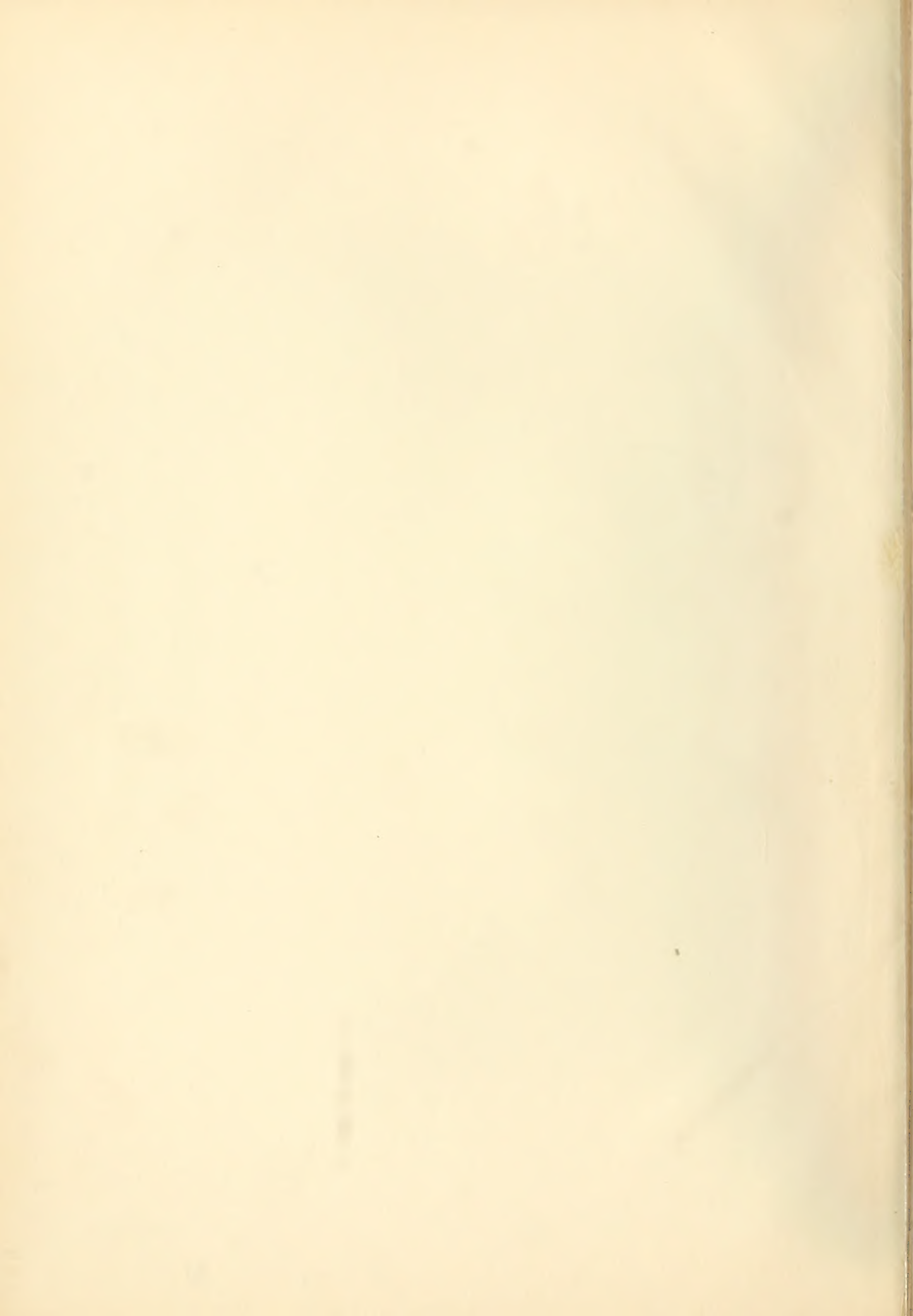


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cases of acute nephritis as I have seen in adults. Even in scarlet fever, in my experience, genuine nephritis seldom occurs unless the child has been subjected to changes of temperature. Perhaps hospital patients, from more constant exposure, are less susceptible to the influences of cold than are the well-to-do classes. I should add, also, that the cases that are called chronic nephritis in our hospital records are really for the most part acute exacerbations of the disease. If the cause of the original attack could be ascertained, it might often prove to have been a chill.

I shall now relate, somewhat in detail, two cases which present the clinical features of acute nephritis as we see it in the child and in the adult. They will also serve to illustrate the therapeutic measures which are usually found efficient.

CASE I.—A boy, ten years of age, was admitted to the Mintburn Hospital for scarlet fever, April 22, 1901, on the third day of his illness. The patient's condition was good, the temperature moderate, 103.2° F., the pulse 132, of good quality, and respirations 24. The rash was well developed, the cervical glands were enlarged and slightly tender, the throat swollen and with well-marked membrane on both tonsils. The temperature and pulse rapidly fell to nearly normal figures, the throat cleared, and the case progressed favorably without complication until May 15th, the twenty-sixth day of the disease, when suppurative otitis media developed on the right side. The urine was abundant in amount, varying from 60 to 120 ounces in the twenty-four hours, and was at all times free from albumin and casts. The inflammation in the ear persisted, with some mastoid tenderness, and it was twice necessary to enlarge the opening in the drum membrane. In all other respects the patient was apparently doing well until the afternoon of May 28th, the thirty-ninth day of the disease, when, without evident cause, his temperature and pulse gradually rose, and one half hour after midnight he had a convulsion lasting several minutes and involving the muscles of the left eye and angle of the mouth and the fingers of the left hand. The convulsions continued with short intervals until 7 a. m., becoming general and accompanied with frothing at the mouth. From then until noon they occurred only every half hour and were less violent. They then ceased and did not recur. Urine drawn by catheter at 7.30 a. m. showed for the first time albumin in small amount, $\frac{1}{4}$ per cent., but no casts. The total quantity of urine passed during the twenty-four hours was 32 ounces. On the day previous to the convulsive attack, the amount of urine was 86 ounces, with a specific gravity of 1015.

With the onset of the convulsions a hot tub bath of ten minutes' duration was given to the patient. This was repeated every hour or two, alternating with hot packs. The first hot pack relieved the convulsions for the time being, but seemed to exhaust the patient. Two convulsions occurred during the second hot pack, but after the third, at 7 a. m., the patient perspired freely and the convulsions became less severe and less frequent. Chloroform was

used and hot saline enemata were also given, but were only partly retained. Nitroglycerin was administered hypodermically, and other stimulants, including suprarenal extract, were given by the mouth. In the afternoon the patient was placed in a hot-air bath and kept there for two hours, during which he perspired profusely. Under these and other measures, he gradually became quiet and rational and his general condition improved. The urine in the evening, again and for the last time, contained a trace of albumin. From this time on, convalescence was uninterrupted and the patient left the hospital on June 23d, the sixty-seventh day of his disease. His condition was good, except for general weakness, anæmia and slight œdema of the extremities. The urine was normal in all respects and there had been no discharge from the ear for seventeen days. The pulse, which had been irritable and of high tension, was regular and of fair force, though rather rapid, varying from 90 to 110 beats per minute.

During the continuance of the convulsions, it was thought that they might possibly be due to extension of the otitic process, and opening of the mastoid was discussed. It was decided, however, to defer operation and the result justified the decision, as the otitis gradually subsided without further interference.

CASE II.—The second case is that of a physician, forty-seven years of age, in vigorous health and with no history of previous affection of the kidneys. On November 12, 1900, he went to the Adirondack Mountains for a four days' hunt during the last of the open season. The thermometer was about ten degrees below the freezing point, and it snowed more or less steadily during his entire stay in the woods. For two days he was on foot with his guide from daybreak to sunset, with a short intermission for luncheon. But what with the stimulus of the air, the beauty of the surroundings, and the exhilaration of the hunt, he was at no time conscious of excessive fatigue. Toward noon of the second day a deer was slightly wounded, and the hunter and guide set out in pursuit, following the tracks and blood in the snow. After two hours' work, a pause was made for lunch, and then, as the snow began to fall more heavily and threatened to cover the trail, the chase was taken up with renewed energy. After a time, as it seemed unlikely that the deer could be overtaken, the guide concluded to post the hunter on a path or so-called "runaway," and endeavor to drive the deer toward him. Our patient about to be, was enjoined to remain absolutely still and on the *qui vive*. He was warmly clad, and, up to this moment, had suffered more from heat than from cold, being in a state of profuse perspiration from the hard exercise. The point where he was placed, however, was exposed to a strong wind, and in a few minutes, he found himself shivering with cold. After facing the wind for a half hour to no good purpose, he reluctantly abandoned his post and returned to camp. There he found another guide and sent him out to assist the first one. It may be of interest to note, in passing, that the deer was finally run down by the two guides and shot. The patient was apparently none the worse for his temporary chill, and on the following day returned to his home, in New York city, and

took up his usual work. Two days later he began to feel feverish and dull, and thinking that he had a slight attack of the grippe, such as he had been accustomed to have once or twice in the winter for several years, he took a few tablets of phenacetin and salol, and paid no further attention to it. The following night, however, he was obliged to get up six or eight times with an intense desire to make water. Micturition was attended with great pain and only a few drops of urine were passed each time. The next morning his discomfort increased, and on taking his temperature he found it over 102° F. His urine then attracted his notice by its dark red smoky color, and on boiling and the addition of nitric acid it became almost solid. He now concluded that it was time to take to his bed, which he did, and sent for a physician and a nurse. His temperature continued to rise throughout the day, and in the evening it was 104° F., with a pulse of 96. There was complete anorexia and intense headache and general muscular pain. The urine, in addition to the albumin, contained hyaline, granular, blood, and epithelial, casts in great numbers, together with many blood and pus cells. The total quantity of urine in twenty-four hours was twenty ounces, with a very high percentage of urea, fifteen grains to the ounce. With rest in bed and a milk diet, and a free use of laxative waters and Vichy Célestins, the patient's temperature declined, and the urine improved so that at the end of five days it contained only a trace of albumin, and a moderate number of hyaline and slightly granular casts, and the blood and pus had entirely disappeared. In ten days more the albumin had diminished to a trace, with an occasional hyaline cast, but the reappearance of pus, in increasing amount, and the presence of pain and tenderness in the region of the right kidney, showed the development of pyelitis. In another ten days the symptoms of the pyelitis had also disappeared, and the patient was convalescent and has continued in perfect health to this day.

In this case there was some doubt for the first few days as to the true nature of the disease, especially as the Widal test gave a positive reaction in a dilution of one in fifteen. The subsequent course, however, demonstrated that we had to do with an acute exudative nephritis, with later involvement of the pelvis of the kidney.

The cause of the nephritis in these two cases is evident—the poison of scarlet fever in the one; in the other, cold applied to the body when perspiring and more or less fatigued. The therapeutic indications were also clear, though varying somewhat in the two cases. From the happy result in both, we may reasonably infer that those indications were met.

Herodotus on the Customary Prostitution of Lydian Women.—Herodotus, in his *History*, i, 93, says: "For all the daughters of the Lydian people prostitute themselves, thus collecting a dowry for themselves, using this for whatsoever purpose they please; and they also dispose of themselves in marriage."

CLINICAL NOTES ON GLEET.*

By A. RAVOGLI, M. D.,

CINCINNATI.

The name gleet is a popular term used to signify a small, scanty discharge from the urethra. The origin of the word is probably from glide, to run slowly. In the different treatises on genito-urinary diseases the word gleet has entirely disappeared, and this affection is described under the head of chronic gonorrhœa or chronic urethritis. When we examine many patients, we find some who really have no apparent inflammation of the urethra; they complain only of a little moisture of the meatus, especially in the morning. It is a complex of different results, a chronic inflammatory condition of the urethra localized in some part of the canal, which maintains the discharge. I believe that this popular expression, gleet, is not entirely out of place and contrary to observation, but may be retained in our nosology of the urethral diseases to signify that transitional stage between chronic gonorrhœa and the formation of a stricture.

From the infection by the gonococcus to the formation of a stricture, there is nothing else than a continuation of disorders and of alterations of the tissues started first by the presence of the infectious germ and then continued in the cells of the tissues as the result of their presence and of the derangement of nutrition they have caused. It can be produced as an example of the relation of one disease to another as cause and effect. If a man at the age of twenty was affected with gonorrhœa, and at the age of forty began to have some difficulty of micturition, being affected with a stricture of the urethra, nobody would deny the relation of the stricture to the progressed gonorrhœa as the evolution of the same process. It is a remnant of the infectious process, a cicatrix that has shrunk little by little.

We can say that gonorrhœa in some cases becomes a general disease, as when it affects the joints. The gonococci have been found without doubt in the affected organs. Moreover, Ahman was able to demonstrate the presence of the gonococcus in the blood of patients suffering with general gonorrhœal infection. Fortunately, we can state with Lesser and many others that general gonorrhœal infection occurs only very rarely, and in most cases gonorrhœa remains limited to the urethra or to the mucous membrane of the genitals or to the organs in direct contact with those of the genito-urinary function.

The gonococci may remain dormant for a long time without showing their presence. Indeed, there are so many structures, Littre's glands, Morgagni's

*Read at the meeting of the Mississippi Valley Medical Association, held at Put-in-Bay, Ohio, September, 1901.

crypts, Cowper's glands, the prostatic ducts, and the seminal vesicles, which offer abodes to the gonococci. The little secretion and the shreds may often be examined without disclosing the presence of gonococci, which are hidden in the submucous tissues and in the glands. From their latency, they may at any time be awakened by a new hyperæmia of the mucous membrane of the genitals, caused either by excess in alcohol or by over-indulgence in venery. In this case we see a fresh gonorrhœal outbreak which simulates a new invasion. It is only an instance of autoinfection. A very plain and interesting case of the kind is referred to by De Keersmaecker and Verhoogen, where the patient remained with an uncured gonorrhœal posterior urethritis, and two years later showed a reproduction of a gonorrhœal prostatitis.

In my cases, however, the gonococcus is dead, so that after several years' standing no acute reproduction of gonorrhœa has occurred, and the fluid has not shown the presence of gonococci. Most of the patients are married men, and their wives have never shown signs of a gonorrhœal infection, nor have they complained of any trouble of the sexual sphere; they have given birth to healthy children, showing no sterility, which so often is the result of chronic gonorrhœa. In one word, they have been exempt from any infection.

In some cases the provocation test has been tried with a solution of nitrate of silver, and in the secretion resulting from the chemical irritation no gonococci could be found, dispelling any idea of the presence of an active infection.

Symptomatology.—The manifestations are limited to a scanty discharge of a whitish fluid which appears in the morning as the *goutte matinale*. In some cases the secretion is so scanty that the fluid at the meatus gets dry and closes the lips together by a dry scale. The patient has no trouble in retaining the urine, and he urinates normally every four or five hours. In the urine we constantly find shreds, which vary in appearance. In some cases the urine is clear or contains short and small shreds, which are scattered throughout the whole quantity of urine. In a few minutes the shreds settle to the bottom, leaving the urine perfectly clear. In other cases the urine is clear, but in the middle of the glass or at the top a conglomeration of shreds is found like a little ball. These are floating, and are easily separated in the form of thick, long shreds. In other cases the urine is somewhat cloudy throughout, a kind of turbidity that destroys the characteristic transparency.

Subjective symptoms are very few. Only seldom have I known patients to complain of a burning sensation in the act of micturition, or more often

at the end of micturition, which is the result of a prostatic complication. Some patients complain of a painful sensation at the time of ejaculation.

Some patients complain of rheumatoid pains affecting the lumbar or the gluteal region, extending to the thighs. These pains are not steady, but come and go. Often the patients complain of being tired, feeling a sense of fatigue. This condition is frequently so accentuated as to produce a marked nervous superexcitability extending over different nerve territories to constitute what we call sexual neurasthenia. In fact, the posterior urethra is supplied with large numbers of sensitive nerves, regulating the acts of micturition and of coitus, and it is easily understood that a continued irritation in this delicate organ may be the source of nervous phenomena. The inflammation produced in this region by the urine and by the secretion which is formed there, causes an irritation, and in consequence nocturnal emissions, which make the patient weak and nervous. The patient loses flesh, becomes forgetful, and cannot attend to his occupation. He loses sleep and is greatly depressed mentally. In some cases erections become difficult or incomplete, and the ejaculation is retarded, tending toward impotence. In other cases the ejaculation is so quick that the individual scarcely has time to approach the woman. In my experience, I can say that in a great many cases of neurasthenia, where the patient has never spoken of any genito-urinary trouble, the introduction of a sound has revealed the origin of his neurasthenia. In some cases the symptoms subside under treatment of the urethra, to reappear later, when the treatment has been neglected.

Physical Examination.—The morning drop must be carefully examined. In the microscopical examination of the secretion we do not find, however, the explanation of the stubbornness of the affection. My observations are in accordance with those of Dr. Renauld¹ with little variation. I find in the secretion some pavement epithelial cells, some mucous filaments in the form of mucin, and small uninuclear leucocytes. Only rarely can some multinuclear cells be found. The field of the glass is covered by a quantity of amorphous granules of uric salt, which are arranged in small concretions. In regard to micro-organisms, at times they are only a few in number, and at other times they are abundant. They are of different lengths and diameters, in the form of cocci. Many have not yet been classified and may perhaps belong to the saprophytes. The most important micro-organism, the gonococcus of Neisser, I

¹Alex. Renauld. Quelques considerations relatives au traitement de la blennorrhagie chronique. *Comptes rendus*, IV Cong.

have never found at this time in a large number of cases. The shreds are made up of multinuclear leucocytes and a few epithelial cells.

Finger has called attention to the condition of the prostate, which he considers responsible for the stubbornness of the discharge. Indeed, this organ, which is formed by the conglomeration of many glands, may easily be the abode of infectious germs. He declares that in cases of old gonorrhœa it is necessary to press the prostate with our finger and obtain some prostatic secretion for microscopical examination. This is a valuable sign, and if in the prostatic secretion we find gonococci, we must deny our consent to marriage.

In most of my cases I have found the prostate not much affected; only in a few cases a little fluid could be obtained by pressure on the gland, and the examination of the secretion did not reveal anything abnormal. But in spite of the negative result of the examination, we must look at the urethral drop with some suspicion. Finger refers to cases of post-conjugal infection in which the urine did not show shreds for some time. So far, although the observations of Wertheim have cleared up the subject a great deal, yet we do not know enough about the metamorphoses of the gonococcus or the different degrees of its virulence.

There is no doubt that gleet has its seat in the posterior urethra. It continues for a long period, which includes years of a chronic hyperplastic inflammation, which will end with sclerosis and shrinking of the tissues, forming the so-called stricture.

The membranous portion of the urethra is lined with many glands which have been described by Littre. Some are small and some of the racemose variety; the small ones are on the anterior surface, the more important on the posterior lateral region of the urethra. They are paved with epithelial cells of different types, and they all offer hiding-places for the development of gonococci in cases of old chronic gonorrhœa. In consequence, we can look upon these glands as foci of infection, which only with difficulty can be destroyed. The difficulty is also increased by the continuous epithelial desquamation of the excretory ducts of the glands and of the utricles, as we can see from the presence of the long shreds that Fürbringer has called comma-like filaments, which are modeled in the excretory ducts of these glands. These accumulations of mucus in the ducts of the glands prevent the access of the remedies to their interior, and so make the gleet more persistent.

For the above-mentioned reasons the digital exploration of the prostatic gland is necessary in every case of gleet, in order to find out its shape, volume, irregularities, tender spots, etc., so as to determine the presence of chronic prostatitis.

The introduction of a metallic sound is necessary to complete the examination. I introduce a Beniqué sound, from No. 21 to No. 24, for an ordinary examination. This is inserted without difficulty, showing that the calibre of the urethra is not affected. When the sound is removed, a little drop of milky fluid comes out of the meatus. This fluid, under the microscope, shows many small leucocytes, some large epithelial cells, and some amorphous uric salts, indicating the presence of altered urine which has remained in the urethra for some time. The little drop of urine left in the canal undergoes chemical changes, causing irritation. Indeed, when a little urine remains to moisten the mucous membrane, it is natural that this irritant should produce a maceration of the epithelium and an irritation of the easily demonstrated by the use of the urethroscope, which shows the mucosa of the urethra red, with small papillary granulations. This condition is not the result of a stricture, but it will become a stricture if it is not treated. It is the result of the chronic gonorrhœal inflammation, which produces hypertrophy of the connective tissues and changes in the epithelial cells. The various alterations which occur in the inflamed cells modify their volume, form, mutual relations, and functional activity. In acute cases degeneration of the cells is present, but in chronic gonorrhœal inflammation a proliferative reaction predominates, and the cells grow and become hypertrophied. These changes of volume of the cells modify the normal elasticity and disposition of the tissues, causing functional disturbance. The urethra is not a simple tube to allow of the passage of the urine, but with its two layers of non-striated muscles and by the help of the compressor, it normally squeezes out every drop of urine from the canal. When a part of the mucous membrane of the urethra is rendered hard and inelastic from infiltration and hypertrophy of its histological elements, this place will be a hindrance to the muscular layers, and also to the compressor in the attempt to squeeze out all the urine. In consequence, a small quantity of urine will remain beyond and about the infiltrated point, which is collected in a drop on the posterior surface of the urethral mucosa. At this point it is clear that the presence of the gonococcus is no longer necessary to maintain the inflammatory process, but the presence of the altered urine is

sufficient to explain the obstinacy of the chronic inflammation.

I have already stated that by gleet I understand that period of chronic inflammatory process of the urethra beginning with the cessation of the gonorrhœal symptoms and ending with the formation of the urethral stricture. The cause is the infiltration and the inelasticity of the tissues and glands of the mucosa of the urethra, limited to circumscribed patches, which prevent the perfect voiding of the urine. The little drop of urine is the cause of an irritation which maintains a chronic inflammation with all its consequences.

Pathology.—In order to understand the changes and the alterations which take place on the affected mucous membrane of the urethra, we must consider the action of the gonococci upon it. When the gonococcus finds its way to any point of the mucous membrane it develops there, proliferates, and consequently causes a reaction, with all the symptoms of inflammation. This constitutes an acute gonorrhœa. Their development finds no obstacle; they infect the surface by continuity and by contiguity, entering the glands in the lacunæ and in the organs which are in contact with the affected mucosa. The fact of penetration we cannot establish with any positiveness; in the ordinary cases it seems that the gonococcus remains rather near the surface. Brewer² states that the investigations of Bumm have shown that the gonococci very quickly penetrate the epithelial covering of the mucous membrane and collect in great numbers in the lymph-spaces of the upper connective-tissue layer. According to Halsted,³ although large numbers of gonococci do penetrate the tissues, yet their development takes place near the surface of the mucous membrane and in consequence within the reach of the injected remedial fluids. Touton, Jadassohn, Fabry, Dinkler, and Rosinsky have shown that the gonococci multiply on the surface of the pavement cells, penetrating only the most superficial layers of the mucosa. In the cylindrical epithelium, they are especially abundant in the neighborhood of the glands. They are found in the excretory ducts of the glands, but never insinuate themselves between the secreting cells. The gonococcus more often attacks the cylindrical epithelium, especially near the glands. In reference to the connective tissue, it seems that the gonococcus only accidentally affects these tissues. Bumm has shown that in ocular blenorhagia the gonococcus invades the connective tissue only in a slight degree, while Touton, Jadas-

sohn, Neisser, and others maintain that it never reaches this tissue. Wertheim, Pellizari, Horwitz, and Crippa have found the gonococci in abscesses and in the œdema of the prepuce. But it remains a fact that the gonococcus is a microbe of the mucous membrane rather affecting the cylindrical epithelium. It may penetrate other epithelial tissue and reach the connective tissue, but only to a slight degree. The gonococcus shows a marked tendency to establish its abode upon the mucous membrane, to persist there for a long period in a latent state and produce chronic manifestations. It seems that the gonococcus loses some of its virulence by repeated reproductions on the same ground, and provokes only slow reactions of a chronic nature. In this way it may remain for a long time on the mucous membrane of the urethra or of its glands in a latent condition. But on account of some irritation it may take on a fresh development on the same ground, or, if inoculated on a new surface, it is capable of developing and producing a fresh gonorrhœa. This stubbornness of the chronic urethritis, the tendency to spread and invade new areas, is explained by the action of the gonococci, which, hidden in the tissues, continue slowly to produce chronic alterations.

In order to appreciate the pathological changes of the mucous membrane of the urethra, it is better to study them on the patient through the urethroscope, rather than post mortem, where, on account of the minuteness of the changes, they do not show so well. The mucous membrane appears dark red, covered with small red points, which easily bleed when touched. The delicate urethroscopical figure looks no longer like a disc with small longitudinal folds, but the mucosa at some point, either in the upper or in the lower segment, protrudes into the urethroscope, showing its infiltrated condition. Sometimes we may note on the surface of the epithelium whitish patches, like epidermic cicatrices, due to the thickening of the epithelial layer. Sometimes in the figure we find small nodules of the size of a pin-head, due to the occlusion and cystic transformation of the Morgagnian lacunæ and of the Littre glands. At other times their orifices appear greatly enlarged. Macroscopical examination does not reveal the alterations of the tissues resulting from a chronic inflammatory process. Under the microscope, it appears that the process runs its course in the subepithelial connective tissue in the form of a small-cell infiltration and a connective-tissue proliferation (Finger⁴). This finds a support in the

²Brewer. *Morrow's System of Genito Urinary Diseases.*

³*Op. cit.* page 164.

⁴*Blennorrhœa of the Sexual Organs.*

observations of Pappenheim⁵ that in the chronic gonorrhœal secretion mostly uninuclear cells are to be found. According to Marchand, the inflammatory process causes at first the migration of multinuclear leucocytes from the blood-vessels, which gradually is followed by the production of uninuclear cells from the reaction of the tissues. In consequence, the uninuclear elements in the secretion are the symptomatic expression of a beginning infiltration of the submucous layer. The infiltration of this layer causes the epithelium to suffer in its nutrition and undergo interesting changes, which in the beginning are limited to proliferation and desquamation of the cylindrical epithelium and later to the conversion of the cylindrical epithelium into pavement epithelium. This infiltration of uninuclear cells in the submucous layer is so abundant at times that Wasermann and Hallé have found that in the posterior part of a stricture the mucous membrane deprived of its epithelium had resulted in a newly formed tissue with new-formed capillaries. In the ordinary cases, however, the infiltration is discrete and is limited to patches of different size surrounding in preference the lacunæ and the glands. It results that the surface in certain points takes on the granular aspect already mentioned, which we often find in examinations with the urethroscope.

Some places of the urethra are in preference attacked by the chronic urethritis, and this is shown by the frequency of the strictures at certain points. The bulb, especially where the urethra enters between the transverse muscles of the perinæum, is the place which is most frequently the site of a chronic inflammation. In the same way, at the end of the pars membranacea and at the beginning of the pars prostatica is another place which is frequently found affected by the chronic infiltration. Infiltrated places are also found around the glands and the lacunæ.

Of course, the infiltrated tissues do not remain always in the same condition; the evolution of the inflammatory process continues, and in consequence they are organized into fibrous tissue. This constitutes a cicatricial tissue, which, becoming sclerotic, produces the so-called organic stricture of the urethra, which affects the calibre, with all the consequent troubles.

I find that this period of infiltration is a preparatory step in the formation of a stricture. In most of my cases I have not found the presence of gonococci, and, as I said above, no infection had occurred, but the small gleet discharge continued for a long time. It is this period which I believe

should still retain the old and popular name of gleet.

It is necessary also to call attention to the condition of the glands. Examination of the prostate, of Cowper's glands, and sometimes of the seminal vesicles completes the clinical observation. As the fluid expressed from these glands must be examined microscopically, the urethra and the bladder must be previously washed with a warm, two-per-cent. solution of boric acid. The patient is placed in the knee-elbow posture, the index finger is introduced into the rectum, and with its volar surface takes hold of the prostate. With the thumb externally a counter-pressure is made, and in this way a little fluid is expressed, which is smeared on a glass and prepared for microscopical examination. With the finger we easily determine the condition of the prostate, its size, volume, tender spots, fluctuating points, etc. In the same way we can find the spermatic vesicles, which are a little above the prostate, by stretching our finger as far as possible. In the same way are found also Cowper's glands, which are below the prostate. The examination of the glands will complete our knowledge of the cause of the gleet.

(To be concluded.)

ROUND LIGAMENT VENTROSUSPENSION OF THE UTERUS; IMPROVED TECHNIQS.

By D. TOD GILLIAM, M. D.,

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When I devised this operation in 1899, I had nothing to guide me but general principles. I was in search of a procedure for correcting and holding in place the retrodisplaced uterus that would be safe, simple, easy of execution, and efficient. I wished to get away from all fixations, as they are inherently pernicious and oftentimes fraught with most distressing sequelæ. The uterus is a mobile organ and cannot be fixed in any position without detriment to itself and contiguous organs. It must conform to the varying conditions of the bladder. It must alter its position in conformity to the fullness or emptiness of the rectum. It must yield to the impulses of respiration and it must adjust itself to the varying movements of the body. Unless it does so, it will impinge upon, or be impinged on by, other viscera and both will suffer. But this is not the worst. The paramount functions of the uterus are those essentially related to the great act of reproduction—pregnancy and parturition. The bound-down uterus cannot accommodate the growing foetus, and the result, in many instances, is its pre-

⁵Ueber das Vorkommen einkörniger Zellen in blenorrhoischen Urethraalsekret. Virchow's *Archiv*, 1901.

mature expulsion. Should the foetus go to term, as it sometimes does through the grace of a resourceful Providence, it will be at the expense of unequal uterine development, distortion, changed axis, unbalanced muscular action, and ineffectual expulsive effort. Such conditions at the accouchment always create consternation and too often culminate in disaster. All this is hackneyed and apparently superfluous, but the continual recurrence of the evils resulting from fixation, through persistence in the practice, renders it expedient to emphasize the fact in the hope that it may exert a deterring influence on operators entering the field, if nothing more. One of the most harrowing experiences of my professional life occurred but a few months since, when I was called to a distant city to perform Cæsarean section in a case of this kind. On my arrival I found the foetus dead and the mother moribund. The labor had been terrific and had continued unceasingly for several days and nights. The fundus was firmly anchored just above the pubis and the uterine development had been entirely at the expense of the posterior wall—the anterior wall being cut out by the fixation. The os was high up above the true pelvis and looked directly backward. The anguish, suspense, and hopelessness of the struggle for two lives in such a case does not admit of computation. Unfortunately, this is not an isolated case, as the medical literature of the last fifteen years will attest. The caption of this paper signifies a suspension of the uterus from the abdominal wall by means of the round ligaments. This is a palpable misnomer, as will appear later, but was used as the most eligible term to express an approximation to the truth. Suspension of the uterus is neither rational nor feasible. None of the ligaments of the uterus, even the strongest, acts as a suspender under normal conditions. A view of the uterus and its ligaments *in situ* will make this clear. The ligaments are all on the same plane with the uterus, and lax; consequently they cannot exert any suspensory influence. Should the uterus settle in the pelvis or draw away from its moorings so as to assume a lower plane and put the ligaments on a stretch, they may, in a measure, become suspensory, but they soon prove their inefficiency by yielding to the sustained traction and thereby become of little value in a rôle for which they were never fitted. The forces which keep the uterus in place are the retentive power of the abdomen and the intra-abdominal pressure. This latter, to be effective, must be exerted on the posterior surface of the uterus. The posterior surface of the uterus is kept in relation to the intra-abdominal pressure by the round ligaments. These little cords, like all the other uterine ligaments, are lax and allow of considerable latitude of motion backward and forward, but exert

a gentle influence to prevent the organ from passing the vertical line. A slight resistance on the part of the round ligaments is ordinarily sufficient to check the backward movement of the uterus when, with the changed position of the body or the movements of respiration, the organ falls forward into normal anteposition. The first step, then, toward correcting the backward displacement of the uterus, is to see that the retentive power of the abdomen is restored. This is usually effected by restoring the broken pelvic floor. The next step is to place the uterus in position so as to receive the weight of the intestines on its posterior surface—and keep it there. The only way to keep it there without compromising its usefulness is to utilize its natural guys—the round ligaments. Recognizing this fact, Alexander devised the operation of shortening the round ligaments at the inguinal outlet; but the operation is difficult and requires long training to become proficient in. The various modifications of this operation are all open to the same objection. Besides, they make no provision for dealing with the adherent, retroverted uterus, the condition most frequently calling for operation. The internal shortening of the round ligament by folding it upon itself throws the stress upon the weakened distal extremity, which may not be equal to the task imposed upon it. In the operation which I have devised, and which, I believe, fulfils every indication of a safe and efficient anchorage of the uterus without in any way curtailing its normal range of mobility, consists in bringing up the round ligament on either side into the abdominal wall and fastening it there. Profiting by the experience of the past, I have modified the operation as at first performed, so as to simplify the technics and improve its efficiency.

Operation.—An abdominal incision three or four inches in length is made in the median line at the usual site between the umbilicus and pubes. The adhesions are broken up and the fundus brought forward. With a finger and thumb or a pair of bullet forceps the broad ligament of one side is seized and brought to the opening. By lifting up the anterior surface of the broad ligament on the tip of a finger applied to its posterior surface the round ligament is brought into view and is picked up, either between the thumb and finger, or with a bullet forceps. Selecting a point an inch and a half from the uterus, a thread is passed under the round ligament and the ends of the thread are brought out of the opening and secured in the bite of a clamp forceps, which is laid upon the surface of the abdomen. The other ligament is sought for and secured in the same manner. At a point about one inch and a half above the pubes, the peritonæum, muscle, and fascia at one edge of the wound are

caught up by a volsella and pinned together, being careful that the edges of these layers are in line. Traction is now made, and, with a small retractor, the skin and superficial fat are drawn in the opposite direction, uncovering the fascia. With a narrow-bladed knife, or better with the perforating forceps devised for the purpose, a stab wound is made from the surface of the fascia into the peritoneal cavity, the instrument entering one half inch from the edge of the abdominal incision, and passing obliquely downward and outward, emerging on the peritonæum one inch from the edge of the abdominal incision.

If the perforating forceps is used, the jaws are separated, and, by an outward movement of the handle, brought into plain view at the large opening. The thread which loops the round ligament is now placed in the jaws, the clamp forceps removed, and the perforating forceps withdrawn, bringing with it the thread and the ligament. If a knife has been used to make the perforation, it is withdrawn and a slender forceps introduced, with which the thread is caught up and the ligament drawn into place. Now, while the ligament is held taut, with its loop end a quarter or third of an inch above the surface of the fascia, a catgut suture is passed through it, including the tissues on either side, and back again, where it is tied. This is cut close to the knot, the suspending thread cut on one side close to the ligament and withdrawn, and the volsella and retractor removed. The other side is dealt with in like manner and the abdominal incision closed. After both ligaments have been fastened, it will be found that an opening exists between the uterus and abdominal wall, of from seven to nine inches in circumference, thus obviating any possibility of strangulation of the bowel. It will also be observed that the uterus is not suspended, but rests easily and naturally on the bladder, from which it can be raised to a position little short of the vertical. Thus the uterus is enabled to conform to the altered conditions of the bladder, rectum, and to the various bodily movements. Should pregnancy ensue, the ligaments develop *pari passu* with the growth of the uterus, and there is neither embarrassment in gestation nor difficulty in parturition. In my first cases I was troubled with suppuration, which was often protracted and aggravating. Of late I have had no suppuration. This I ascribe to the fact that I handle the ligament as little as possible and never touch it with my fingers after it has been drawn into place, and also to the fact that I clip the suspending thread close to the ligament, so as to avoid contamination by drawing it full length through the loop of the ligament after its exposure on the abdominal wall. The slanting perforation of the abdominal wall through which the ligament is drawn is made in

deference to a suggestion of Dr. W. E. B. Davis, of Alabama, who, in discussing the operation before the Louisville meeting of the American Association of Obstetricians and Gynecologists, thought it would be a safeguard against hernia. While I have little fear of hernia from the small perforation made, I find the suggestion valuable, in that it allows the perforation to be made with less retraction of the skin and fat than formerly, which is a distinct advantage. As to the results of the operation, they have been eminently satisfactory under all conditions, including pregnancy and parturition. It has been taken up by the profession in all parts of the country, and I have yet to learn of any untoward or unpleasant results. On the contrary, the letters that I receive and the reports I have read are all commendatory. Believing, as I do, that it will prove a boon to womankind, I could wish for its general adoption until something better can be found.

GELATINOUS CARCINOMA OF THE PERITONÆUM, WITH METASTASES IN STERNUM AND LUNG.

By PHILIP KING BROWN, M. D.,

AND

GEORGE T. BRADY, M. D.,

SAN FRANCISCO.

The patient, W. R., a man sixty-four years of age, teacher, was examined first on August 27, 1899. He complained of slow increase in his waist measure, dating back some months, and a progressive weakness with occasional night sweats. He had had a good-sized, protruberant abdomen for many years, and its increased size had been so slow that he had scarcely noticed it, until he began to grow emaciated generally, except in the abdomen. The increased weight of the abdomen had about compensated for the loss of weight of the rest of the body. No pain had ever been associated with the trouble. There was no history of coughs or hæmorrhages. The patient's habits and past history were entirely negative so far as any light on the present trouble was concerned. The appetite was good and the bowels regular; nothing unusual had been noted in the stools.

Status.—The general emaciation of the limbs, face, and thorax was marked. In contrast to this was the enormously distended and pendulous abdomen everting slightly the costal borders. The lungs showed a little dulness at the left apex, and the breathing generally was shallow and slightly rapid, averaging twenty-four respirations a minute. The heart tones were clear, but the whole organ was pushed upward and slightly to the left; the apex was palpable in the fourth space outside the mamillary line. The area of the liver dulness extended from the level of the right

nipple to a point six centimetres below the costal border in the right mamillary line. The surface was fairly even. Apparently free from attachment to the internal organs, was a mass the size of the open hand, in the lower right iliac region, extending partly into the umbilical region. This mass did not move with respiration, and the skin was freely movable over it. On the left side, a mass of enormous size was made out, extending from under the ribs down to the crest of the ilium and well over toward the median line. It appeared kidney-shaped, the indenture being in the right epigastric region. Apparently, the abdomen was distended with fluid. No glands were found enlarged. The temperature on several occasions was normal. Blood examination: hæmoglobin, 75 per cent.; red cells, 4,200,000; white cells, 6,800; differential count, 77½ per cent.; polymorphonuclear cells; large lymphocytes, 9 per cent.; small lymphocytes, 13 per cent.; eosinophiles, 2/3 per cent. One week later a trocar was inserted into the abdomen, and 50 centimetres of blood-stained fluid containing sago-like, clear yellow clots was removed. Specific gravity, 1021, six per cent. albumen, neutral reaction. Microscopically, it contained pus in small amount, old and fresh blood in quantity, endothelial cells in clumps, and a mucoid unorganized material. The diagnosis of colloid cancer was returned. Six months later the leucocytes numbered 7,200. In nine months, 7,700, of which 79½ per cent. were polymorphonuclear forms; 11½ per cent. large, 7½ per cent. small lymphocytes, and 1½ per cent. eosinophiles. The patient died nineteen months later. Until two weeks before death he was able to do his daily work, and his gastric and intestinal functions were properly performed.

The points of special interest were the size of the tumor masses at the time of examination, the absence of significant blood changes then and months later, the slow progress of the disease, and the peculiar character and doubtful origin of the tumor. Since the original notes on the case were taken, the following facts of ætiological significance were obtained from a brother of the patient:

The patient recognized something wrong with his abdomen five years before he was seen by us, seven years before he died. Two years after he noted the increasing in size of his abdomen, he was struck a severe blow in the abdomen, being thrown violently against the pommel of his saddle while riding on horseback. The tumor mass on the left side he thought developed just after that. The mother died of what was probably a malignant tumor of the eye.

Autopsy Report.—The patient was an elderly man, somewhat above medium stature, greatly emaciated and exhibiting marked anæmia. Specially noticeable was an enormous distention of the entire abdomen, unaccompanied by any discolorations of its walls. This was most decidedly pronounced in the upper third, where the lateral thoracic parietes bulged markedly outward. On making the median incision about

four litres of a heavy blood-tinged fluid, of albuminous consistence and full of gelatinous lumps, resembling calf's foot jelly, and of all conceivable shapes and sizes up to that of a hen's egg, escaped from the peritoneal cavity. While disarticulating the sternum, its manubrium yielded to pressure, and on section the bone proved to have the consistence of soft sugar pine, three fourths of its marrow being replaced by a very fine granular gelatinous mass of a lemon yellow color. The organs of the neck, especially the thyreoid, were then examined, but showed no noticeable changes. Each pleural cavity contained about 500 cubic centimetres of a clear yellow, watery, flakeless fluid. Both lungs had totally collapsed and had retracted deeply into the thorax. Their cut surfaces were hyperæmic, very dry, and practically free from air. In the left lower lobe, about one half centimetre beneath the pleura, were found two adjacent foci as large as lima beans, filled with a jelly-like substance, in all respects similar to that which exuded from the abdomen. Pleural adhesions were slight on both sides, and confined principally to the apical portions of the two lungs. No tuberculous processes were noted. The heart was of about two thirds the normal size, with all its chambers full of dark fluid blood. There was almost complete atrophy of the subpericardial fatty tissue. The heart muscle proper was dry and of a deep brown color. The pericardial fluid was slightly increased. All valves were normal. The intima of the aorta was full of elevated yellowish white atheromatous patches. Microscopic examination showed moderate brown atrophy of the heart muscle. The other thoracic organs presented no noticeable changes. The diaphragm had been pushed up to the fourth rib on both sides. In place of the normal omentum, there presented an enormous rounded, grayish-white tumor mass, 40 centimetres long, 37 centimetres wide, and from 5 to 7 centimetres thick. This reached down to the pelvic brim. Included in it were the pancreas, stomach, liver, spleen, and diaphragm. Cross-section showed the omentum to have been converted into a honeycomb structure, its chambers of variable size, bounded by firm, grayish-white trabeculae, and filled with clear, transparent jelly. All the intestines had receded toward the spinal column and were glued together by similar tumor masses, which were from 2½ to 3 centimetres thick at the mesenteric root. The gut was slit open and examined from stomach to anus. Everywhere the mucous membrane was found to be freely movable, and presented no defects that could be suspected as a starting point for the tumor. Its lumen was partly filled with fluid faeces and was everywhere perfectly patulous, aside from slight kinking where secondary nodules had formed in the mesentery. There were no other changes in the mucous membrane, except marked cyanosis of the descending colon and rectum. The appendix lay behind the cæcum, a mere strand of tissue with obliterated lumen. In the root of the mesentery about its middle, presented a deep-yellowish mass 7 x 7 x 2 centimetres, enclosing several large swollen and reddened lymph nodes. This proved to be a fat necrosis surrounding lymph glands in

a state of acute catarrhal inflammation. From the anterior peritoneal lining the tumor had infiltrated the sheaths of both recti abdominales muscles, leaving only a strip of normal muscular substance anteriorly. The abdominal viscera, including the diaphragm, was removed *in toto*, and weighed forty-three pounds. The tumor mass, excluding the organs, was calculated to weigh thirty-five pounds. All the retroperitoneal organs had escaped involvement, and were dislocated backward. Both adrenals were normal, the pancreas small and atrophic. Compression had produced a dilation of both ureters to twice their normal calibre, and a resultant hydronephrotic distention of both renal pelvis. All of the anterior peritoneal covering of the bladder was invaded to a depth of 3 or 4 centimetres. The prostate and seminal vesicles were unchanged. The liver measured 20 x 14 x 10 centimetres; lobules indistinct, deeply cyanosed, and reddish brown. The tumor, 2 centimetres thick, had completely enveloped the organ, without invading it, and included the diaphragm, whose lower two thirds it had replaced. The pleural surface of the diaphragm was still intact for a depth of 3 millimetres and showed no signs of any neoplasm, while the gall bladder was very small and its wall and contents normal. Nothing pathological was discovered in the bile or pancreatic ducts. The gastro-hepatic omentum was from 2½ to 3 centimetres thick, while the stomach was surrounded by the tumor to a thickness of 2½ centimetres. It was very small, 13 x 8 x 8 centimetres, and its mucous membrane, although in deep folds, showed no signs of ulceration or attachment to the tumor. The pylorus was intact. The splenic capsule had infiltrations 2 centimetres thick. The organ proper was very soft, deep purple in color, with indistinguishable markings. It measured 4 x 5 x 9 centimetres, and showed no tumor metastases. Microscopic examination showed the omental mass to consist of thick trabeculæ of dense fibrous tissue, containing but a moderate number of blood vessels, in whose immediate surroundings were to be found lymphocytes in variable numbers. Delimited by this stroma, were alveoli of polygonal form, filled with finely granular, and in places thready, mucus. Only in the smallest was an epithelial lining demonstrable. Around the periphery in close rows was a distinct transparent membrane of long palisadal cylindrical cells, with a finely granular protoplasm. The nuclei were large, clear, oval, and situated in the lower third of these cells toward the basement membrane, while, toward the free edge, were seen all transitions of mucoid formation. Many of the cells were of typical goblet form. This was shown especially in the lung. Some alveoli were lined by cells in all stages of degeneration and disintegration, and some had lost their lining entirely. The liver capsule, with attached diaphragm, showed similar tumor structure. The organ itself was in the condition of chronic stagnation hyperæmia. The spleen was similarly affected, and its capsule showed the same tumor nodules. The small intestine showed chronic inflammation with decided atrophy of the mucous membrane. The tumor had invaded only the outer mus-

cular coat to one third of its depth. The nodule in the lung was identical structurally with the smaller omental alveoli. If anything, the epithelium was more distinct, and in places gave decided evidence of the presence of goblet cells charged with mucus. The bone marrow of the manubrium was almost entirely replaced by a substance differing in several respects from that present in the peritonæum. The osseous trabeculæ were unchanged, but the marrow spaces were occupied by a peculiar mucoid matrix, rich in hyperæmic capillaries, and yielding but a faint mucin reaction. After decalcifying, many vacuolated elements of fantastic signet form were seen scattered throughout the mucus. In shape they resembled fat cells with flattened nuclei included in a narrow peripheral zone of finely granular protoplasm, and shoved to one side by larger or smaller vacuoles. The linings of the metastases in the lungs and manubrium showed two types of cells, which had undergone mucoid degeneration, and traced the steps of the process. These arranged in palisadal rows could give way from surrounding pressure only at the point of least resistance, and before rupturing, were converted into goblet cells. These contributed the mucus which filled the before-described alveoli. In the bone marrow the cells were unattached, and practically free to distend in any direction. Mucus was, therefore, formed in the vacuoles, and only discharged after the distention caused complete rupture of the cell membrane.

Special attention was directed to ascertain, if possible, the starting point of this neoplasm. Ordinarily, such tumors arise from mucous glands situated in the mucous or submucous coat of some viscus. The stomach and intestines are particularly prone to give them origin. Rigorous search excluded the probability of these organs being the starting point. The fact that the rectus was involved suggested that the omphalomesenteric duct might have furnished the nidus. Clinical history and autopsy findings showed this to be untenable. By careful examination, the thyroid was also eliminated from consideration.

Although *sub judice*, the matter resolved itself into considering some portion of the peritonæum itself as most probably the primary seat. The possibility that the peritonæum might give rise to such a malignant growth, is based upon Albrecht's studies of serous cavities in children. Having found occasionally a suds-like exudate in the pleura, he discovered by diligent search that the frothy matter was due to a mucin produced in the lining endothelial cells themselves. If a remnant of this particular tissue had remained in the peritonæum under peculiarly favorable conditions, such as may have existed in this case, its proliferation from the embryonal focus might result in the production of a typical gelatinous neoplasm.

Æschylus on the Physician His Own Patient.
—From *Prometheus Bound*, vv. 480-483:

Unseemly woes have been thy lot, and thus
Thou wanderest, from having lost thy wits,
Like to some poor physician losing hope
At falling on disease, nor hast the power
To find what remedies may cure thyself.

K. W. M.

Issues and Events of the Day.

THE TRIAL, EXECUTION, AUTOPSY, AND MENTAL STATUS OF

LEON F. CZOLGOSZ, ALIAS FRED NIEMAN, THE ASSASSIN OF PRESIDENT McKINLEY.

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COMMISSION IN LUNACY.

WITH A REPORT OF THE POST-MORTEM EXAMINATION.

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The terrible shock which the assassination of President McKinley by Leon F. Czolgosz at Buffalo, N. Y., on September 6, 1901, imparted to the entire civilized world, and which naturally engendered in the public mind a mingled feeling of horror, vindictiveness, and revenge—a feeling which was exceeded only by the profound sense of sorrow and depression which took possession of the people when a few days later it was realized that, despite the highest efforts of surgical and medical skill, a fatal result to the distinguished victim was inevitable—naturally suggested, both to the lay and medicolegal mind, the need of inquiry as to the mental status and responsibility of the perpetrator of so repulsive and atrocious an act. Moreover, there are many persons who are disposed to hold that the enormity of such a crime is in itself sufficient evidence to warrant the opinion of the existence of insanity, merely because it seems to them inconsistent with the principles of ordinary rational conduct, even though aside from the act itself there be nothing in the entire life and conduct of the individual that is suggestive of mental disease. On the other hand, there are many who, in view of the magnitude of the crime, would oppose the granting of exemption from the ordinary consequences of capital offenses even though the offender were a raving maniac. Suffice it to say that the position taken by such persons, in either case, is untenable and would be an untrustworthy test of responsibility as regards the ends of justice, whether viewed from a legal or a medical standpoint.

It need scarcely be said that the question as to whether or not a certain act is the offspring of mental disease cannot always with safety be determined by the act itself, but must be determined by all the attendant circumstances leading up to and surrounding the act.

"An act of violence," says Ray, "must not be attributed to insanity merely because to a person of high culture and correct morals it seems inexplicable on the ordinary principles of human conduct."

According to the *Code of Criminal Procedure of the State of New York*, Section 21, the legal test of mental unsoundness, as applied to criminal cases, is based on the assumption that insanity is a question of law to be determined by the court, and that the question of responsibility in mental disease hinges upon a knowledge of right and wrong as to the particular act at the time it was committed; whereas medical science holds that insanity, in its relation to crime, is always a question of fact to be determined like any other fact in evidence, aided of course, in such case, by the interpretation of expert opinion evidence, and that whenever its presence can be so determined, the accused should be absolved from responsibility, irrespective of the form or degree of his mental disease or the nature of the act committed. "All that medical science has to do in any such case," says Dr. John P. Gray, "is to say whether the deed springs from disease or not. If it does not, the man is responsible, however ghastly, seemingly purposeless, or vindictive the act may be." In other words, medical science holds that the whole question of responsibility should

rest upon the presence or absence of mental disease, and not upon a knowledge of right and wrong as regards the nature and consequences of the act in question, and that that which in fact is a condition of mental disease cannot in law be a condition of mental health.

The question to be determined, then, in the case of Czolgosz, from the legal standpoint, as embodied in the *Code of Criminal Procedure of the State of New York*, was: When he shot the President, did he know the nature and quality of the act he was doing, and that the act was wrong? If this question could be determined in the affirmative, then he was responsible under the law and punishable for the offense which he committed, even though he was medically insane, so to speak.

On the other hand, the question to be determined from the standpoint of medical science was: Was Czolgosz at the time he committed the act a victim of mental disease or mental unsoundness? If so, according to the dictum of medical science, he was not responsible and hence not punishable for the act he committed. These are the sole questions upon which the guilt or innocence of the accused must rest, whether in the eyes of the law or in the judgment of medical science, and it follows logically that if he were guilty of crime owing to the absence of mental disease, he was equally guilty within the intent and meaning of the statute. Such being the case, the subject of the responsibility of the accused resolves itself into a question of health or disease—sanity or insanity. Hence the application of the legal test may be dismissed from further consideration here, and we may proceed to consider the question of his responsibility from a medical point of view.

THE TRIAL.

The trial of Czolgosz, which took place in the city of Buffalo, N. Y., on September 23-24, 1901, the Hon. Truman C. White, presiding justice, was neither attended by delay "nor harassed by the trivial technicalities of the law." The "machinery of justice" moved so smoothly and so rapidly that the jury was procured, the case tried, and a verdict of guilty rendered within a period of two court days with sessions from 10 to 12 o'clock in the forenoon and 2 to 4 o'clock in the afternoon, the time actually occupied being eight and a half hours in all. The proceedings were marked by no melodramatic or sensational episodes or unseemly wrangle among counsel; while the fact that, under the extraordinary circumstances, the trial was not anticipated or interrupted by any riotous demonstration against the prisoner—any attempt at mob or lynch law—when he appeared in public, affords striking proof of the respect for law and order which prevails in the community where the trial was held. Czolgosz was brought into court, closely guarded by a double cordon of police and handcuffed to an officer on either side. He was neatly dressed and cleanly in appearance, his face clean-shaven, and hair neatly combed.

The preparation and trial of the case on the part of the people by the Hon. Thomas Penny, district attorney, and his assistant, Mr. Haller, was well nigh faultless. Shortly after his arrest the district attorney procured from Czolgosz a statement, several pages in length, which was taken down in longhand, in narrative form, each page of which he signed, after himself making corrections and revisions as to matters which he claimed the reporter had misapprehended. This statement gave in detail facts concerning his premeditations and preparations for the crime, also his movements for some time prior, and up to the time of the shooting. The district attorney also, within a few hours after the crime was committed, proceeded to put the prisoner under the observation of local experts in mental disease, namely, Dr. Joseph Fowler, police surgeon, Dr. Floyd S. Crego, and Dr. James W. Putnam. These physicians had free access to him, down to and during the trial, covering a period of nearly three weeks, during which they examined him repeatedly and made a careful study of his case with reference to his mental condition. The district attorney also permitted the experts on either side to confer together freely, and allowed those for the defense to have free access to all facts and information relative to the case in his possession—a proceeding which in effect was equivalent to the appointment of a commission of five experts—three for the prosecution and two for the defense—to determine the prisoner's mental condition. This course on the part of the district attorney marks a new departure in the methods of getting expert evidence in criminal trials where the question of mental responsibility is involved.

which is to be highly commended as a practical measure tending to eliminate much superfluous testimony and at the same time to minimize the danger of contradictory expert opinions.

In view of the great importance of the case, it is regrettable that no experts were called to testify on the trial as to the prisoner's mental condition, in order that it might appear on the record of the trial that his mental state was inquired into and determined by competent authority. Had the experts on either side been given the opportunity of thus stating officially their unanimous conclusion, together with the grounds on which it was based and the methods by which it was reached, it would have left in the public mind no room for reasonable doubt as to its absolute correctness and that it had been arrived at only by the rules of professional conduct governing the examination of such cases.

The attorneys assigned by the court to the defendant, at the request of the Bar Association of Erie County, were ex-Judges Loran L. Lewis and Robert C. Titus, both prominent lawyers and highly respected citizens of Buffalo. For obvious reasons these gentlemen were reluctant to undertake what they regarded as a most distasteful task, and consented to do so only from a high sense of duty to the public, at the urgent solicitation of the president, the Hon. Adelbert Moot, and other prominent members of the Bar Association, on Saturday, September 21st, preceding the trial, which began on Monday, the 23d.

Respecting the defense, it appears that substantially no preparation was made beyond a fruitless effort of counsel to confer with the prisoner and the examinations made of him at their request by Dr. Hurd and the writer with reference to his mental condition, and a verbal statement by them to counsel of their conclusion that he was not insane. It also appears that no plea was entered by the attorneys for the defense, but Czolgosz, speaking for the first time in court, entered a plea of guilty to the indictment, which plea the court promptly rejected and directed that one of not guilty be entered on the record for the defendant.

Each juror, on qualifying, said, in answer to the usual question, that he had formed an opinion as to the guilt of the prisoner, but that his opinion could be removed by reasonable evidence tending to show that the defendant was innocent. And yet, to one accustomed to being in court and observing jurors when qualifying, it was difficult to avoid the impression that each of the jurors in this case held a mental reservation to convict the prisoner. Had Czolgosz been on trial for the murder of a common citizen, instead of the President, it is safe to say that not one of the jury as completed would have been accepted by the defense; and instead of getting a jury in approximately one hour and a half, that feature of the trial alone would probably have occupied several days.

Having in view the nature and importance of the case, the fact that no testimony was offered on the defendant's behalf and that practically no defense was made, beyond a perfunctory examination of jurors and a mild cross-examination of some of the people's witnesses, which was limited to efforts to elicit information respecting the President's condition during his illness and of his body after death, and a summing up by one of the counsel—Judge Lewis—which consisted mainly of an apology for appearing as counsel for the defendant and a touching eulogy of his distinguished victim, renders the case, in this respect, a unique one in the annals of criminal jurisprudence.

The jury retired for deliberation about 4 p. m., and returned in less than half an hour with a verdict of guilty of murder in the first degree. Czolgosz heard the verdict of the jury standing and without appreciable display of emotion. Several of the jurors were reported to have said, after the trial stated that the jury was in favor of conviction unanimously from the first and could have rendered a verdict without leaving their seats, but deemed it best to make a pretense of deliberation "for appearance sake." Czolgosz was remanded to jail for two days and on Thursday, September 26th, was sentenced to be executed by electricity at Auburn Prison in the week beginning October 28, 1901.

When Czolgosz returned to his cell after his conviction, he ate a hearty supper and soon thereafter went to bed and slept continuously until midnight, when the guard was changed, when he awoke for a few minutes, and then slept again until 6 a. m., when he arose and took a short walk in the cell corridor, after which he made a careful toilet, and at 7.30 partook of a hearty breakfast. He talked freely, as

usual, on ordinary topics, but maintained his usual silence respecting his crime and would not talk of the trial or the verdict. On Thursday, September 26th, he was removed from the Buffalo jail to the State prison at Auburn, N. Y., where he was confined in a "death cell" until his execution too place.

THE EXECUTION.

Czolgosz was executed by electricity on the morning of October 29, 1901. The official witnesses, consisting of the Superintendent of State Prisons and other prominent New York State officials, several physicians, three representatives of the respective press associations, Mr. Spitzka and others, and the official physicians, Dr. John Gerin, prison physician, and myself, having been assembled in the execution room and having received the usual admonition from the warden as to maintenance of order during the execution, the prisoner was conducted to the room a few minutes after 7 a. m. Every precaution was taken by the warden, who had immediate charge of the execution, to minimize the opportunity for notoriety or sensationalism on the part of the prisoner, as well as to insure that his taking off should be effected in an orderly and dignified manner.

As Czolgosz entered the room he appeared calm and self-possessed, his head was erect, and his face bore an expression of defiant determination. The guards, one on either side, quietly and quickly guided him to the fatal chair, the binding straps were rapidly adjusted to his arms, legs, and body, and the head and leg electrodes were quickly placed *in situ* and connected with the wire which was to transmit the lethal current through his body. These preliminaries occupied about one minute. Czolgosz offered no resistance whatever, but during the preparations addressed himself to the witnesses in a clear, distinct voice in the following significant language: "I killed the President because he was the enemy of the good people—the good working people. I am not sorry for my crime. I am sorry I could not see my father." At this moment, everything being in readiness, the warden signalled the official electrician in charge of the switch, who immediately turned the lever which closed the circuit and shot the deadly current through the criminal's body, which was instantly thrown into a state of tonic spasm, involving apparently every fibre of the entire muscular system. At the same time, consciousness, sensation, and motion were apparently absolutely abolished.

Two electrical contacts were made, occupying in all one minute and five seconds. In the first contact the electromotive pressure was maintained at 1,800 volts for seven seconds, then reduced to 300 volts for twenty-three seconds, increased to 1,800 volts for four seconds, and again reduced to 300 volts for twenty-six seconds—one minute in all—when the contact was broken. The second contact, which was made at the instance of the writer as a precautionary measure, but which was probably unnecessary, was maintained at 1,800 volts for five seconds. That conscious life was absolutely destroyed the instant the first contact was made was conceded by all of the medical witnesses present; also that organic life was abolished within a few seconds thereafter.

Czolgosz was pronounced dead by the attending physicians and several of the other physicians present, after personal examination, in four minutes from the time he entered the room; one minute of this period, as already stated, was occupied in the preliminary preparations, one minute and five seconds in the electrical contacts, and the remainder of the time in examinations by the physicians to determine the fact of death.

THE AUTOPSY.

The autopsy was made by Mr. Edward A. Spitzka, under the direction of the official physicians, Dr. Gerin, and myself. The examination occupied about four and a half hours and embraced a most careful gross examination of all the viscera, attention being especially directed to the brain and its meninges. The accompanying masterly description of the post-mortem findings, and especially of the condition and anatomical structure of the brain, by Mr. Spitzka, leaves nothing to be said here upon this point beyond the fact that the autopsy revealed no evidence whatever of disease or deformity of any of the bodily organs, including the brain, which was normal in size, shape, weight, and appearance and was well developed in all respects—a conclusion which was concurred in by all of the physicians present, several of whom had witnessed the execution.

In deference to the expressed wish of the relatives of Czolgosz, and for reasons of a sentimental nature on the

part of the State authorities, the prison warden declined positively to allow any portion of the body to be removed from the prison. Consequently, and regrettably, it was impossible for the examiners to retain honorable possession of any portion of the brain for microscopical examination and study. Accurate measurements, however, of the head and its appendages, of the face, and of the exterior and interior of the skull, together with detail anatomical drawings and descriptions of the brain, were made; also plaster moulds of the head from which a cast was subsequently made and photographs of the same—full face and profile—taken. These measurements, together with plates of the drawings and photographs are presented in Mr. Spitzka's report of the autopsy.

In view of its great importance both to medical science and to medical jurisprudence, the writer regards it as fortunate that the State was able to secure the services of so able a brain anatomist and skilled operator and draughtsman as Mr. Spitzka to make the post-mortem examination.

THE MENTAL STATUS.

On Thursday, September 19, 1901, I received a telegram requesting me to meet Mr. Adelbert Moot, president of the Erie County Bar Association, in Buffalo, N. Y., on the following morning. On my arrival in Buffalo the next day, Mr. Moot informed me that he had sent for me for the purpose of requesting me to inquire into the mental condition of Leon F. Czolgosz, confined in the Buffalo jail under indictment for the murder of President McKinley, and whose trial was to begin on the following Monday. Mr. Moot further stated in substance that three local experts had already examined the prisoner for the district attorney, but in view of the enormity of the offense and the fact that there obviously could be no legitimate defense other than insanity, it was deemed important, in the interests of justice, that his mental condition should be investigated by other experts acting in behalf of the defense, or at least independently of the prosecution, to the end that the prisoner should be accorded every legal right, there being no desire to convict him if he were not mentally responsible, and that I had been selected for this responsible duty. With a deep sense of the responsibility involved, I consented to act, provided it should be distinctly understood that I was not there as a partisan expert in behalf of either side, but simply in a professional capacity to aid in determining the real mental state of the prisoner, and provided further that my selection would be acceptable to the eminent counsel whom the Bar Association had selected for the defense, should they decide to accept that duty, a matter which was then undecided. On the following morning, Saturday, Mr. Moot informed me that the gentlemen referred to had consented to act, and invited me to meet them in conference, which I did, and which resulted in their requesting me to proceed at once to examine into the prisoner's mental condition and to report my conclusion to them as soon as I had reached one. They also assented readily to my proposal to invite Dr. Arthur W. Hurd to become associated with me professionally in the case, Dr. Hurd being the superintendent of the Buffalo State Hospital for the Insane and a competent alienist of large experience in mental diseases. It was also agreed that we should be allowed to confer freely with the district attorney and with the experts for the people, after completing our personal examination of the prisoner. Being unable to establish communication with Dr. Hurd before evening of that day, and in view of the short time intervening before the trial, I decided to make a preliminary examination of Czolgosz alone, and did so that afternoon, in the district attorney's office, first disclosing to him my identity and the object of my interview and informing him of his legal right to decline to answer any question I might ask him.

I examined him again on the following day, Sunday, in the jail, jointly with Dr. Hurd and in the presence of one of his guards, who was questioned at length respecting his observations of him in the jail, as to his habits of eating, sleeping, talking, reading, etc. We subsequently interviewed the district attorney and the superintendent of police, General Bull, who gave us all the facts and information in their possession respecting the case. The statement which Czolgosz made to the district attorney shortly after his arrest throws much light on his mental condition on the day of the crime, but that official deemed it his duty to refuse to allow me to publish it. We also conferred at length with the people's experts—Dr. Fowler, Dr. Crego, and Dr. Putnam—who stated to us separately and in detail

their observations and examinations of him. We also observed him carefully in the court room throughout the trial.

After our examination of Czolgosz, on Sunday, we reached the conclusion, independently of each other, that he was sane, and we so informed his counsel on Monday morning before the trial began.

It should be said that, owing to the limited time—two days—at our disposal prior to the trial and the fact that his family and relatives resided in a distant State and were not accessible for interrogation, we were unable to obtain a history of his heredity beyond what he himself gave us.

Czolgosz, as he appeared at the time of my examinations of him at Buffalo, may be described as a well-nourished, rather good-looking, mild-mannered young man with a pleasant facial expression; features, regular; face, smooth shaven and symmetrical; mouth and ears, well formed and symmetrical; teeth, none missing, but in poor condition from neglect; tongue, clean; palate, fauces, and uvula, normal in appearance; eyes, blue and normal in expression; pupils, equal in size and normally responsive to light and accommodation; hair, light brown and slightly curly; stature, medium, five feet seven and a half inches; and weight, estimated, about 140 pounds. The extremities were in all respects normal. The external genitals were normal, excepting two small, flat, uninflamed cicatrices on the mucous surface of the prepuce, probably the result of previous chancroids, although he denied having had venereal disease other than gonorrhœa. There were no signs of specific nodes or periosteal tenderness over the usual sites of these lesions, nor was there any evidence upon the head or body of traumatism, excepting a slight deviation of the nose due to a blow he received at the time of the assassination, and a superficial vertical cicatrix on the left side of the face, which he said was the result of a slight injury he received when working in a barbed wire factory. There were no tremors or twitchings of the facial muscles, tongue, or hands. The pulse and temperature and skin were normal, as also were the special senses, knee reflexes, coordinating power, and the sensory and motor functions. Finally, a careful inspection of the entire visible body failed to reveal the presence of any of the so-called stigmata of degeneration. The almost perfect symmetrical development—especially of the head and face—is a noteworthy feature in Czolgosz's case, although had deviations been found the fact would have had little weight as tending to show mental disease or degeneracy, as marked asymmetries, both cranial and facial are frequently observed in persons who are quite sane and above the average in mental capacity.

In answer to questions, he stated, in substance, that he was born in Detroit, Mich., of Polish parents; that he was twenty-eight years of age, unmarried, and a laborer by occupation; that he was a Romanist, originally, but had abandoned that faith several years ago because he no longer believed in it; that he attended the common schools as a boy and had learned to read and write; that he had used beer and tobacco, but not to excess; that he had done various kinds of unskilled labor, such as farming, factory-hand work, etc.; that his mother was dead and his father, one brother, and a married sister were living; that, so far as he knew, there was no insanity in his family, and that he had not suffered any serious illness or injury during his lifetime; that he had never been subject to fits, spasms, or vertigo; that he usually ate and slept well, and that his bowels were always regular. He admitted having had sexual intercourse with women, but denied masturbation or other unnatural practices.

Careful inquiry failed to elicit any evidence of delusion, hallucination, or illusion. When questioned as to the existence of enemies, persecutions, or conspiracies against him, he replied in the negative. He evinced no appearance of morbid mental depression, morbid mental exaltation, or mental weakness or loss of mind; nor did he display any indication of morbid suspicion, vanity, or conceit, or claim that he was "inspired" or had "a mission to perform" or that he was subject to any uncontrollable impulse. In fact, as regards the existence of evidences of mental disease or defect, the result of the examinations was entirely negative. On the contrary, everything in his history, as shown by his conduct and declarations, points to the existence in him of the social disease, anarchy, of which he was a victim.

My last examination of Czolgosz was made jointly with Dr. Gerin, physician of Auburn Prison, the evening before his execution. This examination revealed nothing either

in his mental or physical condition which tended to alter the opinion I gave to his counsel at the time of his trial, namely, that he was sane—an opinion which was concurred in by all of the official experts on either side, namely, Dr. Fowler, Dr. Crego, and Dr. Putnam for the people and Dr. Hurd and myself for the defense, also by Dr. Gerin, the only other physician who examined him. Furthermore, the prisoner's manner, appearance, and declarations in the execution room, together with the post-mortem findings, corroborated most conclusively the original opinion as to sanity, while his dying declarations that he killed the President because he regarded him as "an enemy of the good people—the good working people," and that he was not sorry for his crime, all tend to stamp him as an Anarchist. In fact, his bearing and conduct from the time of the commission of the crime to his execution were entirely consistent with the teachings and creed of anarchy. Moreover, neither the three careful personal examinations which I made of him—one alone, one with Dr. Hurd, and one with Dr. Gerin—the measurements of his body by the Bertillon system, nor the post-mortem findings disclosed the slightest evidence of mental disease, defect, or degeneracy. This opinion is confirmed by the people's experts, who repeatedly examined him and observed him from time to time, from the day of the assassination to the close of the trial, and by Dr. Gerin, the physician of Auburn Prison, who observed him carefully during the four weeks that he was in that institution awaiting execution. Dr. Gerin has had exceptional opportunity for the study of criminals, both sane and insane, in his capacity as prison physician and, previously, as assistant physician at the State Hospital for the Criminal Insane.

If Czolgosz was a victim of mental disease, the question would naturally arise as to what form of that disorder he was suffering from. If, in answer to this question, we undertake to make a diagnosis by exclusion, we find the following results: There was absolutely no evidence of insane delusion, hallucination, or illusion. There was none of the morbid mental exaltation or expansiveness of ideas that would suggest mania in any form, none of the morbid mental gloom and despondency of melancholia, none of the mental weakness of dementia, none of the conjoined mental or motor symptoms that are characteristic of paresis, nor was there anything in his manner, conduct, or declarations that would suggest the morbid vanity and egotism, the persecutory ideas, or the transformation of personality which usually characterize paranoia or systematized delusional insanity. In fact, at no time during the period from his arrest to the time of his execution did he exhibit any of the mannerisms, boastful display, etc., or claim to have a "divine inspiration" or "a mission," or make any complaint or suggestion of personal wrongs and persecutions which are so characteristic of paranoiacs; nor did he, during his trial or subsequently, evince any indication of satisfaction or delight at being the central figure of the occasion and the observed of all observers which he was; nor was there any attempt on Czolgosz's part to simulate mental disease. The refusal to talk with his counsel was perfectly consistent with the views which he expressed to the district attorney soon after his arrest, namely, that he did not believe in law and that he wanted no counsel. He did, however, converse with others, namely, the district attorney, from time to time before his trial, also with his guards at the Buffalo jail, with whom he frequently walked in the corridor fronting his cell for an hour or two at a time, conversing with them intelligently the while and making his wants as to bathing, toilet, tobacco, etc., known in a natural manner. He also conversed freely with the people's experts in their earlier examinations of him and talked, though not so freely, with Dr. Hurd and myself, and when, on arraignment for trial and formally asked to plead, he promptly arose from his chair and answered in a clear voice, "guilty." He also responded promptly when directed by the clerk of the court to "stand up and look upon the juror" as each of the jurors was sworn, and resumed his seat in each instance at the proper time. Beyond this he remained mute while in the court room, and yet to any one who observed him closely it was apparent that he was fully aware of and attentive to the proceedings.

A recent writer—an eminent alienist—discussing the mental state of Czolgosz, says: "We can perceive no indications of mental disease in Czolgosz, and were the ab-

surdity of his statements and acts to be a criterion of mental unsoundness we should have to establish a new category of insanity for the reception of the various groups of Anarchists—not to mention other terrorists. * * * We deem it an error to regard Czolgosz's mutism in court when called on to plead and before his counsel as an attempt to simulate insanity. This conduct is in line with his rôle expressed in the theatrical declaration: 'I am an Anarchist and have done my duty.' As it was his 'duty' to slay the President, it is his duty to go to death with his lips sealed, and with this intent, first the plea of guilty and his conduct are perfectly consistent. He shows no reluctance to converse on matters disconnected from the crime, nor even of matters connected therewith provided they do not touch its preparations and thus betray his associates.

Aside from his reticence to his counsel, there was nothing in Czolgosz's manner, appearance, or declarations that was indicative of insanity or of simulating. His reticence toward his counsel, as already intimated, was entirely consistent with his expressed disbelief in government and in law, and his declaration that he shot the President with a clear knowledge of the nature and consequences of the act; and while he pleaded guilty in court and also proclaimed when he went to his death his reason for committing the crime, and declared that he was not sorry therefor, in a manner which clearly implied that he regarded the act as a justifiable one, he did not claim that it was not a crime on his part, as paranoiacs usually do, nor did he in any way indicate that he regarded himself as a victim of conspiracy or persecution. On the contrary, he declared—to the people's experts—that he fully understood what he did when he shot the President and was willing to take the consequences; that "I know what will happen to me—if the President dies I will be hung." Justice White, commenting on Czolgosz's plea of "guilty" when arraigned for trial—a plea which could not be accepted under the law—said: "The prisoner's plea of guilty indicates that he himself anticipates no escape from the penalty which the law prescribes for a crime of the character alleged in the indictment." Again Czolgosz said: "I done my duty, I don't believe in voting; it is against my principles. I am an Anarchist." He further said that he had been an ardent student of the doctrine of anarchy and had attended many "circles" where these subjects were discussed. He had attended a meeting of Anarchists about six weeks ago and also in July; had met and talked with an Anarchist in Chicago about ten days ago; that he belonged to a "circle" in Cleveland which had no name. "They called themselves Anarchists." That he went to Cleveland "on no particular business" the Friday before the assassination. He had been in Buffalo for two or three weeks prior to going to Cleveland. "I planned to kill the President three or four days ago, after I came to Buffalo"—from Cleveland—"I don't believe in the republican form of government, and I don't believe we should have any rulers. I had that idea when I shot the President, and that is why I was there."

In explanation of his abandonment of his religious faith and his rejection of the services of a priest, Czolgosz said the night before his execution: "I would like the American people to know that I had no use for priests. My family are all Catholics and used to go to church until the hard times of 1893. We had been taught by the priests that if we would pray, God would help us along, but it did no good; it didn't help us, and we stopped going to church at that time." He also said at this interview: "McKinley was going around the country shouting prosperity when there was no prosperity for the poor man. I am not afraid to die. We all have to die sometime."

It may be said that Czolgosz's belief, which he expressed as he went to his death, that the President "was an enemy of the good working people" was a delusion, and such it undoubtedly was in the broadest sense of that term; that is, it was a false belief, but it was in no sense an insane delusion or false belief due to disease of the brain. On the contrary, it was a political delusion, so to speak—a false belief founded on ignorance, faulty education, and warped—not diseased—reason and judgment—the false belief which dominates the politico-social sect to which he belonged and of which he was a zealot, who in common with his kind believe that all forms of government are wrong and unnecessary—a body of malcontents whose teachings oppose all government and who advocate the use of violence to destroy the existing social and civil order of things. By his own admissions, Czolgosz was a devout Anarchist and a firm believer in the principles of "Free Society" as

¹The Mental Status of Czolgosz and Assassins Generally, by E. C. Spitzka, M. D., *Medical Critic*, November, 1901.

taught by Emma Goldman—of whom he was an ardent admirer—and others. These were the beliefs which furnished the motives for the murderous deed.

That Czolgosz was an Anarchist and actuated in his crime by the motives which spring from the teachings of that sect is clearly shown by: 1. His declarations after his arrest, namely, that he did not believe in any form of government or law and that all rulers were tyrants who ought to be put down. 2. His admissions to the district attorney that he was a member of anarchistic societies or circles, and had frequently attended the meetings of the same; also that he had been influenced in his views by the "lectures" of Emma Goldman; and that when apprehended anarchistic literature was found on his person. 3. The recognition and commendation which he has received at the hands of Anarchists at their meetings both in this country and abroad since his death, several of these societies having openly recognized him as such and lauded his action.

The Anarchists' creed teaches that when one of their number is selected to do a certain deed, he is to proceed about it quietly and in his own way, taking no one into his confidence; that, having accomplished the deed, if apprehended, he shall not admit his connection with any other members of the circle; that, if convicted and sentenced to die, he shall go to his death without revealing his connection with others, resting secure in the belief that he will be ever regarded by his associates as a martyr and a hero who died in the discharge of a noble duty. The course and conduct of Czolgosz from the beginning down to his death are entirely in keeping with this creed. And, finally, the cool and courageous manner in which he met his death, and the fact that from the day of his arrest until he died he never uttered a word that could be used against his accomplices, if he had any, and that he died, as Anarchists who suffer the death penalty always die, without uttering a word that would tend to incriminate any of his co-conspirators, tend to stamp him as an Anarchist.

In conclusion, the writer, having viewed the case in all its aspects, with due regard to the bearing and significance of every fact and circumstance relative thereto that was accessible to him, records his opinion unqualifiedly that Leon F. Czolgosz on September 6, 1901, when he assassinated President McKinley, was in all respects a sane man—both legally and medically—and fully responsible for his act.

85 MADISON AVENUE.

THE POST-MORTEM EXAMINATION OF LEON F. CZOLGOSZ.

By EDWARD ANTHONY SPITZKA,

NEW YORK,

COLLEGE OF PHYSICIANS AND SURGEONS.

The post-mortem examination was performed by the writer under the supervision of Dr. Carlos F. MacDonald, of New York, who was requested by the State superintendent of prisons to take medical charge of the execution in conjunction with Dr. John Gerin, prison physician. The examination began at 7.50 a. m. and was completed at 12.30 p. m. Among the witnesses were the physicians in attendance at the execution.

As the body lay upon the table in the dorsal position, the right leg, to which the electrode had been attached, was slightly flexed and a trifle abducted. This attitude of the body has been found to be uniform in the post-mortem examinations made on many other electrocuted criminals by Dr. Ira Van Gieson (1). In all of these cases the electrode had been applied to the knee-flexure.

Corresponding to the attachment of the leg-electrode there was a superficial blistering, with some desquamation of the epidermis and some oedema. At the site of application of the head-electrode there were only a few signs of vesication, limited to the occiput.

Post-mortem discolorations existed in all the extremities, but not in the trunk, head, or neck, where the skin was fairly white. There was post-mortem lividity of the toe- and finger-nails. The pressure of the straps had not produced any discolorations. There was a discharge of small amount from the urethra, probably of seminal fluid.

The assassin's physiognomy may be described as youthful and with rather a pleasant expression. The nose is

pointed, slightly retroussé, and fairly straight, deviating a little at the point of the injury inflicted at the time of the assassination. The eyes are blue, the pupils equal and moderately dilated. The hair is a light brown and slightly curly. The face is oval and symmetrical. The ears are well formed and absolutely symmetrical. The mouth is well shaped, the lips full; measuring the true orifice, the width is 4 centimetres, between the outer angles is 5 centimetres. The teeth are of normal shape, but are in poor condition. The external genitals are normal and are unclean with accretions of smegma under the prepuce. There are two flat cicatrices, one 4 millimetres in diameter, the other half as much, on the mucous surface of the prepuce about 5 millimetres from the corona glandis. The tissues under and about these cicatrices are not indurated, and the scars are doubtless the remains of chancroids acquired at some time previously. As stated before, there has been a discharge of seminal (?) fluid, some of which is still within the urethral passage.

At 8.10 a. m. the surface temperature of the body, taken on the side of the chest with a "Seguin" surface thermometer, was 97° Fahrenheit; *per os*, 97.4°.

The body cooled very slowly throughout the examination, and the greatest amount of heat appeared to be retained in the brain. Rigor mortis set in about three hours after death.

The following measurements of the head were recorded:

	Centimetres.
Max. circumference (21½ inches).....	54.6
Max. anteroposterior diam. (from glabella to max. posterior point).....	18.7
Max. lateral diam.	15.5
(Cephalic index = 82.88.)	
Bi-auricular diam. (between roots of zygomatic arches).....	15.0
Length of face (from the intersuperciliary point to the superior alveolar point between the middle incisors).....	9.2
Bizygomatic diam.	14.5
Min. frontal diam.	12.0
Diameter from glabella to inion.	19.1
From vertex to hair-line.	12.0
From hair-line to root of nose.....	6.0
From root of nose to its base.....	5.3
From base of nose to chin.....	7.0
Vertex to chin (diameter).....	25.4
Breadth between pupils of eyes.....	6.8
Breadth of nose at its base.....	3.4
Width of mouth (internally).....	4.0
Width of mouth (externally).....	5.0
Length of ears (both sides equal).....	6.1

After these measurements had been taken, about fifty minutes were devoted to the making of plaster moulds of the entire head.

A cast has since been made from these moulds and two photographic views, in full-face and in profile, are presented here. Unfortunately, the left ear in the mould had been broken during transportation from Auburn, and the fragments were pieced together with difficulty. The defects have been rectified in the photograph. On the subject the ears were perfectly symmetrical, both as to form and size.

The moulds were made upon the head while the body lay prostrate upon the table. This attitude gave rise to the prominence of the "Adam's apple" and to the slight parting of the lips. The hair was rubbed well with vaseline and flattened as much as possible to prevent the plaster from adhering.

On the skull the following measurements were taken:

	Centimetres.
Max. antero-posterior diam.	18.0
Max. lateral diam.	14.7

(Cranial index, 81.66.)

The head of Czolgosz, as is typical of the Poles, falls into the subbrachycephalic class; according to Weisbach, the cephalic index of forty Poles was 82.9 (82.88 in Czolgosz).

At the time of Czolgosz's reception at the Auburn State Prison (September 27th), measurements of his body were

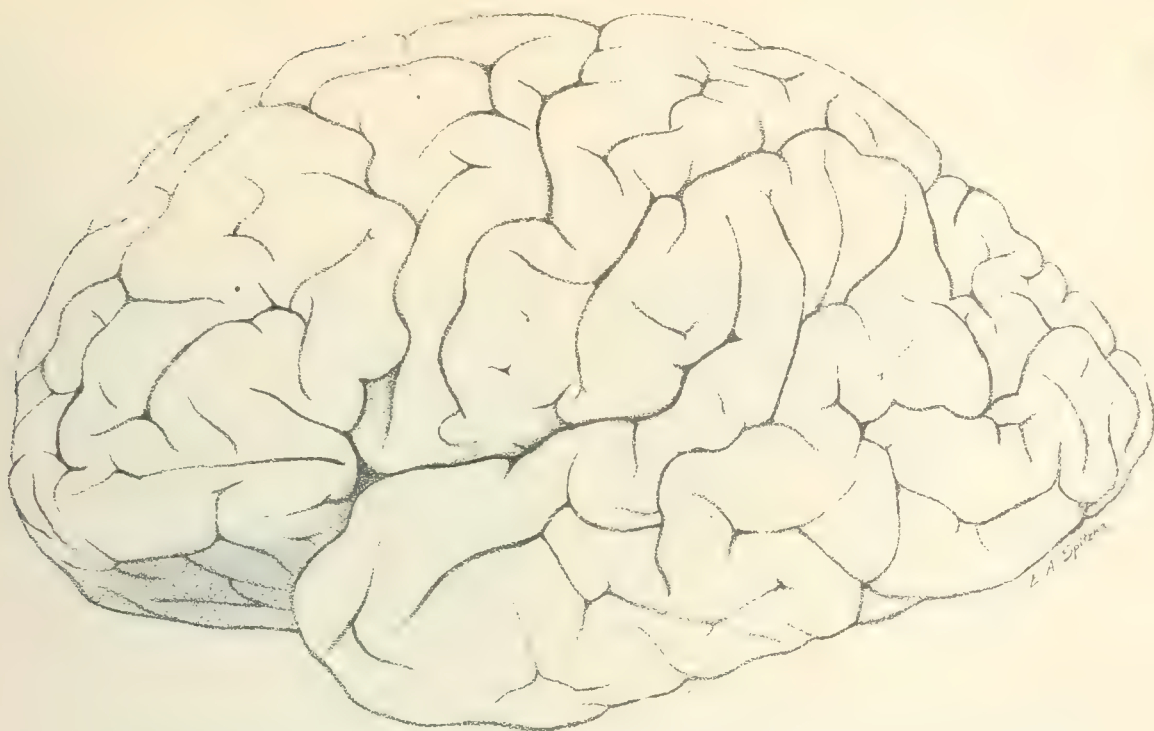


FIG. 1.—Lateral view of the left hemicerebrum of the assassin Czolgosz. This drawing, as were the others of the brain, was made from the fresh specimen immersed in a salt-solution. Although the author cannot aver photographic accuracy, these drawings show the disposition of the fissures and gyres in a fairly correct manner.

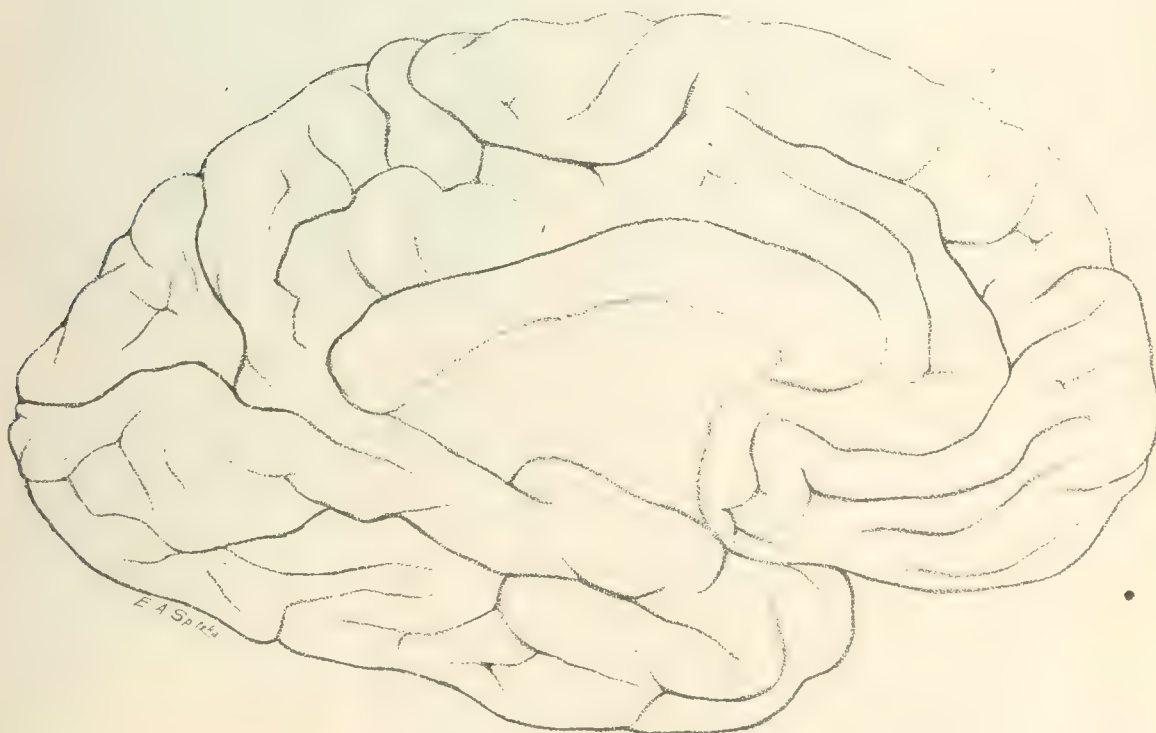


FIG. 2.—Mesial view of the left hemicerebrum.

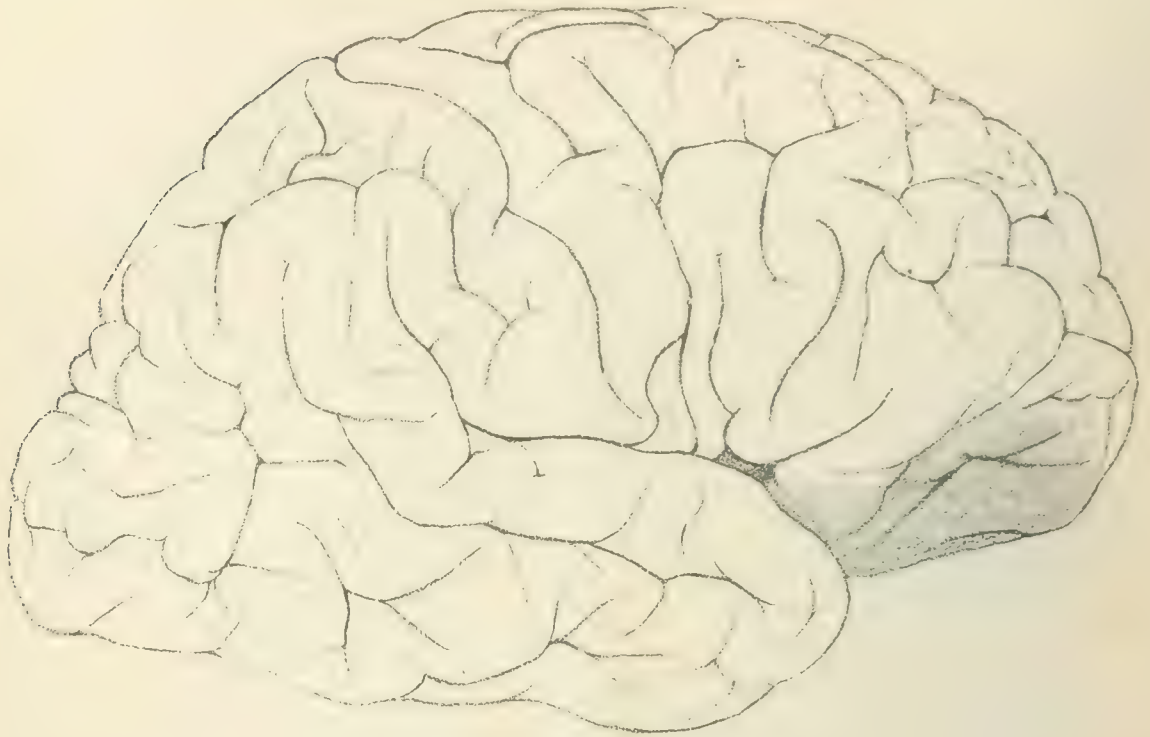


FIG. 3. Lateral view of the left hemisphere.

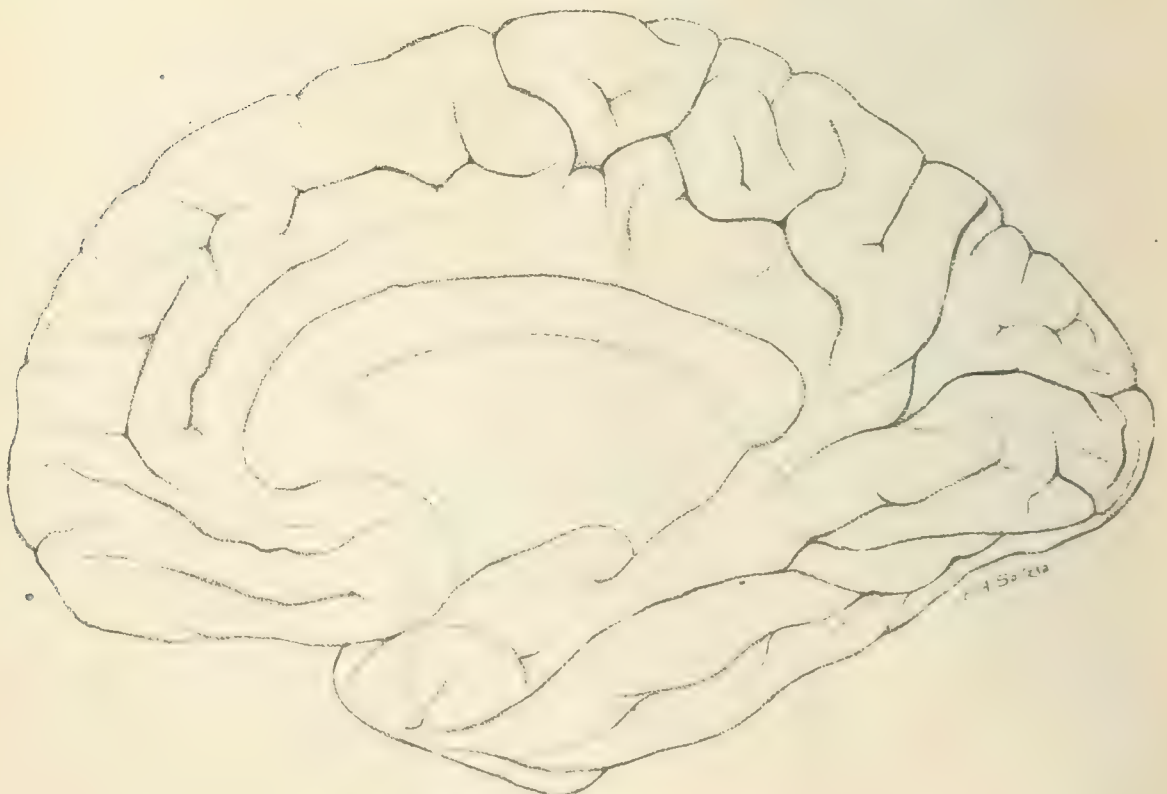


FIG. 4. Mesial view of the right hemisphere.

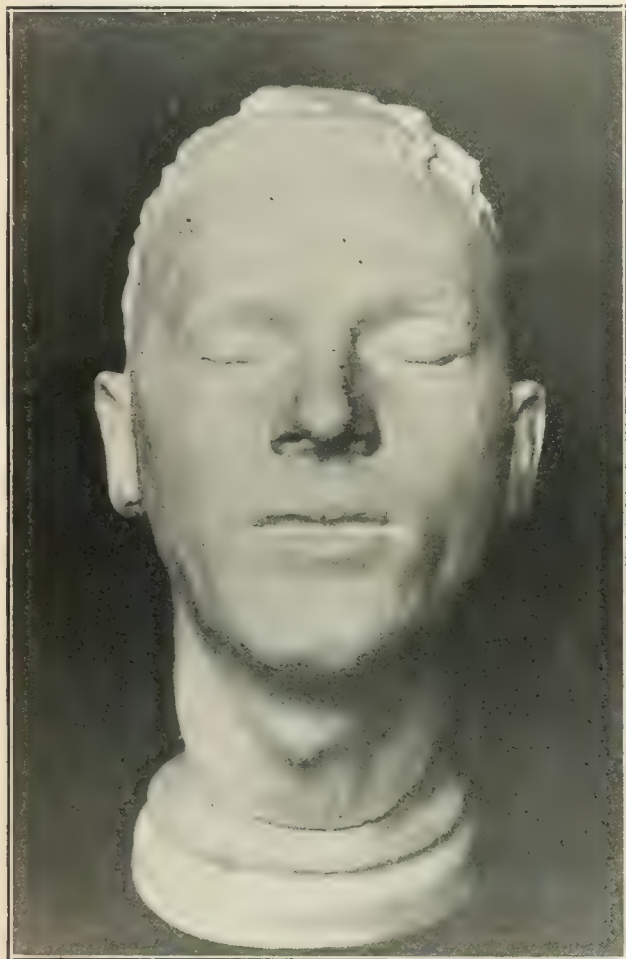
taken according to the Bertillon system by J. N. Ross. I reproduce here the more important figures.

	Centimetres.
Stature (5 feet 7½ inches).....	171.4
Stretch.....	181.0
Trunk.....	91.1
Head, length.....	18.6
Head, width.....	15.6
Cheek, width.....	14.5
Right ear, length.....	6.3
Left foot.....	26.0
L. mid. foot.....	11.7
L. lit. f.	0.0
L. cubit.....	47.2

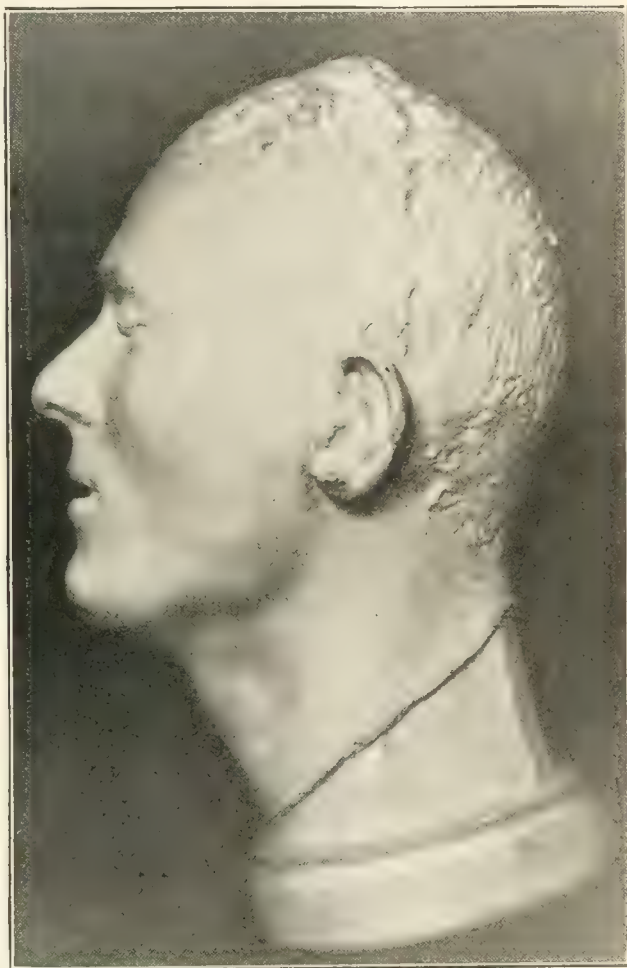
IV. Sev. moles on front and back of neck."

Next the cranium was opened and the brain removed. The scalp was divided by means of a median incision passing from the glabella to the inion. On incising the scalp, a quantity of dark fluid blood escaped. The scalp was of moderate thickness, firm and well adherent to the skull. The two flaps of the scalp were dissected from the skull and drawn down on either side of the head. The sutures were well marked and no synostosis was observed. Supernumerary or abnormally developed bones were not discernible.

The calva was removed by a saw-cut passing around the cranium about 1.5 centimetre above the glabella and about 2.5 centimetres above the inion. In Fig. 7 is shown the outline of the thickness of the skull along this section. In



Front view of the plaster cast.



Profile view of the plaster cast.

Photograph of a cast of the head, from plaster moulds made by the writer soon after death. *Defects:* Unfortunately the left ear in the mould had been broken in transit, and the fragments were pieced together with difficulty. The defects were rectified in the photograph. On the subject the ears were absolutely symmetrical.

"These measurements are all medium and each is consistent with the others. The stretch and cubit measurements might be said to be slightly out of proportion, indicating that his forearms were slightly longer than those of a majority of men of his stature, but this excess of length is not sufficient to call for comment."

His weight on that day was 141 pounds.

The marks and scars are here reproduced in the order in which they appear on the prison department's identification card:

I. Sev. sm. cics, post. first finger, left hand near 2d joint. Cic. of 1 ob. ex. on 1st Phal. 3d finger left hand post.

II. Cic. of 3 rec. ver crossing 3d joint, mid. fgr. right post. Cic. of 1 circ. at 5 over right wrist post.

III. Mole at 5 under left cheek-bone and 9 to left med. line.

the removal of the calva, the saw was supplemented by the chisel and hammer. The calva came off readily, the dura being non-adherent. There was no marked escape of cerebrospinal fluid. Along the saw-cut the skull was slightly flatter in the frontoparietal region on the right side, while it was more curved or rounded on the left. The right parieto-occipital region was a trifle fuller than on the left side. The markings on the internal surface of the calva, such as the groove for the superior longitudinal sinus and for the meningeal vessels, the digitations, and the impressions for the Pacchionian bodies, etc., were all distinctly marked. The dura was grayish-white, moderately translucent and somewhat dry; there existed a marked engorgement of dark fluid blood. The dura was neither tense nor loosened. The Pacchionian bodies were of the usual number and distribution. The inner surface of the dura was

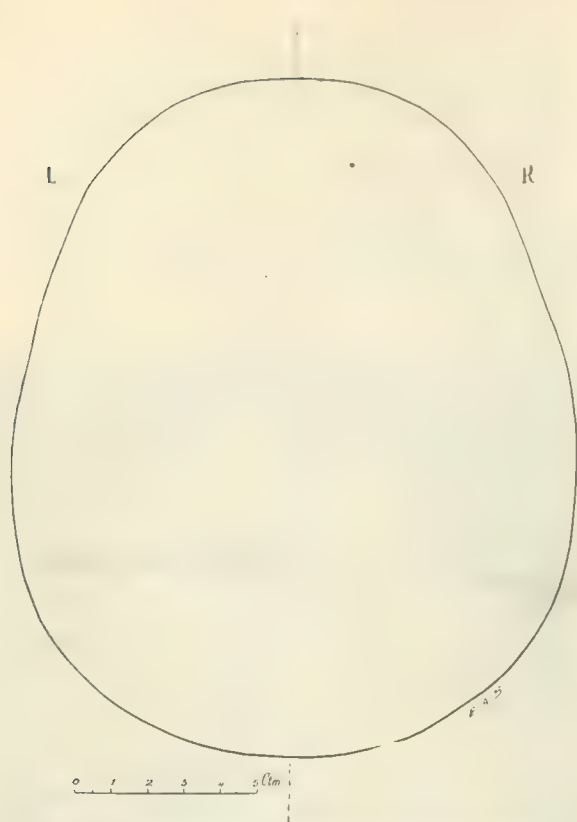


FIG. 5. Horizontal outline of the head (by leadstrap).

fairly moist. There were no evidences of hæmorrhagic pigmentation or of pachymeningitis.

The brain, invested by the pia-arachnoid, was exposed by crucial incisions into the dura, which was perfectly non-adherent to the membranes within. The brain was carefully removed and during most of the subsequent examination was kept in a salt solution (about 1 part in 20 of water). At the time of removal, still invested by the pia-arachnoid and with the ventricles unopened, the entire brain weighed fifty-one and a half ounces avoirdupois (1,460 grammes).

The base of the skull was normal in every respect.

The pia-arachnoid was of normal thinness, and devoid of opacities or other signs of disease, past or present. The

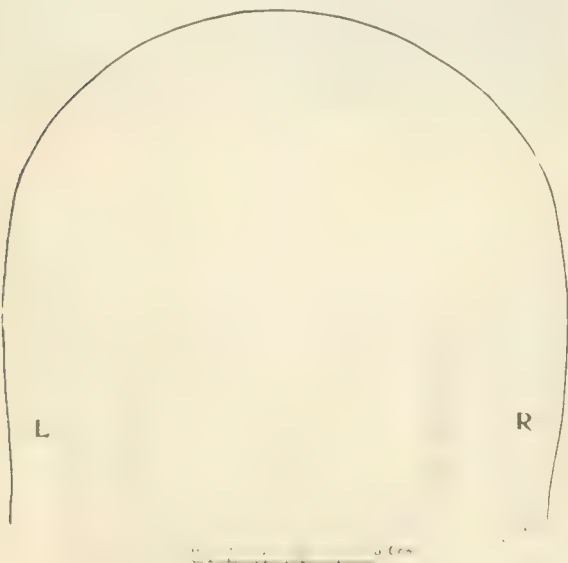


FIG. 6. Outline over the vertex, from ear to ear (taken just in front of the roots of the zygoma).

only unusual appearance was an injection of bright red blood in the finer vessels of the pia, due—if we may judge from previous reports of autopsies on electrocuted criminals—to the high electromotive force exerted by the fatal current in this part of the body. The pia was stripped off with ease, being nowhere adherent to the cortex.

EXAMINATION OF THE BRAIN.

(See Figures 1, 2, 3, and 4.)

In general the brain presents no marked peculiarities of shape or size. It is firm to the touch and no portion of it, despite most careful examination, feels softened or indurated.

The brain was divided into its natural segments according to the following method: The ectal border of the optic tract and the tænia thalami ("ripa" of Wilder) are used as guides for a simple incision; those of either side converge cephalad to meet in front of the chiasm; the usual cut through the callosum and the terma (lamina terminalis) completes a trisection which leaves the cerebrum (prosencephal) and brain-axis separated as nearly the ideal as can be. This mode of dissection is a modification of Meynert's plan and is a method by which each hemisphere, with the insula intact, is separated from the brain-stem; whereas Meynert, by trenching round the circum-insular boundaries sep-

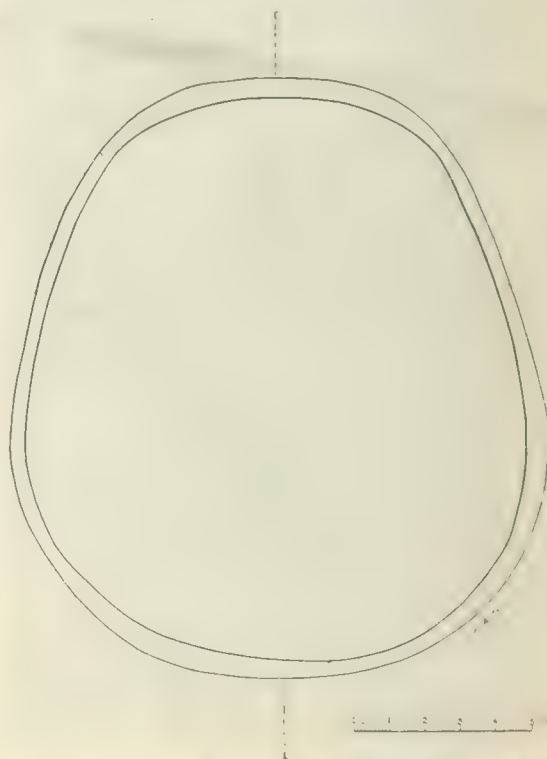


FIG. 7. Outline drawing of the skull in the plane of the saw-cut described in the text, showing the thickness of the bones.

arates the convex cortical mass from the brain-stem plus the insula, leaving a cortical component attached to the axial structures. The Meynert method consequently does not give the weight of the cerebral hemispheres strictly speaking. As far as the caudatum and lenticularis are concerned, this would not be a serious objection; but as it also excludes the important cortical area of the insula—no inconsiderable portion of the cerebral projecting and associating tracts—it falls short of the method adopted here.

After the brain had been thus dissected and drained, and the pia-arachnoid stripped off the cerebrum, the segments were found to have the following weights:

	Grammes.
Left hemisphere (without pia).....	585
Right hemisphere (without pia).....	600
Cerebellum (with pia-arachnoid).....	166
Isthmus (with pia-arachnoid).....	64
	<hr/> 1,415

or a trifle less than 50 ounces.

Examination of the paracœles (lateral ventricles) in both hemispheres revealed the veins of the striatum (the striatal veins) injected with deep violet-colored blood. The cornua were of normal extent and conformation throughout. The endyma was smooth, the choroid plexus was normal and contained little blood; the velum interpositum ("velum" of Wilder) was normal.

DESCRIPTION OF THE FISSURES AND GYRES.

LEFT HEMICEREBRUM.

The sylvian fissure is $6\frac{1}{2}$ centimetres in length; the episylian, $2\frac{1}{4}$ centimetres; the hyposylvian is absent. The presylvian ramus is 2 centimetres in length, the subsylvian 1 centimetre in length.

The central fissure is fairly flexuous and ramified; it is uninterrupted throughout its length and is separated from the sylvian by a narrow isthmus. At its ventral end the fissure terminates in a hook-like manner. The dorsal end appears on the mesial surface. The supercentral fissure is confluent with the superfrontal, but is separated from the precentral. The superfrontal is distinct in the mid- and post-frontal regions, but is absent in the prefrontal region. The three-tier type is preserved in the prefrontal region by the existence of a medifrontal fissural segment about 4 centimetres in length, and which is confluent with the orbitofrontal. This is not very clearly seen in the figure, owing to the effect of the convexity. The reader is referred to the schematic outline in Fig. 8.

The precentral fissure is confluent with a small diagonal fissure, and this in turn with the presylvian. It sends an "anterior precentral ramus" across the medifrontal gyrus to anastomose with the superfrontal fissure.

The subfrontal fissure is independent and sends off several rami into the neighboring gyres. There is a long radiate fissure.

The precentral gyrus is not very broad as compared with the postcentral. The three frontal gyres are fairly massive and marked by fissures which run generally transverse.

The postcentral fissural complex consists of three segments. The dorsal one is very flexuous and ramified, but independent. The middle segment is confluent with the parietal, and is only superficially joined to the third segment, the subcentral. The transpostcentral is hardly visible on the external surface, but on examination is found to communicate with the circuminsular fissure.

The parietal fissure is notable for the angle which it makes with the intercerebral cleft, converging rapidly, toward it as it passes caudad. It communicates with the paroccipital fissure over a vadium about 6 millimetres in depth. Otherwise the paroccipital does not communicate with any other fissure. There are two transparietal fissures; the cephalic one communicating with the precuneal fissure on the mesial surface.

The temporal lobe is of good size and shape. The super-temporal fissure is uninterrupted throughout its length and communicates with the intermedial over a slight vadium. The mediotemporal fissure is represented by four segments. Numerous fissures, the "lateral occipital" among them, mark the region of the occipitotemporal transition. The postcalcarine fissure appears on the lateral surface for about 2 centimetres.

The postcentral gyrus is of good development and is fairly wide. The marginal, angular, and post-parietal gyral portions of the subparietal lobule exhibit a moderate development. The parietal gyrus is of cuneiform shape, broad cephalad, narrow caudad. The supertemporal gyrus is very sinuous. The remaining temporal gyres are fairly wide and well developed.

The subcalcarine gyrus is wide in its caudal portion. The cuneus is small, rather unusually so. The precuneus is of good size and conformation. The paracentral gyrus is of typical appearance and of the usual size. It is traversed by a well-marked inflected fissure and by a tri-radiate intraparietal fissure. The mesial surface of the superfrontal gyrus is of moderate size and is marked by five or six transverse fissures, three of which are rami of the supercallosal. The callosal gyrus in its cephalic half is doubled by a long fissure running parallel with the supercallosal; in its caudal part it is traversed by several transverse fissures.

There are two well-marked rostral fissures (rostral and subrostral) and a short transrostral. The supercallosal fissure is long and anastomoses with the paracentral over a vadium of 5 millimetres.

The paracentral fissure in turn anastomoses with the precuneal over a vadium of 3 millimetres. The occipital and calcarine fissures anastomose freely. A "posterior cuneolingual" subgyrus tends to partially separate the calcarine from the postcalcarine. The collateral fissure is fairly well ramified.

The insula exhibits a good development. There are six gyres proper, with seven peri-insular digitations. The insula was completely covered by the opercula.

RIGHT HEMICEREBRUM.

The sylvian fissure is $5\frac{1}{2}$ centimetres in length; the episylian 3 centimetres; the hyposylvian $1\frac{1}{2}$ centimetres; the presylvian $2\frac{1}{2}$ centimetres; the subsylvian is very short. The central fissure is uninterrupted throughout its length, and is separated from the sylvian by a very narrow isthmus. Its dorsal end crosses the dorsi-mesal margin. The supercentral fissure anastomoses with a long superfrontal fissure, but not with the precentral.

The precentral fissure joins both the transprecentral and the diagonal, and by means of these the sylvian cleft.²

This fissure gives off an "anterior precentral ramus" from which springs the caudal segment of the subfrontal fissure.

The superfrontal fissure is long and uninterrupted, extending nearly to the frontal pole. There is no true medi-

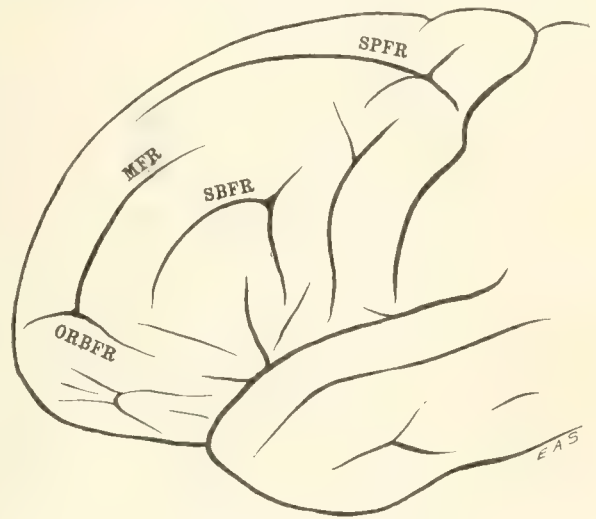


FIG. 8.—Diagrammatic sketch, showing disposition of the fissures and gyral tiers in the frontal lobe of Czolgosz.

frontal fissure present. The subfrontal fissure is in two segments, the caudal segment being confluent with the precentral by means of its "anterior ramus"; the cephalic segment anastomoses with the orbitofrontal. Besides an independent radiate fissure there are other unnamed fissures in the subfrontal region. There are two long sagittally directed orbital fissures; the lateral one of these communicates with the orbitofrontal.

As in the left half, the precentral gyrus is rather narrow as compared with the broader postcentral gyrus. The three frontal gyres are all of good width and are chiefly marked by transverse fissures.

The postcentral fissural complex is made up of two segments superficially confluent with each other. The dorsal segment is short. The ventral segment is longer, and is confluent with the parietal fissure. The parietal fissure is uninterrupted, deep, and separated from the paroccipital fissure by an isthmus. There is a well-marked post-paroccipital fissure, and one distinct transparietal.

The supertemporal fissure is long, uninterrupted, and not deeply confluent with any other fissure. There are four mediotemporal fissural segments. The intermedial joins the parietal. There is a fairly well-marked "lateral occipital" fissure.

The postcentral gyrus is fairly wide and flexuous. The parietal gyrus is wide, and exhibits the same cuneiform shape as described for the left side. Of the subparietal gyres the angular gyrus is of fair size, while the remainder

²Found by Sernoff in 40 per cent. of Polish brains.

of this territory shows only a moderate development. The paroccipital gyrus is very small, but quite flush with the general surface of the brain.

The gyres of the temporal lobe show very good development, and in the occipitotemporal transition the markings are quite complex.

On the mesial surface the supercallosal fissure consists of two segments, and there is a similar duplication of the callosal gyrus (in its cephalic portion) as has been described in the left half. A notable peculiarity consists in the confluence of the inflected fissure with the paracentral stem, while the cephalic paracentral limb is separated from its stem, but is joined to the caudal end of the supercallosal. There is a tri-radiate intraparacentral. The precuneal fissure would be independent but for a superficial junction with the paracentral.

The occipital fissure is deeply confluent with the calcarine. The postcalcarine is tri-radiate and separated from the calcarine by a "posterior cuneolingual" isthmus.

The superfrontal gyrus is fairly well marked by many transverse fissures, and by two long and distinct rostral (rostral and subrostral) fissures. The precuneus is large, a little larger than its fellow on the left side. The cuneus is as small as on the left half. The subcalcarine gyrus is of considerable width in its caudal portion.

The insula presents an ordinary degree of development and, as on the left side, possesses six gyres, with seven peri-insular digitations.

SECTION OF THE BRAIN.

In cutting the brain, the resistance to the knife suggested neither increased nor diminished consistence. The cut surface was moderately moist, the grey as well as the white matter were of normal color, the cortex was of the usual thickness, and there existed neither anæmia nor hyperæmia. No hæmorrhages, sclerotic patches, neoplasms, or other lesions were discoverable.

The basal ganglia, crura, cerebellum, pons, and oblongata were all perfectly normal, there being even an absence—so far as naked-eye examination could determine—of the small hæmorrhages in the floor of the fourth ventricle which have been usually found in electrocuted criminals (2). The spinal cord was not examined.

EXAMINATION OF THE THORAX AND ABDOMEN.

An incision was made from the top of the sternum to the pubic symphysis, a quantity of dark fluid blood escaping. The diaphragm was found attached to the sixth rib on both sides of the sternum. About three to four fluid drachms of clear fluid were found in the pericardial sac. The heart was firm and appeared to be in tetanized condition; it had ceased in systole. This contracted condition of the heart is doubtlessly due to the high electromotive force of the fatal current. The ventricles were empty; the heart walls, endocardium and valves were normal. The weight of the heart was eleven ounces. Both lungs were somewhat emphysematous, floating a trifle more than half out of water. They were moderately pigmented and of firm consistency. None of the bronchial lymph nodes were enlarged. Except for a few bands of pleuritic adhesions of the right lower lobe, there were no lesions in either lung. The left lung weighed $7\frac{3}{4}$ ounces, the right lung $8\frac{1}{2}$ ounces.

The larynx, the aorta, and the venæ cavæ were normal. The stomach was in the normal position, well contracted, and well under the diaphragm, with only a small residue of food near the pyloric end—the prisoner having had nothing to eat since the evening before the execution.

The examination of the intestines was a brief one, as nothing unusual was seen. The appendix was 8 centimetres in length, free, and lay dorsad and mesad of the cæcum.

The pancreas was normal.

The liver was dark, hyperæmic, but healthy; there were no patches, infarctions, or other lesions. The gall-bladder contained about one ounce of clear bile. The liver weighed 61 ounces.

The spleen was also hyperæmic, mottled with light pink streaks, but of normal structure. Weight, $7\frac{3}{4}$ ounces.

The kidneys were moderately supplied with fat, markedly hyperæmic, but all the structures could be made out clearly to be of normal condition. The left kidney was

somewhat larger than usual. The capsule was non-adherent in both instances. The left kidney weighed $7\frac{1}{4}$ ounces; the right weighed $5\frac{1}{4}$ ounces.

The bladder was somewhat contracted, firm, and contained about three ounces of clear urine. The bladder wall and mucous membrane were normal in all respects. The prostate was rather firm, but not enlarged. The urethra, testes, etc., were normal.

It had been the writer's purpose to make a fuller anatomical and anthropometrical investigation upon the assassin, but the peculiar circumstances which arose in the matter of the disposal of the body, and the anxiety of the prison's warden to put the body under earth, forced me to conclude my researches after having obtained the most essential data for purposes of record and future study.

The results of the necropsy can be summed up by saying that Czolgosz was in excellent health at the time of his death. There was, of course, a marked condition of hyperæmia of all the viscera, and the blood was considerably altered in that it remained fluid, doubtless due to the destruction of the fibrin-ferment, or of the fibrinogen, or both. These phenomena, as also the seemingly tetanized condition of the heart, have been observed by E. C. Spitzka, Carlos F. MacDonald, Van Gieson, and E. W. Holmes (3) on criminals executed by lethal currents of electricity.

The external appearances of the body of the assassin, especially the facial expression, have been admirably described by Murat Halstead, who happened to be present, in a short but vivid account of the autopsy, entitled *Czolgosz after Death*.

"The spectacle was interesting; the assassin had been dead but a few minutes, and was lying at full length on his back on the table provided for the surgeons, his body white as marble, his face not at all distorted. One might say he was as if sleeping, but that would not describe the expression of the features, though that was almost of perfect repose. The head rested on the back part of the table so as to elevate the chin and allow the forehead to slope downward. There was no sign of a great agony; the hair had not been removed for the electrode, but was full of water from the sponge, and in disorder. If there was any mark on the head made by the deadly shock it was not visible. There was a red blotch on the right leg below the knee. The strong throat, with a distinct "Adam's apple," was prominent. The lips were slightly parted with more than the curl they had in life. There was nothing in the appearance of the body of the emaciation from imprisonment so often referred to. Any physician would say the corpse was that of a well-nourished young man. The figure was of good proportions, his limbs especially so. The arms were not muscular. Evidently he was not a man who had cultivated his muscles by exercise or expanded them by labor. The arms were of a young man of leisure—smooth, round, and fair. His hands were not in any way notable. He had high insteps, neat ankles, and long toes. The muscles of the legs were better developed than those of his arms, indicating he was swift of foot. He was not noticeably spare in body; his chest was round and symmetrical—not lean—but the ribs quite distinct. With his head thrown back, it seemed to have been well poised in life, more so than is shown in his pictures, all of which that are familiar having been taken in prison. Nothing in his face or his person gave indication of heavy feeding or drinking, or of evil indulgence. There were none of the inevitable traces of confirmed dissipation."

The question as to whether his body invested a healthy mind opens up a wide topic for discussion which it is not entirely in the writer's province to pursue. So far as our knowledge of the correlation of brain structure and brain function extends, nothing has been found in the brain of this assassin that would condone his crime for the reason of mental disease due to intrinsic cerebral defect or distortion. The brain weight, though by itself unimportant, when considered in its other relations, points to a good condition of the organ. Divested of its membranes, dissected, drained, and after being immersed in a salt solution for several hours, its weight was 1,415 grammes, a trifle less than fifty ounces. This weight is even a little over the average. Giltchenko (4) records observations upon the weight of 102 Polish brains, the average being for males, 1,397.8 grammes, with an average stature of 168.12 centimetres. The development of the fissures and gyres, from a morphological viewpoint, has taken place in the direction usual in ordinary average brains. There are no marked evidences of arrested development or of pithecoi-

*The "hearty breakfast" so graphically described in most newspapers was but a fragment of the more nutritious

dal anomalies.¹ Generally speaking, this brain does not exhibit that special kind of asymmetry of gyral structure in the cerebral halves that is so characteristic of the brains of highly endowed individuals. There are many features in the one hemisphere that are reproduced almost exactly alike in the other. The few peculiarities encountered in the course of the fissures, such as the confluence of the left precentral, by its anterior ramus, with the superfrontal—across the medifrontal gyrus; or the separation of the right cephalic paracentral limb from its stem, while at the same time the inflected joins the paracentral—(a feature found by the writer in 9 out of 160 hemispheres in which the inflected was present (5) also the smallness of the cuneus—are insignificant so far as individual brains are concerned, and will be discussed at length in a later contribution (6).

The skull is not symmetrical, but the asymmetry is slight and fully within the normal range of variation. An absolutely symmetrical skull probably does not exist.

It is a probable fact that certain oft-mentioned aberrations from the normal standard of brain structure are commonly encountered in some criminal or degraded classes of society, and those who have attempted to found a school of degeneracy have endeavored to explain crime and social wickedness as due to the "accidental persistence of lower types of human organization." But these structural anomalies, so far as they have been described in the brains of criminals, are too few and too insufficiently corroborated to warrant us in drawing conclusions from them. Various perversions or anomalies of mind may exist in this class without presenting a uniform criminal type, either from the sociological or the anatomic aspect. Of course, it is far more difficult—and it is impossible in some cases—to establish sanity upon the results of an examination of the brain than it is to prove insanity. It is well known that some forms of psychosis have absolutely no ascertainable anatomical basis; and the assumption has been made that these psychoses depend rather upon circulatory and chemical disturbances. So far as this question touches upon the brain and body of Czolgosz, there have been found absolutely none of those conditions of any of the viscera that could have been at the bottom of any mental derangement. Taking all in all, the verdict must be, "socially diseased and perverted, but not mentally diseased." The most horrible violations of human law cannot always be condoned by the plea of insanity. "The wild beast slumbers in us all. It is not always necessary to invoke insanity to explain its awakening."

In conclusion, the writer wishes to express to Dr. Carlos F. MacDonald his appreciation of, and thanks for, the exceptional opportunity afforded in the performance of this autopsy.

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66 EAST SEVENTY-THIRD STREET.

D. D. S., in *Medicine* for December, 1901, must be surprised to find that the citation of "It is admitted by E. A. Spitzka that the brain presented anomalies" is directly contradicted. This is one of those numerous instances showing the desirability of medical writers' awaiting the responsible publications of scientific results of conclusions, instead of giving newspaper canards currency by incorporating them in their papers, and at the same time distorting facts to fit the theories they hold. The paper of Dr. Talbot presents such an endless vista of degeneracy as to give ground for apprehension

Therapeutical Notes.

The Treatment of Passive Congestions of the Liver of Cardiac Origin.—Dr. Bommier (*Journal de médecine de Bruxelles; Revue médicale*, December 4th) says that in passive hepatic congestions of cardiac or pericardial origin, cardiac tonics must be employed, digitalis, caffeine, strophanthus, spar-teine, or Huchard's pills:

R Watery extract of ergot of rye. . . 60 grains.
Powdered squill. 45 "
Calomel. 30 "
Powdered digitalis. 15 "

M.

For 40 pills, three to be taken daily for thirty days.

Lactic Acid in Alopecia.—Balzer (*Journal des praticiens*, August 24; *British Medical Journal*, December 2, 1901) recommends the following treatment for alopecia. After cutting the hair short and washing with soap the following lotion is applied:

R Corrosive sublimate. $\frac{1}{2}$ part;
Acetic acid. 1 "
Alcohol. 100 parts;
Ether, {
Alcoholic solution of lavender, } of each, 50 "
M.

After drying the head is rubbed with lactic acid, about 30 per cent.

Picric Acid in the Treatment of Gonorrhœa.—H. de Brun (*Revue générale de clinique et de thérapeutique*, June 15, 1901; *Annales de dermatologie et de syphiligraphie*, September, 1901) says that injections of a 1 in 200 solution of picric acid are often painless, while those of 1 in 100 may cause considerable pain, but are never intolerable. Given with a compressed meatus and so retained for three minutes, and repeated from two to three times daily if they cause little pain, or once daily if they are borne with difficulty, they are said to produce a radical cure of acute gonorrhœa in from four to five days; from the first injection the discharge becomes clearer and loses its purulence; it sometimes becomes more abundant, but diminishes and disappears when the injections have been suspended. In chronic gonorrhœas that resisted all previous treatment, rapid and final cures have been obtained.

The reader who may have happened to see an article entitled Degeneracy and Political Assassination, by Eugene S. Talbot, M. D., that many other facts on which it rests were obtained in a similarly uncritical way and hence have misled that writer as unfortunately as in the Czolgosz matter.

The incorrect and misrepresenting citations were sufficiently trying without additional infliction in the way of an invidious implication, be it ever so unintentional on Dr. Talbot's part, but when the entire tone of the article in reference to the Czolgosz trial is critical anent its alleged "cooked and dried" character, and he intimates suppression of post-mortem evidences, it sounds as if "It is admitted by E. A. Spitzka that the brain presented anomalies," indicated an unwilling admission and hence a partisan spirit. However, as the statement is altogether false, this feature needs no more consideration than "no microscopic examination worthy of the same was made."

We deserve at least this piece of justice, that we did not pretend to have done anything we did not do. Had we made one, it would have been our aim to be more accurate in citation of collateral writers than Dr. Talbot has been or seems to have aimed at being. So how it can have been worthy or unworthy of any name, I cannot see.

Dr. Talbot, not familiar with the laws of New York State, commits another error when he slays: "The course of the court in refusing to accept his plea of guilty and forcing him to accept counsel is justifiable only on the ground of assumed insanity." The laws of this State do not permit the plea of guilty in capital offenses; the code hereto appertaining is mandatory, and leaves no discretionary power with the judge. Consequently his action permits of no criticism, and above all, renders any proposed interpretations of his motives equally gratuitous and unwarranted.

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THE NEW YORK MEDICAL JOURNAL.

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THE PROPOSED UNITED STATES HEALTH
SERVICE.

There has recently been introduced in the Senate by Mr. Perkins and in the House of Representatives by Mr. Hepburn a bill "to increase the efficiency and change the name of the United States Marine-Hospital Service." The text of the bill will be found in this issue of the *Journal*. In the Senate it has been read twice and referred to the Committee on Public Health and National Quarantine, and the indications are that it will be enacted. We understand that the bill has the approval of Surgeon-General Wyman.

The advocates of the bill argue that the name Marine-Hospital Service does not adequately indicate the scope of the corps's activities, for, although it still treats annually some 56,000 sick and injured seamen and will probably go on increasing in this field of duty, its enforcement of quarantine regulations at home and abroad, its management of epidemics, its inspection of immigrants, its continual scientific investigations, and its publications bearing upon matters affecting the public health make its sanitary importance far greater than that of the specific service for which it was originally created. There has been a somewhat persistent demand by certain members of the profession that the general government should establish a public health service which should be such in name as well as in fact. This, it is thought, the bill, if enacted, will accomplish by dignifying and expanding the present service in a manner as nearly in accord with the expressed feeling of the American Medical Association and the National Conference of State Boards of Health as is at present practicable. It is further pointed out that under the proposed service the

country will be more advantageously represented in international sanitation than it is at present, and this, it must be admitted, is a point of great magnitude and one that is doubtless destined to grow more and more important in the future.

All these arguments seem to us to be sound, and unless there is much more to be said against the bill than has thus far come to our knowledge, we see no reason why its enactment would not be highly promotive of the public welfare and of the dignity and efficiency of the service. There may, of course, be some sentimental regret among the officers of the corps at changing a name under which they have been honorably designated for a great many years, but any such feeling should give way before the substantial advantages which the bill promises, and we feel sure it will. The objection has been raised that certain State laws exist in which the Marine-Hospital Service is mentioned by name, and consequently that, so far as the service was concerned, these laws would become inoperative and remain so until they were amended by the substitution of the new name. But it may confidently be assumed that such substitution would be effected at the earliest opportunity, so that in any event the officers of the service would be but temporarily deprived of the benefits conferred upon them by State laws. We are inclined to think, moreover, that even temporary hardship would not result, for we believe that the courts would hold that the formal substitution was not necessary, the Health Service being the heir, so to speak, to all the privileges and immunities of the Marine-Hospital Service.

We are particularly glad to see that the bill provides for a more adequate salary for the surgeon-general, for his duties and responsibilities have by legislative action, as well as by developmental increment, been vastly increased since the present salary was fixed. The number of patients now treated annually in the marine hospitals is almost four times as large as it was in 1875, when the surgeon-general's remuneration was established, the office force is nine times as large, the disbursements are nearly four times as great, and the correspondence is twelve times as voluminous. Finally, the medical examination of immigrants and the quarantine service of Hawaii, Puerto Rico, Cuba, and the Philippines have been added to the duties of the service and to the responsibilities of the surgeon-general.

ANTIDIPHtherITIC SERUM IN THE TREATMENT OF PNEUMONIA.

Rather less than a year ago a French physician, M. Talamon, presented before the Hospital Medical Society of Paris the results of his clinical experience in the use of antidiphtheritic serum in the treatment of pneumonia. He had been led to employ it, not by the notion that it might have any specific action upon the *Pneumococcus lanceolatus*, but on the supposition that, along with its special effect on the diphtheria germ and its products, it had an influence in promoting phagocytosis, and so would aid the system in the struggle against any infectious disease. Far from appearing chimerical, this theory so commended itself to two other French physicians, M. Landrieux, of the Lariboisière, and M. Legros, a hospital interne, that, in spite of their having been unable to substantiate it in experiments on white mice, they have still felt encouraged to give a trial in actual practice, and they report their results in the *Journal des praticiens* for December 14th.

In a series of seventeen cases of frank pneumonia, they treated ten with injections of antidiphtheritic serum, not, however, to the neglect of the usual therapeutical measures, especially the use of digitalis, caffeine, and the cold pack. All the seven patients who were treated without the injections of antitoxine recovered, while two of the ten others died. On the face of it, therefore, their experience is not favorable to M. Talamon's treatment. Nevertheless, it must be said that the number of cases was too small to warrant the deduction from them of any final conclusion, especially since one of the fatal cases did not come under treatment until the disease had been progressing for eight days, had become severe, and had invaded successively all parts of the right lung. It is interesting to note some of the features of the other case. A coachman, forty-two years old, was admitted into the hospital on the second day of a pneumonia of medium intensity, with a temperature of a small fraction over 101° F., the pulse 86, and the respiration 40. On the right side, toward the median portion of the inner border of the scapula, there was an area as large as the palm of the hand of crepitant râles with bronchial respiration. The expectoration was greenish-yellow, and contained numerous specimens of *Pneumococcus lanceolatus capsulatus*. A blood count showed 3,720,000 red and 18,600 white corpuscles. The

conclusion was that there was very well-marked polynucleosis. Twenty cubic centimetres of serum were injected that afternoon. During the night the patient was seized with progressively increasing dyspnoea, and he died the next morning.

The authors remark that they have sometimes seen a sudden fall of temperature within twenty-four hours after a second injection in adult patients admitted between the third and fifth days of the disease, but they add that they have observed the same thing after two days' treatment with the cold pack, without the use of serum. It seems hardly probable that these results, inconclusive as they are, will lead others to feel warranted in resorting to diphtheria antitoxine as a remedy for pneumonia.

A REMARKABLE EXAMPLE OF "MIXED INFECTION."

The old doctrine that no two specific diseases can coexist in the same organism has received many a rude shock of late years, but seldom, we imagine, one more pointed than was unfolded some weeks ago by M. V. Babes and M. G. Robin (*Semaine médicale*, October 9th; *Indépendance médicale*, October 16th). The gentlemen mentioned reported eight cases of disease occurring in two localities which were exceedingly insanitary and affecting ill-nourished and ill-housed ragpickers. The authors think that the disease would formerly have been unhesitatingly set down as typhus. In all of the cases Pfeiffer's bacillus was present, and in most of them Widal's serum reaction was manifest, though there was not the least lesion of typhoid fever and Eberth's bacillus was not detected.

It is not thought that these features can be explained by assuming that unrecognized typhoid fever had occurred and ended in recovery, for very often the agglutination reaction was wanting at first, or at least was not well marked, whereas it subsequently became very sharply characterized. No more acceptable is the hypothesis of a simple epidemic of anomalous influenza, for in some cases Pfeiffer's bacillus was wanting during the early days of the disease, but ultimately showed itself; moreover, this micro-organism was found in great numbers in the oldest seats of pneumonia, softening, and pulmonary gangrene. The authors think that all these considerations indicate rather that there must have been some hidden element representing

a primary infection of which the microbe escaped them, on which were engrafted Pfeiffer's bacillus and probably also Eberth's, the latter, by reason of special circumstances, not having multiplied sufficiently to give rise to the lesions of typhoid fever and invade the blood.

At all events, the authors think, their observations show that the mere finding of Pfeiffer's bacillus in an epidemic does not demonstrate that the disease is influenza, and that the serum reaction is not decisive that typhoid fever is present, for it is possible to encounter both these diagnostic signs in the evolution of a particular syndrome—the authors' *épidémie associée*—which is neither influenza nor dothienenteritis.

LUPUS AND TUBERCULOUS MEAT.

A Berlin newspaper, the *Local-Anzeiger* for December 13th, gives an instance in which two slaughter-house employees whose work consisted in separating tuberculous refuse from the carcasses of slaughtered animals recently contracted lupus of the hands, presumably by reason of their occupation. The occurrence may be viewed as of some pertinence to the question of the communicability of tuberculous disease from cattle to man.

CHICAGO'S LOW DEATH RATE.

The people of Chicago are to be congratulated upon the low rate of mortality reported for the year 1901. Up to the middle of December, 23,625 deaths had been recorded, making the rate 13.8 in a thousand. The sanitary officials of the city, to whom great praise is certainly due, are said to have stated that this is a lower rate than has ever before been observed in a city of over 1,000,000 people.

A CRITIC CRITICISED.

In the *Münchener medicinische Wochenschrift* for December 10th Dr. J. C. Huber, of Memmingen, reviews the second edition of Dornblüth's *Klinisches Wörterbuch der Kunstaussdrücke der Medizin*. His criticisms are in the main correct, but he falls into two errors, that of declaring that there is no such word as *raphanus*, which he says is a mistake for *raphanus*, and that of insisting that *rachitis*, not *rhachitis*, is the proper term for rickets. He cites Pliny and Virchow, the one in favor of *raphanus* and the other as maintaining the correctness of *rachitis*. It is true that Pliny wrote *raphanus*, but the very dictionaries that mention him in connection with the word give *ῥαχισ* as the Greek form. Some years ago Virchow did defend the form *rachitis* rather elaborately, but he failed to convince scholars of its correctness.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 6th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, January 7th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston) (annual); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, January 8th.—New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, January 9th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual and election); Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, January 10th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, January 11th.—Obstetrical Society of Boston (private).

The Alumni Society of Gouverneur Hospital held a meeting on December 21, 1901, at 8.30 p. m., at the Academy of Medicine. The next regular meeting will take place on the first Tuesday in February.

Morphinomania in Puerto Rico.—It is said that morphine is used extensively in the town of Juana Diaz, Puerto Rico. It is estimated by the insular board of health that out of the 2,500 inhabitants 1,000 are victims of this habit.

The Johns Hopkins Hospital Medical Society held its regular meeting at Baltimore on December 16th. Papers were read as follows: A New Method of Pyloroplasty, by Dr. John M. T. Finney; Pneumococcus Septicæmia, by Dr. Rufus I. Cole; The Distribution of Mosquitoes in and about Baltimore, by Dr. L. K. Hirshberg and Dr. G. C. Dohme.

The Medical Society of the Borough of the Bronx.—The next regular meeting of the society will be held on Wednesday, January 8th, at the Metropolitan Theatre Building, Third Avenue and One Hundred and Forty-second Street, at 8 p. m., when papers will be read and there will be a presentation of patients, instruments, etc.

Erratum.—We have received a communication from Dr. Oretchkin, the editor of the new Russian medical journal to which we referred editorially in our issue for December 28, 1901, p. 1200, whereby we learn that the name of the periodical is *Practicheski Vrach*, not *Roussky Vrach* as stated in our comment.

The Medical Association of the Greater City of New York.—At the annual meeting, to be held at the New York Academy of Medicine January 13, 1902, the following will be the order of exercises:

Election of officers. Nominations: For president, Dr. Andrew H. Smith; for chairman for the borough of the Bronx, Dr. S. Carrington Minor; for member of the executive council, Dr. Reynold W. Wilcox.

Annual reports of the executive council, the corresponding and statistical secretary, and the treasurer.

Discussion on the Treatment of Urethral Strictures, to be opened by Dr. Ramon Guit  ras. The Pathology of Stricture; Observations on the Operative Technique, by Dr. Robert H. Greene. Discussion continued by Dr. William K. Otis, Dr. James Pedersen, Dr. Robert W. Taylor, Dr. J. Blake White, and others.

The New York Academy of Medicine.—A stated meeting was held on Thursday, January 2d, at 8.15 p. m. in Hoosack Hall, when the annual reports were read, and the Symposium on Tuberculosis was continued by a consideration of the Need of Sanatoria for Tuberculosis. Among those announced to take part in the discussion were Dr. G. L. Peabody, Dr. S. A. Knapp, Dr. Alfred Meyer, Dr. H. P. Loomis, Dr. J. E. Stubbart, Dr. L. Weber, and Dr. W. Freudenthal.

At the next meeting of the *Section on P  diatrics*, announced for January 9th, at 8.15 p. m., the following is the order of business: 1. Presentation of Cases—A Case of Congenital Asymmetry or Hemihypertrophy in an Infant. By Dr. A. Hymanson. 2. Papers—The Effect of Heat upon Cow's Milk as an Infant's Food. By Dr. S. H. Dessau; The Chemistry of the Stomach Contents in Children. By Dr. Louis Fischer.

At the forthcoming meeting of the *Section on Otology*, announced for Thursday, January 9th, at 8.15 p. m., the following is the order of business: 1. Exhibition of Specimens and New Instruments. (a) A Specimen of Brain Abscess. By Dr. Edward B. Dench. (b) A Specimen of Brain Abscess, with Portion of the Temporal Bone. By Dr. James F. McKernon. 2. Presentation of Cases. 3. Paper—Successful Operation upon a Case of Brain Abscess following Suppurative Middle Ear Disease. By Dr. Frederick L. Jack, of Boston, Mass.; A Study of the Aphasia Persisting after Evacuation of Brain Abscess. By Dr. Georgie L. Walton, of Boston, Mass. 4. Discussion on the preceding. 5. Paper—Does the Early Treatment of Acute Inflammation of the Middle Ear Prevent the More Serious Complications? By Dr. E. L. Meierhof. 6. Discussion.

Illegal Practice is Charged against the President of the Institute of Somatopathy.—Julius Augustus Ward, M. S., D. D., D. O., president of the Institute of Somatopathy, was arrested in New York on December 30th and arraigned in Yorkville Court on the charge of assuming and advertising the title of doctor in such a manner as to convey the impression that he was a legal practitioner of medicine. The complainant was Marianna H. Briggs, of Clifton Park, N. J. Mr. Champe S. Andrews, counsel of the Medical Society of the County of New York, represented Miss Briggs. The case against "Dr." Ward is as follows: Some time ago he issued a prospectus of somatopathy. This prospectus advertised the new scientific discovery of somatopathy, which it thus described: "Somatopathy (advanced osteopathy) is scientific palpitation, disensation, and manipulation based upon anatomy." Some twenty-four pages in the pamphlet were devoted to a discussion in technical terms of this new discovery. In this prospectus was advertised the Institute of Somatopathy, which represented itself as giving degrees in osteopathy, the tuition for four terms of five months being \$500. A post-graduate course was advertised at \$250. Also the curriculum included a nurses' course, for which the charge was \$250. Throughout the entire book references were made to various medical aspects, which left the impression that the science of somatopathy was founded on the highest medical principles. In several places the title of "Dr." was affixed to Ward's name. Ward's case will probably come up for trial in two weeks. Ward is out under bail, which was furnished by a Brooklyn man. "Dr." Ward recently lost a suit for \$90, which he had brought against Mrs. Theodore Sutro for services rendered.

Alleged Explanation of Nerve and Muscle Stimulus.—In a dispatch to the *New York Sun*, dated Chicago, December 30th, it is announced that Dr. Albert F. Matthews, professor of physiological chemistry in the University of Chicago, has reported to the American Physiological Society, at their annual meeting in that city, the discovery of the secret of nerve and muscle stimulus and of the manner in which nerve impulses are conveyed to different parts of the body, as well as that in which muscles contract and expand in response to these impulses. Professor Jacques Loeb is reported to have characterized Dr. Matthews's discovery as "the most nearly fundamental physiological generalization in fifty years."

This is a brief summary of the discovery drawn up by Dr. Matthews, as given in the *Sun*:

First.—Motor nerves contain or consist of a colloidal solution, the colloidal particles of which carry positive electrical charges.

Second.—Nerve-protoplasm is stimulated by the passage of the colloidal particles from a condition of a solution to that of gelation, or jellying.

Third.—This change is brought about by the action of ions, electrically charged atoms or groups of atoms, which bear negative charges. The stimulating action of any chemical compound depends on these negative charges. These ions (anions) having one charge, are less efficient than those with two

or three. In other words, the stimulating action of any ion is proportional to the number of negative charges it bears.

Fourth.—The colloidal particles of the nerves are held in solution by positively charged ions, sodium, potassium, calcium, hydrogen, etc., and the effectiveness of these ions in preventing stimulation varies directly with the number of positive charges they bear. A one-charged ion, such as sodium, is less poisonous than a three-charged, such as iron.

Fifth.—By these facts chemical stimulation is shown to be identical with electrical. Whenever in any part of a nerve negative charges are in excess the nerve is stimulated, that is, the colloids pass from a solution to a jelly. The stimulus always arises at the cathode or negative electrode.

Sixth.—The irritability of a nerve is diminished whenever the solution of the colloids is rendered more permanent. It increases as the nerve approaches the gelation state. All positively charged ions thus diminish irritability, negative increase it. This explains electronus, as the irritability of the nerve is increased near the cathode and reduced at the anode.

Seventh.—Heat diminishes the irritability of the nerve by rendering the solution more stable; cold increases it by rendering it less stable. At high temperatures gelation takes place and the nerve is stimulated.

Eighth.—The nerve is stimulated mechanically because the colloidal particles are forced together. As they coalesce their surface becomes less. Less positive charges can reside on it and part of the negative charges previously induced in the surrounding water are set free and immediately precipitate the next group of colloids.

Ninth.—These in their turn set free negatives, which precipitate the next group, and so the nerve impulse is carried. Technically these negative changes are called the negative variation, and this stimulates each successive element of the nerve.

Tenth.—Anæsthetics all dissolve fat. They reduce the irritability of the nerve or protoplasm because the colloids in the nerve are largely fat compounds and more soluble in a mixture of ether and water than in water alone. All anæsthetics render the colloidal solution more permanent and prevent gelation.

Eleventh.—Besides the number of electrical charges in the ions there is some other factor which determines the action of salts. Thus potassium is more effective in reducing irritability than sodium; fluorine is far more effective as a stimulant than chlorine, although all carry only a single charge. It is believed that this difference of efficiency in monovalent anions or kations is dependent upon the rate of rotation of the electron or the positive or negative point-charge about the atom with which it is associated. The electron rotates about the fluorine atom about twice as fast as about the chlorine atom.

Twelfth.—The stimulating action of any anion or the poisonous action of any kation is hence a function, first of the number of charges rotating about the atom; second, of the rate of rotation of these charges, and, third, of the circumference of their orbits.

Thirteenth.—Chemical stimulation is thus, by the electro-magnetic theory of light, shown to be identical

with stimulation by light waves. The stimulating action of any anion increases as the spectrum of that anion approaches the ultra-violet.

Fourteenth.—The long light waves and heat waves are in their action like those of the positively charged ions.

The Proposed United States Health Service.—

The following is the text of a bill now before Congress "to increase the efficiency and change the name of the United States Marine-Hospital Service:"

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the United States Marine-Hospital Service shall hereafter be known and designated as the United States Health Service, and the supervising surgeon-general and the officers now or hereafter commissioned under the act of January 4, 1889, entitled "An Act to regulate appointments in the Marine-Hospital Service of the United States," are hereby designated as the surgeon-general, surgeons, passed assistant surgeons, and assistant surgeons of the United States Health Service; and the salaries and allowances of said officers, the surgeon-general excepted, shall be the same as now allowed by regulations of the Marine-Hospital Service. Acting assistant surgeons, hospital stewards, and employes shall be continued in employment under the United States Health Service, and shall be employed hereafter under the regulations of said service. Nothing in this act shall be held or construed so as to discharge any officer or employe now serving in the Marine-Hospital Service or to deprive any officer of his commission. The care of sick and disabled seamen and all other duties now required by law to be performed by the Marine-Hospital Service shall hereafter be performed by the United States Health Service, and all funds and appropriations now provided by law for use by the Marine-Hospital Service and all properties and rights pertaining to said service are hereby made available for use, for like purposes and in like manner, under the Treasury Department, by the United States Health Service.

Sec. 2. That the salary and allowances of the surgeon-general of the United States Health Service shall be the same as now allowed by law to be paid to the surgeon-general of the army.

Sec. 3. That commissioned medical officers, when detailed by the surgeon-general for duty in the United States Health Bureau at Washington, District of Columbia, in charge of the administrative divisions thereof, namely, marine hospitals and relief, domestic quarantine, foreign and insular quarantine, personnel and accounts, sanitary reports and statistics, and scientific research, shall, while thus serving, be assistant surgeons-general, United States Health Service, but their pay and allowances shall be the same as now provided by regulations of the Marine-Hospital Service for officers in charge of said divisions; and the senior officer thus serving shall be the assistant within the meaning of section one hundred and seventy-eight, Revised Statutes of the United States.

Sec. 4. That the President is authorized; in his discretion, to utilize the United States Health Service in times of threatened or actual war, and the commissioned medical officers of said service, while thus serving, or while serving on boards or otherwise brought into official relations with medical officers of the army or navy, shall have rank as follows: The surgeon-general ranking with and after the surgeons-general of the army and navy; assistant surgeons-general ranking with and after assistant surgeons-general of the army and medical directors of the navy; surgeons with and after surgeons of the army having rank of major, and of the navy having rank of lieutenant-commander; passed assistant surgeons with and after assistant surgeons of the army having rank of captain, and of the navy having rank of lieutenant; assistant surgeons with and after assistant surgeons of the army having rank of first lieutenant, and of the navy having rank of junior lieutenant.

Sec. 5. That there shall be an advisory board for the hygienic laboratory provided by the Act of Congress approved March 3, 1901, for the purpose of conferring with the surgeon-general of the United States Health Service relative to the investigations conducted in said laboratory. Said board shall consist of the surgeon-general of the army, the surgeon-general of the navy, the chief of the Bureau of Animal Industry of the Department of Agriculture, and the director of the said laboratory, who shall be *ex-officio* members of the board and serve without additional compensation; and five other members, to be appointed by the Secretary of the Treasury on recommendation of the surgeon-general of the United States Health Service, who shall be skilled in laboratory work in its relation to the public health, and not in the regular employment of the government. The said five members shall each receive compensation of ten dollars per diem while thus serving, together with allowance for actual and necessary travelling expenses and also hotel expenses while in conference, said conferences not to exceed ten days in any one fiscal year. The period of service of the first five of the members not in the regular employment of the government shall be so arranged that one member shall retire each year, the appointments thereafter to be for a period of five years. Appointments to fill vacancies occurring in a manner other than as above provided shall be made for the unexpired term of the member whose place has become vacant.

Sec. 6. That the President shall appoint and commission one chemist, one medical zoologist, and one pharmacologist whenever in the opinion of the surgeon-general commissioned medical officers of the United States Health Service are not available for this duty by detail, who shall be in charge of the divisions, respectively, of chemistry, zoology, and pharmacology of the hygienic laboratory, and shall each have the pay and emoluments of a surgeon of the United States Health Service and be subject to the regulations of said service. The director of the said laboratory shall be an officer detailed from the corps of commissioned medical officers of the United States Health Service as now provided by regu-

lations for such detail from the Marine-Hospital Service, and while thus serving shall have the pay and emoluments of a surgeon.

Sec. 7. That when in the opinion of the Secretary of the Treasury the interests of the public health would be promoted by a conference with the State or Territorial boards of health or health authorities, the District of Columbia included, the surgeon-general of the United States Health Service is hereby authorized, with the approval of the secretary, to invite one or more of said boards of health or authorities to send delegates, not more than one from each State or Territory and District of Columbia, to said conference, and when thus convened said delegates shall be entitled to reimbursement for their necessary expenses of travel and of maintenance not exceeding five days at the place of conference, in accordance with such regulations as may be made by the Secretary of the Treasury.

Sec. 8. That to provide uniformity in the registration of mortality, morbidity, and vital statistics it shall be the duty of the surgeon-general of the United States Health Service, after conference with the State boards of health, to prepare the necessary forms for the collection and compilation of said statistics, and said statistics, when transmitted to the United States Health Bureau on the approved forms, shall be compiled and published by the United States Health Service as a part of the health reports published by said service.

Sec. 9. That the President shall from time to time prescribe rules for the conduct of the United States Health Service. He shall also prescribe regulations respecting its internal administration and discipline, and shall prescribe the uniforms of its officers and employes; and the surgeon-general shall transmit annually to Congress, through the Secretary of the Treasury a report of the transactions of said service.

Official News.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending December 28, 1901:

GROVE, W. B., Passed Assistant Surgeon. Detached from the *Michigan* and ordered home to await orders.

ORVIS, R. T., Passed Assistant Surgeon. Ordered to the *Michigan* as relief of Passed Assistant Surgeon W. B. GROVE.

ROTHGANGER, G., Surgeon. Detached from the Naval Hospital, New York, and ordered to the *San Francisco*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending December 28, 1901:

BAKER, DAVID, First Lieutenant and Assistant Surgeon, is relieved from further duty in the Department of California, and will report in person to the commanding officer at Fort McPherson, Georgia, for duty.

GORGAS, WILLIAM C., Major and Surgeon, and JEFFERSON R. KEAN, Major and Surgeon, are detailed to represent the Medical Department of the Army at the Pan-American Sanitary Congress, to be held in Havana, Cuba, on February 15, 1902.

HOOPER, VERNON J., Captain and Assistant Surgeon, United States Volunteers, is honorably discharged from the service.

VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 28, 1901:

DISEASES.	Week end'g Dec. 21		Week end'g Dec. 28	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	19	14	20	11
Scarlet fever.....	247	14	220	10
Cerebro spinal meningitis.....	0	3	0	2
Measles.....	157	22	61	31
Diphtheria and croup.....	277	40	255	61
Small pox.....	12	1	14	4
Tuberculosis.....	218	131	209	146

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending December 27, 1901:

Smallpox—United States.			
California.....	San Francisco.....	Dec. 8-13.....	1 case.
Illinois.....	Chicago.....	Dec. 14-21.....	2 cases.
Indiana.....	Evansville.....	Dec. 14-21.....	4 cases.
Iowa.....	Clinton.....	Dec. 14-21.....	2 cases.
Louisiana.....	New Orleans.....	Dec. 14-21.....	1 case.
Massachusetts.....	Boston.....	Dec. 14-21.....	41 cases.
“.....	Cambridge.....	Dec. 14-21.....	3 cases.
“.....	Gloucester.....	Dec. 14-21.....	2 cases.
“.....	Lowell.....	Dec. 14-21.....	6 cases.
“.....	Malden.....	Dec. 14-21.....	3 cases.
“.....	Scituate.....	Dec. 14-21.....	1 case.
Michigan.....	Grand Rapids.....	Dec. 14-21.....	1 case.
Minnesota.....	Minneapolis.....	Dec. 7-14.....	7 cases.
Nebraska.....	Omaha.....	Dec. 14-21.....	13 cases.
N. Hampshire.....	Nashua.....	Dec. 14-21.....	1 case.
New Jersey.....	Camden.....	Dec. 14-21.....	15 cases.
“.....	Newark.....	Dec. 14-21.....	24 cases.
New York.....	New York.....	Dec. 14-21.....	12 cases.
Ohio.....	Ashtabula.....	Dec. 14-21.....	1 case.
“.....	Cincinnati.....	Dec. 14-21.....	11 cases.
“.....	Cleveland.....	Dec. 14-21.....	1 case.
“.....	Massillon.....	Dec. 7-14.....	1 case.
Pennsylvania.....	Philadelphia.....	Dec. 14-21.....	76 cases.
“.....	Philadelphia.....	Dec. 14-21.....	16 deaths.
South Carolina.....	Greenville.....	Dec. 7-14.....	2 cases.
Tennessee.....	Memphis.....	Dec. 14-21.....	2 cases.
Utah.....	Salt Lake City.....	Dec. 14-21.....	2 cases.
Vermont.....	Burlington.....	Sept. 28-Dec. 21.....	55 cases.
Wisconsin.....	Green Bay.....	Dec. 15-22.....	7 cases.
“.....	Milwaukee.....	Dec. 14-21.....	1 case.
Smallpox—Foreign.			
Austria.....	Prague.....	Nov. 23-Dec. 7.....	7 cases.
Belgium.....	Antwerp.....	Nov. 23-Dec. 7.....	3 cases.
Canada.....	Ghent.....	Nov. 30-Dec. 7.....	3 deaths.
“.....	Halifax.....	Dec. 7-14.....	21 cases.
“.....	St. John.....	Dec. 7-14.....	11 cases.
“.....	Windsor.....	Dec. 7-14.....	1 case.
“.....	Winnipeg.....	Dec. 7-14.....	4 cases.
Colombia.....	Cartagena.....	Nov. 23-30.....	2 deaths.
“.....	Cartagena.....	Dec. 7-14.....	25 cases.
France.....	Paris.....	Nov. 30-Dec. 7.....	1 case.
Gr. Britain.....	Glasgow.....	Dec. 6-13.....	4 deaths.
“.....	Liverpool.....	Nov. 30-Dec. 7.....	5 cases.
“.....	London.....	Nov. 30-Dec. 7.....	20 deaths.
India.....	Calcutta.....	Nov. 16-23.....	3 deaths.
“.....	Calcutta.....	Nov. 16-23.....	2 deaths.
Italy.....	Naples.....	Nov. 23-30.....	18 cases.
Russia.....	Moscow.....	Nov. 16-30.....	23 cases.
“.....	Odessa.....	Nov. 23-Dec. 7.....	9 deaths.
“.....	St. Petersburg.....	Nov. 23-30.....	3 deaths.
“.....	Warsaw.....	Nov. 16-23.....	8 cases.
Spain.....	Corunna.....	Nov. 30-Dec. 7.....	1 death.
“.....	Corunna.....	Nov. 30-Dec. 7.....	1 death.
Yellow Fever.			
British West Indies.....	Lucia.....	Dec. 2-6.....	8 cases.
Mexico.....	Acapulco.....	Dec. 1-4.....	6 deaths.
“.....	Acapulco.....	Dec. 1-4.....	15 deaths.
Cholera.			
Cuba.....	Havana.....	Nov. 20.....	1 death from S. S.
India.....	Bombay.....	Nov. 19-20.....	Buenos Aires.
“.....	Calcutta.....	Nov. 14-16.....	4 deaths.
“.....	Madras.....	Nov. 15-22.....	76 deaths.
Straits Settlements.....	Singapore.....	Oct. 27-Nov. 2.....	27 deaths.
Plague—Foreign and Islands.			
India.....	Bombay.....	Nov. 19-20.....	358 deaths.
“.....	Calcutta.....	Nov. 10-23.....	48 deaths.
“.....	Karachi.....	Nov. 10-23.....	49 deaths.
Russia.....	Batoum.....	Nov. 30.....	1 case.
Turkey.....	Constantinople.....	Nov. 20-27.....	1 case.
Hawaii.....	Honolulu.....	Dec. 1-4.....	1 death.

Births, Marriages, and Deaths.

Married.

COE—CLARK.—In Lexington, Kentucky, on Wednesday, December 25th, Dr. John W. Coe, of New York, and Miss Mary Clark.

JANEWAY—BULKLEY.—In New York, on Monday, December 23d, Dr. Henry H. Janeway, of New Brunswick, N. Y., and Miss Elizabeth Bulkley, daughter of Dr. L. Duncan Bulkley.

MARCH—FREASE.—In Canton, Ohio, on Wednesday, December 18th, Dr. Harry A. March and Miss Edith M. Frease.

McGOWAN—O'BRIEN.—In Washington, on Monday, December 23d, Dr. Michael J. McGowan, of Chicago, and Miss Annie E. O'Brien.

MILLER—SAHN.—At Clayton, on Monday, December 23, 1901, Dr. Otis W. Miller and Miss Helen M. Sahn, both of St. Louis, Mo.

PATTON—FALLON.—In Chicago, on Monday, December 23d, Dr. David Harry Rutherford Patton and Miss Mary Ellen Fallon.

RUPP—MURTAGH.—In New Orleans, on Monday, December 16, 1901, Dr. J. H. Rupp, of Algiers, and Miss Annie Murtagh.

SMITH—MARVIN.—In Albany, on Tuesday, December 24, 1901, Dr. E. Austin Smith, of Rome, and Miss Grace Marvin.

VIGNES—LABASSE.—In New Orleans, on Saturday, December 28th, Dr. C. V. Vignes and Miss Emma Labasse.

WRIGHT—LUNDE.—In New York, on Wednesday, December 25, 1901, Dr. J. H. Wright, of Boston, and Miss Aagot Lunde.

Died.

CAMPBELL.—In Detroit, on Tuesday, December 17th, Dr. Donald S. Campbell, in the forty-fourth year of his age.

DEVINE.—In Philadelphia, on Thursday, December 26, 1901, Dr. George C. Devine.

DUHADWAY.—In Jerseyville, on Saturday, December 21, 1901, Dr. Caleb Duhadway.

LEWIS.—In New York, on Saturday, December 28, 1901, Dr. Amos B. Lewis.

MARSHALL.—In St. Joseph, Mo., on Sunday, December 8, 1901, Dr. Moses Marshall.

MURDOCK.—In Kansas City, Mo., on Monday, December 23, 1901, Dr. Frederick J. Murdock.

MURRAY.—In Key West, Florida, on Monday, December 23d, Gillie, eldest daughter of Dr. R. D. Murray, United States Marine-Hospital Service.

NAGER.—In Newark, N. J., on Friday, December 20th, Dr. Vincent Nager, in the fifty-second year of his age.

PERRY.—In Fort Atkinson, Wisconsin, on Thursday, December 19th, Dr. Frederick J. Perry, in the thirty-sixth year of his age.

RULISON.—In Cincinnati, on Monday, December 23, 1901, Dr. Hiram Rulison.

SAUTER.—At Covington, La., on Sunday, December 22, 1901, Dr. Emile Sauter, of New Orleans.

SHOEMAKER.—In Phoenixville, Pennsylvania, on Saturday, December 14th, Dr. Jesse G. Shoemaker, in the thirty-sixth year of his age.

STARK.—In Kansas City, Missouri, on Tuesday, December 17th, Dr. John Stark, formerly of the United States Army.

WADSWORTH.—In Warehouse Point, Connecticut, on Tuesday, December 17th, Dr. Timothy D. Wadsworth, in the sixty-fourth year of his age.

WALLIS.—In Philadelphia, on Saturday, December 28, 1901, Dr. James M. Wallis.

WRIGHT.—In Washington, D. C., on Tuesday, December 24, 1901, Dr. T. H. Wright, of Pickens, Miss.

Pith of Current Literature.

Journal of the American Medical Association,
December 28, 1901.

Food Products from Diseased Animals. By D. E. Salmon, D. V. M.—The author points out that tubercle bacilli may be present in the milk of tuberculous cows when there are no signs of tuberculosis of the udder. The investigation of this subject has been greatly aided by the tuberculin test, which directs our attention to the affected animals. It has been proved that, in some countries, from forty to fifty per cent. of all the cows have tuberculosis. In the United States, however, the proportion is probably not over five per cent. in our worst affected States.

Tuberculosis in the Middle States and Its Curability. By Dr. John A. Robison.—The author answers the question of the curability of consumption in the Middle States in the affirmative; urges the erection of State sanatoria, or private sanatoria if the State will not give a helping hand, and regrets that Illinois, which stands fifth in the mortality list, has refused to take high rank in providing a State sanatorium.

The Biologic Test for Semen. By Dr. C. G. Farnum.—From experiments the author concludes that the blood sera of animals treated with different semina and testicular emulsions contain precipitins, which probably are specific. Since dried semen of considerable age (thirty-four days) gives the reaction, it would seem that the test may be of practical value for the detection of the nature of suspected seminal spots.

American Medicine, December 28, 1901.

Massive Infiltration Anæsthesia with Weak Analgetic Solutions (Modified Schleich Method). By Dr. Rudolph Matas.

Technique of Fixation of Prolapsed Kidney. By Dr. Augustin H. Goelet.—The author does not believe it necessary to strip off the fibrous capsule and bring the kidney structure into contact with the muscles to secure adhesion. The fixation sutures, of which there should be two, are inserted into the lower half of the kidney, so that the upper part may be drawn up into place under the ribs. The first suture is inserted first upon the outer part of the exposed kidney surface from above downward, somewhat obliquely to the long axis of the kidney, and drawn through; then it is inserted transversely, and again from below upward in the same manner as in the first insertion, but on the opposite side of the exposed surface. The second suture is inserted above the first, but in a somewhat different manner, there being no transverse insertion, but an exposed loop of the suture on the outside of the fibrous capsule. The advantage of this suture, which is a modification of the first, is that it takes up less space and inflicts less injury upon the kidney structure.

Trophoneurosis Affecting the Hair, with Photographs of a Case. By Dr. F. Savary Pearce.—In the author's case there is absolutely no history of an hereditary predisposition to graying of the hair. While it is possible that some metabolic disturbance

and a self-intoxication of intestinal origin aggravated the condition, as shown by the dyspeptic symptoms, the author believes that a profound neurosis best explains the case, thus illustrating the apt remarks of Dr. Forbes Winslow, that the physician must acknowledge "the powerful effect of mental emotions upon the material fabric."

Observations on Tuberculosis in Connection with the Work at the Massachusetts State Sanatorium. By Dr. Henry B. Dunham.—The success of the régime (fresh air, plenty of nourishment, cold bathing, and regulated exercise) adopted at the Massachusetts State Sanatorium, is best indicated by the fact that, whereas the percentages of "arrested cases," "improved cases," and "unimproved cases," for the year 1898-99, were respectively 30.97, 46.10, and 21.23; for the year 1900-01, the percentages in the same order are 42.20, 53.7, and 3.90.

Nephritis in Malaria. By Dr. John T. Moore.—Nephritis is not likely to occur in a single tertian infection for a short interval, say of five days. A double tertian infection will produce a nephritis in a large percentage of cases if it runs only for a short time. The more chronic the case of any infection becomes, the more likely it is to produce nephritis. Malaria of long duration, or often repeated attacks will produce chronic renal disease, as shown by the continuous presence of albumin and casts. *Æstivo-autumnal* malaria probably gives the greatest percentage of cases of nephritis—68.7 per cent. The age of the patient, height of temperature, or specific gravity of the urine shows no relation to the presence of albumin and casts.

Ludwig's Angina Complicating Typhoid Fever. By Dr. William Egbert Robertson and Charles C. Biedert.

Philadelphia Medical Journal, December 28, 1901.

Medical Care and Treatment of Inebriety. By Dr. T. D. Crothers.—The author points out that the treatment of a case that simply checks the brain and nerve irritations by narcotics, or by removal of spirits, or by elimination removes the congestion and relieves the gastritis, is only partial; the inebriate is diseased and the question of medical care and treatment turns on an exact knowledge of the causation and of his present condition. We should study the inebriate and his malady, and teach the public the real facts and their meaning; we should assert our position as teachers.

The Typhoid Spine. By Dr. William J. Taylor.—While the author believes that the majority of cases of painful spine after typhoid fever are neurones, known as spinal irritation, there cannot be pain, thickening, tenderness, and deformity without a definite pathological lesion.

Abstract of a Paper, A Résumé of the Subject of Actinomycosis, with Report of a Case of Actinomycosis Abdominalis. By Dr. A. Vanderveer and Dr. Arthur W. Elting.—If the case reported is studied carefully, it is very striking to observe the characteristic conditions that have been described by many authors, *i. e.*, the tumors to be felt in the peritoneal cavity, and in the abdominal walls, the peculiar reddish-blue appearance of the surface of the abdomen, and the multiple abscesses containing

yellowish pus and granules. All of these conditions are indicative of actinomycosis, also the patient's improvement for a time after operative intervention, and still further improvement when getting under the full effect of the iodide of potassium; the affection of the nose, and rapid recovery, all aid in confirming the diagnosis.

Cystic Liver. By Dr. Israel Cleaver.

The Relation of the Middle Turbinate Body to Chronic Diseases. By Dr. Charles H. Baker.

The Relation of the Sympathetic Nervous System to Functional Amblyopia. By Dr. Harry S. Pearse.—Our knowledge of the manifold manifestations of the disease, hysteria, in every structure of the body will not permit us to say positively that the retinal elements, the conducting channels of visual sensation, or the visual centres themselves, are free from the influence of this disease. The effect upon the visual apparatus of fright, shock, emotion, mental exhaustion, overexertion, etc., is essentially the same as in hysteria, and whether the sympathetic is concerned in this action is yet a question. In view of the known sphere of action of the sympathetic and of the many cases observed which present the same conditions in the vessels of the fundus which the influence of the sympathetic produces elsewhere in the body, if the sympathetic does *not* influence the fundus, what does?

Medical Record, December 28, 1901.

The Neurotic Indications of Pre-senility. By Dr. Allan McLane Hamilton.—While it is almost an affectation to adopt the terms "Americanism," "American neurosis," or "American neurasthenia," the author believes that many of us do break down at an earlier age than our foreign neighbors, and this is largely because of our struggle for the rapid accumulation of wealth, for the gratification of an ambition which is due to competition, and not in a small measure to the stimulation of our newspapers. So far as the treatment and antagonism of pre-senility is concerned, the cutting off of all possible bad habits will, of course, suggest itself. Absolute abstinence, however, is sometimes as bad as excessive indulgence, in men who are habituated. The taking of alcohol in any form must be regular, after eating, and always well diluted. The advantages of a modified Nauheim treatment should not be lost sight of. A decidedly beneficial result is apt to follow the judicious use of a hot saline bath, the effect upon the circulation being quite as prompt and serviceable as that obtained by the expensive and troublesome effervescing bath.

Clinical Report of a Second Series of Twelve Cases Benefited by Bottini's Prostatotomy. By Dr. Ramon Guit  ras. One is apt to think, *a priori*, that the contractile power of the vesical sphincters is reduced by the Bottini operation, but the author has found, on the contrary, that it seems to be improved after prostatotomy; for in many cases incontinence is cured by this operation. It is also worthy of note that patients are not always incapacitated for sexual life by the Bottini operation. In performing an operation of this kind, the estimation of the result is different according as viewed by the surgeon or the patient. All of these cases were benefited ac-

cording to the surgeon's idea, in that the amount of the residual urine was greatly diminished. They were all able to urinate spontaneously, and the cystitis had been benefited. Some of the patients, while acknowledging that they had better control of their bladders, did not feel that they had been benefited much, as they still had frequency of urination and burning, due probably to the cystitis which had not been cured.

On the Transmission of Yellow Fever by Vessels, and Its Bearing upon Quarantine Regulations. By Dr. Edmond Souchon.—In a previous article by Dr. Alvah H. Doty, the statement is made, that if vessels are five days or more in transit from ports infected with yellow fever, and all on board are found to be well after a careful inspection and the use of the clinical thermometer, the vessel, its passengers, and crew shall be released without further detention or treatment. The author, Dr. Souchon, by no means agrees with this statement and submits a pertinent list of cases of non-infected vessels, few of which were less than five days out, from ports quarantined against yellow fever, which developed yellow fever after disinfection at quarantine station.

Medical News, December 28, 1901.

Some Surgical Tendencies from a Medical Point of View. By Dr. Reginald H. Fitz.—The author emphasizes the importance of the careful study and selection of suitable cases. The benefits of an  sthesia and asepsis are not wholly unalloyed. Operations are undertaken which are followed by the immediate death of the patient, others prove to be wholly unnecessary, and still others leave the patient in a condition of hopeless invalidism, often making life worse than death. Any operation which does not better the condition of the patient must be regarded as a therapeutic error. By cultivating greater accuracy in diagnosis and prognosis, and the more widespread knowledge of pathology and pathological anatomy, the surgeon will become a better adviser though the number and variety of his operations thereby may materially be lessened.

Treatment of Lobar Pneumonia. By Dr. Charles G. Stockton.—The author pleads, not for the treatment of pneumonia as a disease by blood-letting, but for the postponing of one of the local manifestations of the affection, and thereby assisting Nature to bring about the favorable crisis and to allow the patient to recover. Counter-irritation is commended as being particularly applicable to those cases in which there is delayed resolution. If, with stimulation, we at the same time sweat the patient and assist hepatic and renal secretion by proper means, our results will be strikingly better.

On the R  le of the Prostate Gland in Gonorrh  a. By Dr. Frederic Bierhoff.—The best prophylactic treatment is to rid the patient of the gonorrh  al urethritis in the shortest time. The best method is the irrigation of, first, the anterior, then the entire urethra, at first twice, later once daily. Care must be taken to avoid forcible injection. Rest in bed, bland nutritious diet, attention to the bowels, avoidance of all alcoholic drinks and sexual excitement, should be observed. If prostatitis develops, massage of the prostate gland must be

employed in addition to irrigation of the urethra. For massage the finger is better than any instrument, it being preferable to locate the foci of disease and to massage these; moreover, the amount of pressure to be employed can be gauged better with the finger, and the danger of injury to the patient is less.

The Neurotic Element in Infantile Eczema. By Dr. Jerome Kingsbury.

Boston Medical and Surgical Journal, December 26, 1901.

Some Surgical Tendencies from a Medical Point of View. By Dr. Reginald H. Fitz.—(See abstract of *Medical News*, p. 32.)

Successful Operation upon a Case of Brain Abscess following Suppurative Middle Ear Disease. By Dr. Frederick L. Jack.—The author believes that the opinion of Macewen regarding the necessity of opening the squamous portion as well as opening the tegmen is so generally shared that it would be presumptuous to assume from the present case that the prevailing opinion was erroneous. This case certainly demonstrates, however, that such an opening is not invariably necessary. The opening through the tegmen sufficed, not only for the removal of a large amount of pus, but also of considerable sloughing brain tissue. That the evacuation and drainage were complete is shown by the perfect recovery.

Study of the Aphasia Persisting during Convalescence after Evacuation of Brain Abscess. By Dr. George L. Walton.

Congenital Elevation of the Shoulder. A Report of Two Cases, Illustrating the Two Types of the Deformity, Treated by Operation. By Dr. Joel E. Goldthwait and Dr. Charles F. Painter.

Tubal Pregnancy with Double Pyosalpinx. By Dr. C. H. Hare.

A Plea for Pain and Patient. By Dr. Edmond R. Moras.

Presse médicale, November 20, 1901.

Serotherapy in Typhoid Fever.—Professor Chantemesse writes an enthusiastic paper on this subject. By comparing the use of antityphoid serum with other methods of treatment during the same epidemic, the mortality showed a marvellous diminution. The effect of the injections upon the temperature is particularly remarkable, the temperature falling by crisis in all cases in a few hours. Polyuria is established soon after the injection is made, and in the blood, in from twenty-four to forty-eight hours, a hyperleucocytosis manifests itself, the myelocytes diminish in number, the eosinophilic cells reappear, and mononuclear and transition forms appear; in other words, the blood assumes the characteristics of convalescence. The serum has a phagocytic action; it is prophylactic, anti-infectious, and antitoxic. In the gravely ill it produces a tremendous microbic destruction; in these cases, the patient must be given large draughts of water that the urine may carry off the

noxious matters circulating in the blood. The author describes in detail the method of administration.

Tuberculosis in the Tracheotomized and Intubated.—M. R. Romme has studied the figures of various observers and has come to the conclusion that intubated children acquire tuberculosis only about one fourth as frequently as those who are tracheotomized. When there can be a choice, therefore, as to the method of operation, he would prefer intubation.

Gumma of the Frontal Lobe with Jacksonian Epilepsy. By M. G. Dievlafoy.

Gazette hebdomadaire de médecine et de chirurgie, November 21, 1901.

Serum and Urine in the Jaundice of Infants.—M. Lereboullet concludes that, in the icterus of newborn infants, the serum always gives evidence of the presence of biliary pigments. As to the urine, even with Salkowski's method, the biliary pigments are often absent. This may be due to an arrest of the biliary coloring matters by the kidney, due, beyond doubt, to the still imperfect functions of the renal bodies in the new-born. The jaundice is truly one imparted by the bile pigment circulating in the serum.

Lyon médical, November 17, 1901.

Uterine Invasion Treated by Anterior Colpo-hysterotomy.—M. Gayet reports a case of uterine inversion in a young woman, aged twenty-four years, in which he secured a perfect result by suturing the uterus to the anterior vaginal wall. He prefers this method because the posterior cul-de-sac is reached with difficulty in the case of an inversion, reduction and suturing are easy, and damage to the bladder and ureters more remote.

Treatment of Facial Neuralgia by Galvanic Currents. By M. Vernay.—(*Conclusion.*)

Centralblatt für Gynäkologie, October 26, 1901.

Operation for Severe Vesico-vaginal Fistulæ.—Dr. Nicolai Wolkowitsch found that most vesico-vaginal fistulæ have their vaginal openings near the cervix uteri, and that because of this fact, many of the inconveniences of the ordinary operation arose; for instance, the tension on the upper edge of the fistula and the adhesions formed by the fistula to the anterior wall of the uterus. He has made use of this fact in his repair of fistulæ by freeing the cervix, carrying the uterus forward and fixing it in the fistulous tract after denuding the edges of the fistula and the anterior wall of the uterus at its point of fixation. The results were excellent in six out of eight cases; in two they were practically failures.

November 16, 1901.

Extensive Vaginal Rupture during Coitus.—Dr. N. Ostermayer reports such a case in a young woman. The small vagina rendered inspection and palpation most difficult, but, in order to stop the alarming hæmorrhage, the author finally succeeded in observing that the left wall of the vagina was completely torn through to a size sufficient for the

insertion of a hen's egg. A circular suture stopped the bleeding. The author found nothing anatomically abnormal to account for the tear, and ascribes it to the excessive sexual excitement of both parties.

November 23, 1901.

A Gynæcological Phantom. By Dr. Ludwig Knapp.

Vaginal Cæsarean Section for Premature Separation of the Placenta.—Dr. W. Rühl reports such a case [ablatio placentæ]. The mortality in these cases is very high for both mother and child, and the author believes that, by Dührssen's method of elythrotomy, the maternal death rate can be materially reduced. He points out, however, that for the ordinary practitioner without much experience in vaginal surgery, the usual method of Cæsarean section is safer; but if that is not practicable, Dührssen's method is to be rapidly performed to save the mother's life.

Münchener medicinische Wochenschrift, November 12, 1901.

The Theory of the Antibodies. By Dr. Max Gruber.—(*Continued.*)

Neuritis and Polyneuritis.—Professor R. Stintzing suggests the following divisions and nomenclature:

I. Genuine multiple neuritis—*teleneuritis multiplex*. 1. In leprosy; 2. in beriberi; 3. a few primary forms of unknown origin, *idiopathic*.

II. Multiple degenerative nerve atrophy—*teleneurosis multiplex*.

(A) Diffuse teleneuroses:

(a) Toxic in origin—alcohol, arsenic, mercury,
(b) Infectious in origin—typhoid, variola, and other acute infectious diseases, in the puerperium, in tuberculosis, and syphilis.

(c) Constitutional in origin—diabetes, carcinoma (cachectic form), marasmus (senile form).

(B) Systemic (motor) teleneurosis—as in lead poisoning.

III. Multiple inflammatory degenerative forms, *teleneuritis, multiplex degenerativa*, as diphtheritic, and the neuritis in Landry's paralysis.

Cyclic Albuminuria. By Dr. Paul Edel.—(*Continued.*)

Treatment of Sea-sickness.—Dr. O. Rosenbach suggests the use of psychic influences, especially suggestion, to overcome *sea-sickness*.

Case of Osteomalacia with Tumor Formation. By Dr. G. Feldmann.

November 10, 1901.

Present View of Fatty Hearts.—Dr. Carl Hirsch says that fatty degeneration of the heart does not exist as a disease *sui generis*. The author prefers to agree with von Leyden, who calls the condition the "cardiac difficulty of the obese." These disturbances are of different kinds and have different causes. If they appear in young persons (under forty), of an obese build, we may ascribe them to a misproportion between body weight and cardiac strength; but coronary sclerosis and severe functional disorders of the heart must be excluded in

these cases. In fat people of muscular strength who suffer from cardiac insufficiency, anatomical changes or marked functional disorder must first be considered. These are especially coronary or general arteriosclerosis, renal changes, and chronic myocarditis.

Action of Alcohol Enemata upon the Gastric Secretion.—Dr. Richard Spiro says that enemata of alcohol or of alcoholic fluids increase the secretions of the stomach, especially if from seven to ten cubic centimetres of pure alcohol or of alcoholic liquors containing from seven to ten per cent. of alcohol are used. The greatest increase of acids is observed about one hour after the enema; after that, the acidity gradually disappears. In cases of achylia and carcinoma of the stomach, no increase in the total acidity was noted after the enemata.

Practical Significance of Lactation Atrophy of the Uterus.—Dr. W. Thorn says, as a result of extensive studies, in an elaborate article, that even excessive atrophy of the uterus during lactation is physiological, and usually shows regeneration within six weeks of weaning. Women who remain amenorrhœic and show a lactation atrophy and general decrease of strength, should be overfed, the hours of nursing should be curtailed, and artificial feeding should be partially instituted, before it is decided to remove the child from the breast. If then, the uterus does not soon return to a state of normal involution, weaning is advised. If a retro-deviation exists with the atrophy, it requires no orthopædic treatment; but if it gives symptoms after involution has taken place, treatment with a pessary should be instituted. If complicating diseases exist, which cause debility and seem to threaten an increase of the atrophy or to cause an atrophy of the ovaries, the question of weaning must depend upon the character and severity of the disease.

Judgment of the Puerperium by the Pulse Rate. By Dr. Otto Aichel.

Theory of the Antibodies. By Dr. Max Gruber.—(*Conclusion.*)

Cyclic Albuminuria. By Dr. Paul Edel.—(*Conclusion.*)

Wiener klinische Wochenschrift, November 21, 1901.

Erythema following the Use of Fowler's Solution.—Professor Neumann reports the case of a man, aged thirty-seven years, who was given, during a period of two months, an ounce and a half of Fowler's solution and six grains of arsenious acid for forunculosis. At the end of that time he appeared with an erythema on his hands, feet, legs, buttocks, scrotum, and face. It appeared in three forms, gyrate, papular, and bullous. With the cessation of the arsenic treatment, the erythema disappeared in a month's time.

Demonstration of Pleural Effusions and their Diagnostic Value. By Dr. R. R. von Steintzer.

Influenza in Measles.—Dr. Julius Süsswein reports a number of cases in which influenza complicated measles, and says that it is not an uncommon complication, influencing the course of the measles unfavorably. There are cases of combined measles and influenza which cannot be distinguished from uncomplicated measles.

Berliner klinische Wochenschrift, November 11, 1901.

Heredity of Tuberculosis. By Professor F. Martius.

Studies on Pleural Transudates.—Dr. Alfred Wolff says that the generally accepted notion that the cells in pleural transudates undergo fatty degeneration and are then reabsorbed, is not borne out by facts, as this conclusion was reached by studies of unstained specimens. The fat in leucocytes is peculiar to itself, is not identical with other known facts, and has staining peculiarities. The fat in pleural effusions arises from degenerative processes, while glycogenic degeneration is frequent and occurs only in fresh cells. Between the two there is a decided difference.

Double Consciousness. By Dr. Karl Gumpertz.

The Pathological and Histological Changes Induced by the Tubercle Bacillus. By Professor Baumgarten.—(*Continued.*)

Centralblatt für Chirurgie, November 9, 1901.

Quinine as a Styptic and Antiseptic.—Dr. Hugo Marx praises quinine as a practical styptic and antiseptic. The hydrochloride salt has the power of agglutinating red-blood cells, hence its styptic influence. The author has made many experiments to prove the bactericidal power of the drug. For the control of bleeding, he applies compresses or tampons moistened in a one-per-cent. or two-per-cent. solution of quinine hydrochloride. No unfavorable reaction to the tissues follows. He advises the use of the solution in aseptic as well as in septic operations, and suggests the employment of a quinine gauze, similar to iodoform gauze.

Riforma medica, October 3, 1901.

Changes in the Blood Due to Cold. By Dr. Vitige Tirelli.—The author has studied the effects of cooling the living bodies of rabbits and also the effect of freezing their dead bodies on the constitution of the blood. He finds that cooling produces in live rabbits' blood the following changes (the temperature was from 0° to 1° C., the duration of the exposure from twelve to sixteen hours): There is a slight diminution of the hæmoglobin, and a moderate decrease in the number of red blood cells, but the shape and uniformity of coloring of these cells are unchanged. The leucocytes remain normal, both as to shape and as to the appearances of the granules, but in some isolated cases there are faded nuclei and destruction of the cell bodies. There is, however, a diminution in the number of the completely developed white cells by about one half, while there is an increase in the number of the younger forms, probably caused by the development of substances as the result of the destruction of the old cells, which stimulate the formation of new ones. Polynuclear leucocytes are therefore present in greater numbers than normally. The normal proportion between the various kinds of leucocytes is, however, restored when the body of the animal is warmed once more for seven hours, but the total number of leucocytes remains, though

slightly, below the normal. The bone marrow also participates in these changes, and, in this tissue, the author has found that the endoglobular erythrophile bodies are reduced in number by cold, and again become more numerous when the animal is heated.

The changes produced by freezing the bodies of rabbits (at 12-15° below 0° C.) are as follows: The animals die of what appears to be asphyxia, *i. e.*, dyspnœa, loss of consciousness, or paralyses, ecchymoses, and hæmorrhages. The red cells show a marked erythrocytolysis, oligochromæmia, together with a uniform diminution in the coloring of the individual cells, and an extreme tendency, in dry preparations, to distortion into stellate forms. The latter are found to be artifacts, inasmuch as blood in sections of blood-vessels do not show this distortion. As regards the leucocytes, there is a series of morphological changes, chiefly in the staining qualities of the cell bodies, in the multinuclear, the shrinking of the nuclei in the mononuclear cells, and the vacuolization of the nuclei in the lymphocytes.

The author concludes that hæmolysis plays a part in the mechanism of death by exposure to extreme cold.

Experiments with Intraspinial Injections of Antiseptic Substances. By Dr. Alessandro Mariotti.—The author has tried to inject antiseptic solutions into the spinal cord, with a view of establishing a method of treatment in meningo-spinal infections. He injected antiseptic substances into four dogs by the method of lumbar puncture. The first dog received in this manner two cubic centimetres of a one-per-cent. solution of carbolic acid, *i. e.*, 0.16 grammes per kilogramme of the animal's weight, without any local or general effect. The second dog received four cubic centimetres of the same solution at a temperature of 39° C. without any bad effects, and two days later, five cubic centimetres of a one-and-one-half-per-cent. solution of carbolic acid were injected into the same dog. Although the animal was closely watched, no disturbances of any kind were noted, and, five days later, a third injection of carbolic acid, this time five cubic centimetres of a two-per-cent. solution, *i. e.*, 0.66 grammes per kilogramme, were given intraspinally, without any untoward effects. In the third dog, a solution of iodine, and in the fourth a solution of corrosive sublimate, was used in the same way without disturbing the health of the animals. The highest dose of iodine was 0.083 grammes per kilogramme of the animal's weight, and the highest quantity of corrosive sublimate was 0.038 grammes per kilogramme. The doses injected were therefore relatively small, but such solutions were capable of arresting the growth of germs without giving rise to disturbances of function or to lesions, local or general. The doses injected corresponded approximately to the ordinary hypodermic doses of the drugs used, and it was not deemed necessary to determine the maximum doses of the antiseptics employed. In order to find out how far up in the spinal column, or possibly in the brain itself, an injection of an antiseptic introduced into the spine in the lumbar region would be carried, the author injected a colored solution into a fifth dog. He found that the highest point reached by the solution of carmine was opposite the fourth cervical vertebra. The author concludes from these experiments

that intraspinal injections of antiseptics in dogs are devoid of dangers within the limits of the doses used in his experiments, that the amount of solution which can thus be injected is such as can produce its ascending effect upon the spinal cord, and that the quantities and qualities of the antiseptics used were such as to make possible the desired antiseptic effect upon the germs of medullo-spinal affections.

October 4, 5, and 7, 1901.

Considerations and Investigations on Antisepsis and Asepsis in the Surgical Clinic of Messina. By Dr. Ferdinando Gangitano.—The extensive material of the author's clinic gave opportunities for researches in asepsis and antisepsis, conducted with special reference to the solution of problems connected with the asepsis of the operative field and the prevention of infection in the stitch wounds by germs situated in the deeper layers of the skin. The author's conclusions are as follows: The practice of applying a wet compress to the operative field on the day preceding the operation is to be commended. The best compress of this kind is one saturated with soft soap and formaldehyde in one-per-cent. solution. The skin is never absolutely sterilized, for while the superficial layers can be proved to be perfectly sterile, the deeper strata are the seat of germ growth in many instances. Silk sutures, while passing through these deeper layers, become infected. It is possible, however, by suturing with a red-hot needle to avoid this infection from the deeper layers of the skin. The method of using red-hot needles is original with the author and is as follows: The needle is threaded and fastened in the needle holder, whereupon, just before the suture is inserted into the skin, the needle is heated to a red heat in a flame. The skin is held with forceps in the usual way, and the suture is inserted. The needle is heated anew for each stitch, and a new needle is required for every three or four stitches. The only disadvantages of this method are the loss of time it entails, and the number of needles used in each operation. These disadvantages may be disregarded in cases where it is very important to get a perfectly sterile wound. The author's investigations concerning the comparative value of dry and wet dressings have made him a strong partisan of the dry method.

October 8, 9, and 10, 1901.

Studies on the Bacteriology of Bubonic Plague. By Dr. C. Terni (*First Paper*).—The bacillus of plague, discovered by Kitasato and Yersin, shows definite morphological characters that serve to distinguish it from other germs. There is no acute lymphadenitis which is produced by germs that may be mistaken for the bacillus of plague. All instances of acute lymphadenitis which present the clinical characteristics of plague are suspected cases of bubonic plague, and should be examined microscopically. The microscopical and bacteriological diagnosis of plague is now founded upon so positive scientific data, that no doubt can be possible as to the certainty of the results. When cases corresponding clinically to plague in which the bacteriological tests show that plague is present, develop in a locality, a microscopical examination is not even necessary to state positively that plague ex-

ists, and to furnish reason for strict quarantine regulations. The chief clinical symptoms which the physician must rely on in making a diagnosis of plague, are the quality of the pus from the suppurating glands, which is sanious, and not "laudable," and the frequency (above 120) and small size of the pulse, together with the unusually low temperature and subsequent dilatation of the right ventricle. In cases in which the bacillus of plague is associated with ordinary streptococci, and which are generally benign, the specific germs disappear very rapidly, and unless the examination is made in the acute stage, none will be found. On opening the abscess and allowing it to remain open for three or four days, it will be found that the plague germs have disappeared and that nothing but streptococci remain.

Gazzetta degli Ospedali e delle Cliniche, November 10, 1901.

The Importance of the Ciliary Ganglion as a Peripheric Centre for the Sphincter of the Iris. By Dr. Alessandro Marina.—The author cites a number of facts which lead to the conclusion that there is a centre for the sphincter of the iris in the anterior part of the common oculomotor nucleus, and concludes from a clinical study of the disturbances of the contractile function of the pupil, that there must be also a peripheral centre for this function. Cases have been known to occur in which there was a severe lesion of the oculomotor centre, completely destroying the same, and yet there was no paralysis of the sphincter of the iris. The author supposes the peripheral centre to be situated in the ciliary ganglion, and records experiments upon nine monkeys and four dogs to prove this theory. In addition, the author examined the Gasserian and superior cervical ganglia, as well as the central oculomotor region and the medulla in 13 paralytics with normal pupillary reaction, in 20 with defective or absent pupillary reaction, in 29 persons who had died of various diseases, and in 5 tabetics. He found that, in paralytics with normal reaction, the ciliary ganglia were normal; on the other hand, in those with disturbances of pupillary reaction the ganglia were found diseased. The same was found in the tabetic patients.

On Pleuritic Urticaria. By Dr. Gustavo Minciotti.—A patient with serofibrinous pleurisy was aspirated, and on the following day was seized with vomiting that bore all the characteristics of uræmic vomiting. There were apathy and somnolence, and the urine, though of sufficient quantity, contained a trace of albumin. Urticaria followed, and the vomiting ceased two days later, after which all the symptoms began to disappear, leading to recovery. According to Carageorgiades, pleuritic urticaria occurs usually during the stage of absorption. Its intensity does not at all depend upon the amount of exudate, and it constitutes a favorable prognostic sign. It is probably of toxic origin.

Corrosive Sublimate Subcutaneously in the Treatment of Puerperal Infection. By Dr. Arturo Montini.—This method of treatment has given good results in the hands of the author, as well as in those of other observers. The dose should be regulated according to the severity of the infection, and

if care is exercised, no danger of mercurialism need be feared. It is advisable to alternate the injections of corrosive sublimate with those of quinine bichloride. In puerperal septicæmia, with the uterus as starting point, curettage is also of value, if practised according to the rules of the art.

Atropine in large Doses in the Treatment of Intestinal Obstruction. By Dr. Domenico Cappuccio.—This method, first introduced by Batsch, in 1899, has not yet gained general recognition. This may be due to the fact that cases of dynamic obstruction of the bowels are rare, and that in the presence of the alarming picture of intestinal stenosis, the surgeon is more apt to think of an operation than of anything else. It is certain, however, that statistics on the value of this method are as yet too scanty to form a basis of judgment. In a case reported by the author, three doses of atropine were given subcutaneously within twelve hours, with the result that a strangulated hernia was converted into a reducible one. The first relief was felt two hours after the third dose, when some gas was passed by the rectum. The dose in this case was one milligramme of atropine at each injection (grain 1/60). According to Batsch, this method is applicable solely to cases of dynamic obstruction, and therefore, cases which terminate fatally under the use of atropine should not be counted against this method, if the autopsy shows them to have been cases of organic obstruction. The author recommends the use of atropine tentatively in cases of obstruction in which the symptoms are mild and the condition of the patient is good, so as to admit of delay. Large doses of atropine cannot be given without a certain danger of poisoning. Many herniotomies will be avoided if recourse is had to atropine in cases of strangulated hernia in which attempts at taxis fail. The method of Batsch must not be used, however, in crural herniæ in old patients, where there is a tendency to gangrene.

Khirurgia, September, 1901.

Ulcers of the Duodenum and Cicatricial Contractions Resulting therefrom. By Dr. V. Liansky.—The author reports three cases of duodenal ulcers, the histories of which he gives in detail, in view of the rarity of the affection. Duodenal ulcers are stated to be from twelve to forty times less frequent than gastric ulcers. They occur, as a rule, after burns on the surface of the body, infectious diseases, and affections of the biliary tract, and are seen more frequently in elderly men, who are often otherwise in good health. The author's first case was noteworthy because there were scarcely any symptoms pointing to the presence of duodenal ulcers. In such cases we expect to get localized pain in the right hypochondrium, jaundice, and hæmorrhages in the gastric contents and in the fæces. In this case, however, the pains were paroxysmal in character, at times so severe as to produce syncope, and located in the left hypochondrium, the right not being even very sensitive. The vomiting was continuous, and blood was present only on one occasion. The ulcer could not be found at the operation, because it was located in an unusual place in the duodenum, where it could not

be reached—namely, in the upper horizontal portion, about one inch and a half from the pylorus. The ulcer ruptured about eighteen hours after the operation, and the patient died. In the second and third cases the cicatrix formed by the healing ulcer caused obstruction of the intestines.

Intestinal Obstruction. By Dr. V. A. Selenkine.—In this case the cæcum and appendix were found in the left hypochondrium, and the colon was found twisted one and one half time around its own axis. The operation lasted two hours and a half, and the patient died soon after the operation. The case is reported on account of the unusual situation of the large intestine.

Catgut in the Radical Operation for Hernia by Bassini's Method. By Dr. N. Nikolsky.—The author believes that Bassini's operation is without dangers, and is absolutely indicated in cases of incarcerated hernia and in cases in which the operation is performed simply because the patient wishes to be cured of the rupture.

The author recommends catgut in this operation, as by the use of this material in a sterile form he was able to obtain primary union and to shorten the postoperative period considerably.

On the Radical Treatment of Inguinal and Femoral Herniæ. By Dr. I. A. Bondareff.—In 52 patients there were 52 inguinal, and 6 femoral, herniæ. The radical operation was performed in 43 cases, by Kocher's method; in 5, by Bassini's; in 3, by Girard's; and in 3, herniotomy was performed. Only in one case, that of an anæmic and scrofulous boy with a double inguinal hernia, was there any recurrence. On one side he had had a Bassini, on the other a Kocher operation. The author believes that the method must be chosen in each instance according to the peculiarities of the case, but thinks that Kocher's method gives the best results, and is simpler than the others.

On Local Chronic Tuberculosis of the Cæcum and its Surgical Treatment. By Dr. I. M. Glasstein.—The author reports a case of tuberculosis of the cæcum, in which the diagnosis was made before the operation. The tubercle bacillus is not necessarily present in the fæces in such cases. The patient was a boy, ten years of age, which is a remarkable fact, as these cases do not occur usually at such early age. Entero-anastomosis was performed, and the patient recovered.

Vratch, November 17 (New Style, November 29), 1901.

The Binocular Phenomenon. A Contribution to the Physiology of Binocular Vision. By Dr. A. I. Sokoloff.—A series of experiments show that the theory of binocular vision as usually taught at present is not sufficient to explain this phenomenon. The author found that the visual path of one eye must, under the conditions of binocular vision, become subordinate to that of the other eye, and not receive any impressions that are not received and transmitted by the other eye. He assumes the existence of two sets of visual centres, the impressions on the retinae of both eyes meet in the first set of

centres, and the unpaired impressions struggle for supremacy in these centres until one of the retinal impressions is arrested in its progress, while the victorious impression, passing on to the other centres, makes a sensory impression, and is transferred without change to the opposite cerebral hemisphere through the connecting fibres.

On the Effect of Antipyrine upon the Animal Organism. By Dr. E. Soudzilovsky.—In view of the widely different opinions on the subject, the author investigated the action of antipyrine upon animals, chiefly with the purpose of determining the influence of this drug upon the nitrogenous metabolism in both health and fever. Rabbits, dogs, and frogs served as objects of experiment. The animals were first placed in cages, and observed, with reference to the condition of nitrogenous exchange. They were then given subcutaneous injections of antipyrine. The fever was produced artificially by injections of bacterial cultures, and in one instance by puncture of the corpus striatum. The author found that all the animals tested lost their appetite after the administration of the drug. The amount of urine, the relative and absolute amounts of nitrogen and urea, and the percentage of nitrogenous exchange were markedly increased. (*To be concluded.*)

A Simple Method of Fixation for Blood-smears. By Dr. N. P. Kornilovitch.—The disadvantage of Ehrlich's method of fixing blood smears on coverglasses or slides is, that in heating the preparations in the thermostat, especially when many slides are prepared at the same time, the shelves of the oven are not heated evenly, although the thermometer shows a uniform temperature. The slides that lie on shelves nearer the flame are heated more than the others, and thus many are spoiled. The author uses a solution of osmic acid consisting of 1.0 of the acid, 0.6 of sodium chloride, and 100.0 of distilled water. The specimens were obtained as follows: A camel's-hair brush was first thoroughly cleansed by dipping into alcohol and washing in water. It was then dipped into the one-per-cent solution of osmic acid, a fraction of a drop being taken up by the brush. A drop of blood from the finger or the lobe of the ear was taken with this brush and smeared upon a clean slide. The blood was thus immediately mixed with the fixative. The slide was dried in the air and stained at once.

Neuromyositis following Chronic Alcoholism. By Dr. S. G. Lisiansky.—The patient was a man, aged thirty-nine years, with a history of chronic alcoholism. On admission his upper extremities and trunk were found to be in a condition of paresis, and the mobility of his lower extremities still more markedly affected. There were no sensory disturbances, but the knee and ankle reflexes were completely absent. There was no reaction of degeneration. In the course of a few days he began to show disturbances of mind, and the paresis became a paralysis. Hallucinations, delusions, and indistinctness of speech were noted; he developed bed sores and finally could not answer any questions. A month after admission he died suddenly after an access of collapse. On autopsy, myocarditis, fatty degeneration of the heart and lungs, and parenchymatous nephritis were found. The author attributes all the lesions found to alcoholic poisoning.

On Intra-uterin Injections. By Dr. B. A. Liuboff (*continued*).—In speaking of the value of intra-uterine injections of solutions of iodine in chronic gonorrhœal endometritis, according to the method proposed by Grammatikati, the author says that he tried this treatment in thirty cases without obtaining a cure in a single instance. In disorders of menstruation not depending upon any new growth, curetting, followed by the use of the intra-uterine injections of iodine with Braun's syringe were of great value. In fifteen patients with fungous endometritis, curetting and injections of iodine were followed by marked improvement. (*To be concluded.*)

A Case of Papular Erythema of Uræmic Origin. By Dr. I. V. Vvedensky.—Until 1900 Thirfield collected only 46 cases of this affection from the literature. The author reports an additional case. The patient was a man, aged fifty-two years, and his case was remarkable because the erythema was caused, not by Bright's disease, but by retention of urine. He had been suffering from retention for four days before he could obtain relief in a hospital. A "basinful" of urine was drawn off with a Nelaton's catheter, No. 17F. On the following day the rash appeared in the form of red papules on the trunk. Two days later, the eruption covered the whole anterior aspect of the body and parts of the back. There was intense itching, and later desquamation. The kidneys were not affected, as there was no albumin in the urine at any time. The temperature remained normal throughout, the rash was symmetrical and appeared on the sixth day of the disease. After the thirteenth day it began to recede.

Miscellaneous.

The Graver Complications of Chronic Purulent Otitis Media.—Dr. Herbert F. Waterhouse (*Edinburgh Medical Journal*, September) considers the following complications of chronic purulent otitis media:

1. Aural polypi.
2. Purulent inflammation of the mastoid antrum and cells, including caseous and cholesteatomatous collections.
3. Paralysis of facial nerve.
4. Ulceration of blood vessels.
5. Meningitis.
6. Cerebral and cerebellar abscess.
7. Pyogenic lateral sinus thrombosis.

He remarks as follows on the diagnosis of cerebral and cerebellar abscesses from (1) leptomeningitis, and (2) infective lateral sinus thrombosis:

1. In meningitis the onset and course of the symptoms is much more rapid than in abscess, the temperature is high, the pulse rapid, there is general hyperæsthesia to light and sound. There are stiffness and rigidity, with sometimes pain in the neck. Involvement of the cranial nerves is common, and squint is frequently suddenly developed.

2. Infective sinus thrombosis is also, as a rule, in uncomplicated cases readily differentiated from intracranial abscess, by the occurrence of violent recurring rigors, followed by profuse sweatings, the temperature very high at one time and falling several degrees in a few hours, the pulse very rapid and weak, the hard, cord-like swelling, and the pain on pressure over the upper part of the internal jugular vein, the œdema over the mastoid (if present), and the profuse diarrhœa.

Book Notices.

Dictionary of Philosophy and Psychology, including many of the Principal Conceptions of Ethics, Logic, Æsthetics, Philosophy of Religion, Mental Pathology, Anthropology, Biology, Neurology, Physiology, Economics, Political and Social Philosophy, Philology, Physical Science, and Education, and giving a Terminology in English, French, German, and Italian. Written by Many Hands and Edited by JAMES MARK BALDWIN, Ph. D. (Princeton), Hon. D. Sc. (Oxon.), Hon. LL. D. (Glasgow), Stuart Professor in Princeton University. With the Cooperation and Assistance of an International Board of Consulting Editors. In Three Volumes, with Illustrations and Extensive Bibliographies. Vol. I. New York: The Macmillan Company; London: Macmillan & Co., Limited, 1901. Pp. xxiv-644. (Price, \$5.)

If we may judge by the first volume, Professor Baldwin and his coadjutors are producing a book of reference of a very high order of merit. It will not take the place of a medical dictionary, although many medical terms are defined in it. Predominant among them are those employed in neurology and especially in psychology. This is shown *inter alia* by the long article under the word *Brain*, including a very complete and accurate anatomical glossary, also by the definition of *Commissure* being so fashioned as to apply only to the commissures of the central nervous system. It would have been better, we think, to give briefly the non-neurological meanings of words used in neurology and in other departments of medicine, and we cannot imagine how the editor could limit the definition of *Circulation* to the financial use of the word, or how he could refrain from explaining the bacteriological meaning of *Agglutination*. We suppose that some system was followed in determining what current medical terms should be admitted and whether they should be completely or only partially defined, but we have not been able to make it out. We are not seeking to imply that it is not a good one, and, indeed, far from carping at omissions, we are glad to find so much of the medical vocabulary included.

Concerning the definitions from the point of view of exactness, when not purposely restricted, too much cannot be said in commendation. We have noticed only one definition that seems unsatisfactory. It is that of *Contractility*, given as follows: "The property or function of living tissues to react in some way when a proper stimulus is applied." The phrase "in some way" seems inadequate, but the reference "See Vital Properties and Muscle" is appended, and it is consequently to be expected that the vagueness of the definition may be cleared up in the second and third volumes. On the other hand, the remarks under *Corpus* strike us as altogether admirable. They are as follows: "Used in combination in many anatomical terms (e. g. *corpus callosum*). * * * Most American and many European neurologists drop the substantive in many such cases, and write e. g. *callosum*. Where various nouns are compounded with the same descriptive adjective (e. g. *corpus fornicis* as contrasted with *crus fornicis*), *corpus* must be retained; but it

should never be applied to replace 'nucleus' for an histological aggregate, as it properly refers to a part anatomically discrete."

We are glad to see that Professor Baldwin prefers the German spelling of twenty years ago to that which the schoolmasters are now trying to force upon the people, and particularly that he does not join hands with those who seem bent on banishing the letter c from the German language, though even he makes the slip of admitting *Kontraposition*.

As a specimen of book-making the volume is admirable; it is well printed and well bound. Errors of proof-reading are very rare; among the few that we have noticed is one under the term *Day-blindness*, in which the word *Ophthalmia* takes the place of *Ophthalmology* in a reference. We hope that the publication of this great work will soon be completed, but we realize the arduous nature of the labor required in its preparation.

Traité de chirurgie clinique et opératoire. Publiée sous la direction de MM. A. LE DENTU, Professeur de clinique chirurgicale à la Faculté de médecine de Paris, etc., et PIERRE DELBET, Professeur agrégé à la Faculté de médecine de Paris, etc. Tome dixième. Première partie. Par MM. PIERRE SEBILEAU, R. PICHEVIN, S. BONNET, E. SCHWARTZ. Avec 186 figures intercalées dans le texte. Deuxième partie. Par MM. A. LE DENTU, S. BONNET, P. MAUCLAIRE. Avec 147 figures intercalées dans le texte. Paris: J. B. Baillière et fils, 1901. Pp. 1334.

With the appearance of the tenth part in two volumes, this comprehensive system stands completed. Diseases of the generative organs of the male and those of the female are under consideration, and they occupy the greater part of the two volumes, the remainder of Part ii being devoted to the surgery of the extremities, mainly orthopædics. A uniform degree of thoroughness characterizes each article, but they are all replete with bacteriology, which is a very strong feature of these volumes, and the thorough appreciation of the significance of bacteriological teachings has tended to simplify the otherwise complicated French nomenclature of diseases.

It is not possible to pass in review so many topics by so many authors, but two in particular are worthy of note, that on orchido-epididymitis and the one on ectopic gestation. The former is treated of from the bacteriological standpoint. The author does not countenance such appellations as epididymitis *d'emblée* or epididymitis *par force*, which expressions are still in vogue in French medical literature. A careful analysis will in each instance trace the origin to a source of infection, recent but obscure; e. g., typhoid, mumps, catheterism, or remote or latent gonorrhœa or tuberculosis. Close pathological study obliges the author to accept naught but castration as the operation of choice in tuberculous epididymitis. Ectopic gestation is exhaustively treated from an anatomico-pathological point of view, and the teaching is wholly consonant with our view.

In the part devoted to orthopædics the innovations, on coxa vara, coxa valga, metatarsalgia, and tendon grafting, are very well written. The surgery taught is of the highest order. This superior-

ity is the outcome of the strong faith of the collaborators in a rigorous application of bacteriological principles, accurate pathological data, and a thorough grounding in embryology. Considering these facts, it is not too much to say that these volumes are strong at every turn of the page in diagnosis, prognosis, and treatment.

Oral Surgery. A Text-book on General Medicine and Surgery as Applied to Dentistry. By STEWART LEROY McCURDY, A. M., M. D., Professor of Anatomy and Surgery, Pittsburgh Dental College, etc. Pittsburgh: The Calumet Publishing Company, 1901. Pp. 3 to 368.

The opening sentence of the preface states that "the title of this book is selected for the want of a better one"; and, unfortunately for the well being of the book, this remark but too correctly typifies the incongruous matter grouped under the title.

A recital of the elements of surgery is always proper, but should not be primer-like, as it is in these pages. For instance, we fail to see the need of dwelling on the use of adhesive straps in approximating the lips of wounds in oral surgery, and the relation of gonorrhœa to oral surgery is by no means clear. Again, congenital dislocations are wholly foreign to this specialty, and the consideration of intracranial surgery for the relief of trigeminal neuralgia is beyond the pale of oral surgery. In contrast to these digressions, plastic surgery of the mouth, so very germane to the subject, is not even favored with an illustration, while a picture of skin graft for an ulcer of the leg is given.

The language is unscientific and proper names are misspelled. Yet, in the face of these inconsistencies, the author is to be commended for his zealously in familiarizing dentists with more of the genuine surgical methods than they are wont to practise. For these the dentist can turn to this book with profit.

A Text-book of Bacteriology. By GEORGE M. STERNBERG, M. D., LL. D., Surgeon-General, United States Army; Honorary Member of the Epidemiological Society of London, etc. Illustrated by Heliotype and Chromolithographic Plates and Two Hundred Engravings. Second Revised Edition. New York: William Wood & Company, 1901. Pp. xi-708.

The reader who is familiar with the first edition of this work will not fail to note that certain chapters have not received that careful revision which a work of this nature demands. The development of this particular branch of medicine has been so rapid since the publication of the first edition that it is not only desirable, but essential, that the student and physician should be in touch with the progress made. Here and there are evidences that the author has carefully followed the scientific achievements made along these lines, while in other places the revision has been incomplete and unsatisfactory.

The general plan of the work is similar to that of the early edition, but two new sections have been added, on Protective Inoculations in Infectious Diseases and on Bacteria of Plant Diseases. In the description of the distinction between the typhoid bacillus and the many varieties of the colon bacillus group, the agglutination reaction with serum or

blood from a typhoid fever patient should have been mentioned.

While criticising the work from the standpoint of a text-book for students, we are glad to state that as a work for reference on many subjects it stands unexcelled. Throughout the book are scattered many important facts and data, some of which are personal observations, while others are gleaned from the works and monographs of many writers on the subject of bacteriology. And it is this excellent collection of facts, not found in any other text-book with which we are acquainted, that makes the work so valuable for reference and so remunerative to the reader.

Memoranda on Poisons. By THOMAS HAWKES TANNER, M. D., F. L. S. Eighth Revised Edition. By HENRY LEFFMANN, A. M., M. D., Professor of Chemistry in the Woman's Medical College of Pennsylvania, etc. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. 9 to 170. (Price, 75 cents.)

It is a pity that the American reviser of this very convenient and useful little manual of toxicology did not improve his opportunity with the issue of the eighth revised edition to bring the work more into accord with American principles of nomenclature. This is, however, a minor fault which might be overlooked were the information regarding methods of antidotal treatment brought more fully up to date. Much is, however, left to be desired in this particular, and we need only point to the preference which is given the stomach pump as a means of emptying the stomach to emphasize the weakness of the manual. Apomorphine is a reliable and prompt emetic and of particular service in certain conditions, particularly where an emetic cannot be administered by the mouth, and one is obliged to introduce the emetic under the skin. But apomorphine is not mentioned among the list of emetics, though wine of ipecac and powdered ipecac are named.

While it is generally recognized that there is no real antidote for carbolic acid, the method of washing the stomach with a solution of saccharated lime or a solution of sodium sulphate, after the stomach contents have been evacuated, has given good results; and the old method of administering oils, which is recommended in this work, has been generally abandoned. However, a concession to modern methods is found in the statement that "the true antidote [for carbolic acid] is a soluble sulphate (sodium sulphate), which converts carbolic acid into sodium phenolsulphonate."

The chapter on the detection of poisons is perhaps all that could be asked for in a brief work of this kind. Anachronisms are plentiful, but the general scheme for the detection and separation of poisonous alkaloids will answer fairly well the purpose of the medical practitioner, who is not expected to be familiar with the minutiae of chemical analysis.

Despite all we have said in criticism, Tanner's *Memoranda on Poisons* is still a useful book of reference for the practitioner who desires immediate information regarding the action or antidotal treatment of the commoner poisonous substances. It is not, of course, to be classed with the larger works like those of Luff, Blyth, or Kobert.

BOOKS, ETC., RECEIVED.

Essentials of Physiology. Prepared especially for Students of Medicine. By Sidney P. Budgett, M. D., Professor of Physiology in the Medical Department of Washington University, St. Louis. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 233. (Price, \$1.)

A Complete Exposé of Eddyism or Christian Science and the Plain Truth in Plain Terms regarding Mary Baker G. Eddy, Founder of Christian Science. By Frederick W. Peabody, Member of the Boston Bar. An Address delivered at Tremont Temple, Boston, on August 1, 1901. Pp. 68.

System of Physiologic Therapeutics. Edited by Solomon Solis-Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume III. Climatology—Health Resorts—Mineral Springs. By F. Parkes Weber, M. A., M. D., F. R. C. P. (Lond.), Physician to the German Hospital, Dalston, etc. With the Collaboration of Guy Hinsdale, A. M., M. D., Secretary of the American Climatological Association, etc. In Two Books. Book I. Principles of Climatotherapy—Ocean Voyages—Mediterranean, European, and British Health Resorts. Illustrated with Maps. Pp. xiii-17 to 336. Volume IV. Book II. Health Resorts of Africa, Asia, Australasia, and America. Special Therapeutics. With a Special Article on the Hawaiian Islands by Dr. Titus Munson Coan, of New York. Illustrated with Maps. Pp. xiii-17 to 420. Philadelphia: P. Blakiston's Son & Company, 1901.

Report of the Surgeon-General, United States Navy, Chief of the Bureau of Medicine and Surgery, to the Secretary of the Navy, 1901.

Miscellany.

The Treatment of Phthisis by Means of Electrical Currents of High Frequency and High Potential.—Chisholm Williams, F. R. C. S. Ed. (*British Medical Journal*, October 12, 1901), describes a method of treating phthisis by electrical currents of high frequency and high potential, based upon the results of forty-three cases. The author says that the difference between the currents obtained from the ordinary dynamo, or Ruhmkorff coil, and those of Tesla is that the alternations of the latter are infinite and the electro-motive force proportionally high; that is to say, the alternations of an ordinary coil are about 200 per second and the electro-motive force of from 10,000 to 200,000 volts, while the alternations of the high-frequency currents are millions per second and the electromotive force from 100,000 to a million volts, depending on the means employed in their production.

The secondary terminals of the coil, or transformer, are connected to the inner coatings of two Leyden jars, the armature of these jars being so arranged as to form a spark-gap which is traversed by the currents; the outer coatings of the jars are connected by means of a solenoid. This solenoid furnishes the currents of high frequency and high potential which are used for medical treatment. The methods of treatment are of three kinds: By auto-conduction, auto-condensation, and resonator.

1. *Auto-conduction*.—The patient is placed in a large solenoid, and currents are "induced" in the living body, from which sparks may be drawn.

2. *Auto-condensation*.—The patient lies on a couch, in or under which is a large sheet of metal, which forms one armature of a condenser, and the patient by means of suitable handles forms the other. In this way currents of from 300 to 400 milliampères may be safely passed through the body.

3. *Resonator of Oudin*.—A solenoid, one end of which terminates in a metal sphere or other shaped terminal, the other end being carried to the outer coatings of the Leyden jars. From this can be drawn a long brush discharge, or, as it is technically termed, "effluve," similar to the "static breeze," but absolutely painless and of far greater power and intensity. This method can also be used locally by means of suitable electrodes, for more or less localizing the current, as in lupus and other skin affections.

In treating tuberculous patients, the author found that general electrification was better than local, and a combination better still. The effects are said to be as follows:

Fever.—After a few applications (generally and locally) the temperature acts to the stimulus, and in proportion to the length of the sittings will be the height of the rise of temperature we can produce. This in a severe case may be to 103° F. or so; but we find that in from twelve to twenty-four hours it has come down to, as a rule, below the patient's lowest point, and as we persist or desist in the application so does the temperature rise or fall. Later on we reach a stage where even prolonged exposure to the high-frequency currents will produce no rise. When that stage is reached the patient is to all intents and purposes well; and should a relapse occur, it would be easy to resume the treatment for a while.

Cough, after a few days, is relieved, and after a few weeks is greatly lessened; though a dry cough without expectoration may persist for many months.

Sputum.—At first the usual muco-purulent expectoration loses its offensiveness, usually becoming increased in quantity, but generally in a month or two ceases. It sometimes becomes "rusty," like pneumonic sputum.

Tubercle Bacilli, after a week or so, greatly increase in numbers; this may go on for weeks, then they gradually decrease, and have a tendency to form "clumps," and later, as the patient improves, fall to an extremely small number, and may become somewhat irregular, small in shape, and take a stain with extreme facility. The bacilli seem to follow the course described by Forbes Ross and Norris Wolfenden in their paper on the Effects produced in Cultures of Tubercle Bacilli by Exposure to the Influence of an X-ray Tube (*Archives of the Röntgen Ray*, August, 1900). They say, in conclusion, "There is not the smallest doubt that x-ray stimulation does not kill tubercle bacilli, but stimulates them to excessive overgrowth, and only affects them adversely by attenuation from overgrowth."

Perspiration.—This keeps pace with the temperature, but generally subsides after a few weeks' treatment, and only recurs if the treatment is pushed and the temperature rises unduly.

The *appetite* is improved and digestion greatly increased. The *kidneys* at first excrete larger quantities of phosphates, but these quickly clear off and the urine becomes normal.

Body weight, as a rule, steadily increases with the improved digestion. A common occurrence was a gain of fourteen pounds in three months. A loss of a few pounds at the commencement is not rare.

Diet.—Light nutritious diet was ordered. Practically no drugs were used except an occasional laxative. Cod-liver oil and such like foods were gener-

ally allowed after one month's treatment.

The *pulse-rate* is increased twenty or thirty beats in tuberculous subjects during the actual application of the currents, but in a few hours regains its usual rate. In slightly neurotic cases it may be irregular.

Anæmia.—The mucous membranes in a few weeks look brighter, and the skin becomes more pink-looking and acts better.

Clubbed fingers follow the usual course of a phthisical patient when recovering from the disease. The nail edges become more square and the free margins elevated.

Menstruation, mostly absent, irregular, or pale, and very generally scanty, improved very rapidly under the treatment. The author has observed the same phenomenon in cases of severe chlorosis unassociated with phthisis.

Larynx.—Tuberculous laryngitis seems particularly amenable to treatment by means of the "effluve" method.

Breathing, if short and difficult, quickly becomes longer and easier, the chest capacity soon improving. The rate of breathing is increased during the actual application of the currents.

Dosage.—The medical man should most carefully watch the temperature chart, and let that direct him regarding the dosage. Some knowledge of electricity is required for its successful application. Generally speaking, in severe cases ten minutes a day is sufficient, but may be quickly increased, providing the fever does not go too high (over 101.4° F.). The author gives all cases general electrification, and in addition, to some locally, the "effluve" from a metallic brush. Actual sparking of the chest wall is somewhat painful, and should never be used in phthisis, as in his opinion it is useless. If the "effluve" is of proper consistency, the skin feels as if it was receiving a soft warm breeze, slightly tingling in its nature.

Effectiveness.—Of forty-three patients, forty-two put on weight and lost all symptoms, except in a few, where a slight cough remains and a few bacilli may be found occasionally. Physical signs generally remain long after the patient is at his maximum weight (for height).

Time varies with the severity of the symptoms; an average in a severe case would be three months. Thus, the first month applications might be made daily; second month, every other day; third month, twice a week. In several of the author's male patients their ordinary occupation was resumed after a month or so. By those practitioners possessing an efficient x-ray apparatus the treatment can be readily applied if the necessary additional apparatus is procured.

Dr. Rivièrè (Paris) had for five years employed high-frequency currents in the treatment of pulmonary and local tuberculosis and had communicated a paper on the subject to the Congress of Electrotherapeutics, held in Paris in the year 1900, and later to the Congress on Tuberculosis in London.

Therapeutic Suggestion During Natural Sleep.

—In our issue for May 21, 1898, and again in that for November 12th of the same year, we referred to the subject of Therapeutic Suggestion during Ordinary Sleep. In the *Journal of Mental Pathology* for June, 1901, is a very interesting article by Dr. Paul

Farez, of Paris, who says that authentic observations, convincing experiments, and proved cures, show the efficacy of suggestion during natural sleep. Before active suggestion can be made use of during natural sleep it becomes necessary to bring the patient into a preparatory condition, such that he may be spoken to without his being awakened and such that suggestions made should reach him and nestle in his consciousness. This is attained by simple but tedious procedures, requiring much patience and circumspection. Several periods are to be distinguished.

First Period.—In the evening, when the patient is asleep, the author steals noiselessly into his bed chamber, and, standing a few yards away from the bed and, in a low tone of voice, scarcely audible, in a long, monotonous rhythm, he begins to articulate the two syllables "dormez," "dor mez" * * * which he repeats without any impatience whatever so long as is necessary. Little by little he approaches the patient until he reaches his ear at a distance of from six to eight inches, not for an instant interrupting the articulation of the two syllables, in the same slow and monotonous rhythm, in a low tone of voice hardly audible.

Second Period.—When in close proximity to the patient's ear, he continues articulating the two syllables in uniform measures. He maintains the same rhythm, but after the lapse of some minutes, heightens the tone, his voice augments in intensity, little by little, without a start, without abruptness, without suddenness.

The auditory sensation, indistinct at first, hardly existing, settles gradually, becomes more and more distinct, reaches the entrance to consciousness, passes from the penumbra to perfect life and soon attains the vivacity of the imaginative representations of a dream. Then the sensory excitation produced by the repeated monotone does not cease to be maintained, but becomes progressively augmented; the auditory sensation persists, becomes more and more vivid and preponderant, and gradually reduces the force of the other representations that previously occupied the area of consciousness, which become attenuated and disintegrate, until they fall submerged and become altogether remote. At that moment nothing remains of this but the auditory sensation caused by the repeated intonation.

Third Period.—The consciousness cannot long remain identical to itself; it requires, in a certain sense, the "perception of a difference," the consciousness, if its contents cease to be distinctively successive and differentiated, soon becomes veiled and dimmed. Let us then continue repeating the monotone, now not in a progressively increasing tone, but purposely uniform and continuous. From this moment the quantity and quality of the conscious phenomenon does not vary; our simple, homogeneous sensation, fully conscious, will now become less and less conscious, then subconscious. At this moment psychic life is void of all contents, and has reached a condition of receptiveness; the patient has become subject to suggestion. By what traits is one to recognize the necessary condition?

In order to articulate the syllables after an isochronous rhythm, every syllable "dor" is pro-

nounced during every inspiration and every syllable "mez" during every expiration. The author has noticed that if, after a variable length of time, he changes somewhat slightly the rhythm of his words the patient's respiratory rhythm becomes modified in proportion, becoming accelerated or decreased in ratio with the quickening or slowing of his vocal rhythm. When it is possible thus indirectly to act on the respiratory movements of the subject, he is ready for the suggestion.

Fourth Period.—Call to mind the advice given by August Voisin, in reference to the hypnotic sleep: "One must proceed slowly—one must not make too many suggestions during one séance, or run the risk of causing apparent malaise, which shows itself by facial contractions." The suggestions must be expressed with distinctness, conviction, and authority, and must consist of short, concise, well marked phrases reduced to a strict minimum. Every syllable of every word must be distinct, one from the other, and must be articulated according to the rhythm of the respiratory movement.

Fifth Period.—At the end of the séance we must order the patient not to awake before a given hour, to sleep all through the night very calmly, and to dream of nothing but what has been advised. We must suggest to him that on awaking he will not be tired, but full of energy, with his spirit alert and active. This done, he must not be left suddenly; we must retreat gradually, repeating our intonation, this time with a progressively decreasing intensity.

As to duration and frequency one cannot formulate any precise rule, for the conditions of intervention vary with the subject. In general a séance must last not less than half an hour. Séances may be repeated daily, at least, in the beginning. Later on the intervals may be made longer, according to the gravity or complexity of the disease and also according to the degree of amelioration obtained.

As the term "hypnotic" suggestion is applied to that caused during artificial or induced sleep, the author proposes the expression "somnic" suggestion for that caused during normal sleep.

There are certain forms of mental troubles the cause of which is principally psychological, which diseases seem to be susceptible to, and to improve or even become cured by, suggestive treatment. Unfortunately, however, that "the insane are not susceptible to hypnotism" seems to be commonly believed. That this is a fallacy, August Voisin has demonstrated since 1880, and numerous physicians have obtained success by the use of suggestive therapeutics in the treatment of the insane, prominently Burkhardt, Berillon, Dufour, von Eden, Farez, Grasset, von Krafft-Ebing, Lombroso, Roubinovitch, von Schranck-Notzing, Jules Voisin and others.

In a paper written in 1889 Voisin cited cases of patients whose cures dated back three, four and even five years; out of twenty-two insane treated by hypnotic suggestion four remained completely cured. At a congress which took place in Munich in 1896 he made the report of forty-two patients successfully treated by that method. He admitted, however, that he could hypnotize only ten

out of every 100 patients; but this proportion is large considering that before this the profession deemed all the insane to be refractory to hypnotism.

Mucous Otitis.—At a recent meeting of the American Laryngological, Rhinological, and Otological Society, Dr. H. A. Alderton, of Brooklyn, read a paper in which he said that the mucous form of otitis occurred more frequently in adults than in children, and often after an attack of influenza. There was often little or no pain, but a stuffy feeling in the ear, with diminution of hearing. Crackling sounds on blowing the nose or swallowing were not so common as in the serous variety. Tinnitus was apt to be severe, and there might be vertiginous attacks. Inspection showed but little congestion, but the membrane appeared in its normal position, though lacking lustre and having a dull gray color. There was a dull-looking area of hyperæmia along the handle of the malleus and at the periphery of the drum membrane. In most cases the tube was obstructed. There was a noticeable disproportion between the power to hear a whisper and that of hearing the speaking voice. The upper tone limit was not much affected. The pulse and temperature were practically normal. The condition might last from a few weeks to a number of years. Inflation of the tympanum improved the hearing. On incision of the tympanic membrane, there might be no discharge, but on inflation, a stringy, tenacious discharge made its appearance in the canal, and the hearing was immediately greatly improved. Douching through the external canal had seemed, in his experience, to do only harm. The treatment par excellence was by incision and evacuation of the tympanum with measures directed toward improving the condition of the nasopharynx. The drum membrane was often healed at the second dressing.

Chaucer's Word Portrait of a Physician of the Fourteenth Century.—In the *Prologue to the Canterbury Tales*, vv. 411-444, describing in detail, and one by one, the company assembled at the Tabard Inn, in Southwark, to make the annual pilgrimage to the shrine of St. Thomas à Becket, at Canterbury, Chaucer says:

With us ther was a Doctour of Phisyk,
In al this world ne was ther noon him lyk,
To speke of phisik and of surgerye;
For he was grounded in astronomye.
He kepte his pacient a ful greet del
In houres, by his magik naturel.
Wel coude he fortunen the ascendent
Of his images for his pacient.
He knew the cause of everih maladye,
Were it of hoot or cold, or moiste or drye,
And where engendred, and of what humour;
He was a very parfit practisour.
The cause yknowe, and of his harm the rote,
Anon he yaf the seke man his bote.
Ful redy hadde he his apothecaries,
To send him drogges and his letuaries,
For ech of hem made othir for to winne;
Hir frendschipe nas nat newe to beginne.
Wel knew he the olde Esculapius,
And Deiscorides, and eek Rufus,

Old Ypocras, Haly, and Galien;
 Serapion, Rasis, and Avicen;
 Averrois, Damascien, and Constantyn;
 Bernard, and Gatesden, and Gilbertyn.
 Of his diete mesurable was he,
 For it was of no superfluete,
 But of greet norissing and digestible.
 His studie was but litel on the Bible.
 In sangwin and in pers he clad was al,
 Lynced with taffata and with sendal;
 And yet he was but esy of dispence;
 He kepte that he wan in pestilence.
 For gold in phisik is a cordial,
 Therefore he lovede gold in special.

[With us there was a doctor of physic. In all this world there was no one like him, to speak of medicine and surgery; for he was grounded in astrology. He watched his patient a very great deal for the proper astrological hour, to help him by his natural magic. Well could he seize upon the fortunate astrological moment that had a favorable sign and planet ascending, to make images to be so treated as to benefit his patient. He knew the cause of every malady, whether it was engendered by a hot or cold, a moist or a dry humor; he was a very perfect practitioner. The cause being known, and also the root of his ailment, he soon gave the sick man his remedy. He had apothecaries all ready to send to him drugs and his electuaries, for each of them helped the other to success; their friendship was not newly begun. Well knew he old Æsculapius, and Dioscorides,¹ and also Rufus,² old Hippocrates, Haly³ and Galen; Serapion,³ Rhasis,³ and Avicenna;³ Averroes,³ Johannes Damascenus,³ and Constantins Afer;⁴ Bernardus Gordonius⁵ and John Gatisden,⁶ and Gilbertyn.⁷ In his diet he was moderatè, for it was subject to no excess, but very nourishing and digestible. His study was given but little to the Bible. He was clad entirely in robes of blood-red color and grey, lined with taffeta and thin silk; and yet he was but moderate in his expenditure; he saved what he acquired during the great pestilence.⁸ For gold as a medicine⁹ is a cordial, therefore he loved gold especially.]

Plato Describes the Death of Socrates from Hemlock.—In the *Phaedo*, 117 B, in which Plato records the manner of the death of Socrates, he says that a slave "returned bringing the man who was to give him [Socrates] the drug, carrying it rubbed down in a drinking cup. And when Socrates saw the man, 'Well,' said he, 'good sir, you understand these things; what must I do?' 'Nothing,' replied

the other, 'but drink this and then walk about until a weight comes upon your legs, then lie down, and so it will operate of itself.' * * * Then Socrates walked about until he said that his legs were getting heavy, when he lay down on his back; for thus the man had bidden him. And then the man who gave him the poison, taking hold of him, at intervals examined his feet and legs, and, having violently pressed his foot, asked him if he felt anything, and he said 'no'; and after that, he pressed his legs; and going higher and higher, he pointed out to us that he was growing cold and stiff. And Socrates felt himself and said that when [the insensibility] reached his heart he should be gone. Already he was growing cold in the region of the abdomen, and uncovering himself, for he had had his face covered, he spoke what were indeed his last words. 'Crito,' said he, 'we owe a cock to Asklepios.¹ Pay the debt, therefore, and do not neglect it.' 'This,' said Crito, 'shall be done, but consider if you have anything else to say.' To Crito's question he made no answer, and, after a short time, he gave a shudder and the man uncovered him and his eyes were fixed; and seeing this, Crito closed his eyes and his mouth."

Medical Fees.—The *New York State Journal of Medicine* for December, 1901, says:

"We do not suppose it is possible to suggest any satisfactory fee scale, but it is self-evident that the scale which taxes the clerk a day's wages for consultation while his employer escapes with the income of a minute is, to say the least, not an equitable one. Neither can the system be defended as businesslike by which the physician treats for nothing a multitude of patients who would willingly pay a small fee for the same service, if the fee were in proportion to their means. And if the fees at one end of the scale are too high those at the other end are certainly too low, as compared to other professions. The man who does not begrudge his pastor a handsome fee for a ten minutes' wedding ceremony, very often thinks the same fee too much for as many hours' work in facilitating the advent of his first born. The business man pays his attorney a large fee for drawing his will in an emergency and then disputes the account of the surgeon who obviated the immediate necessity of that will."

Tuberculosis among Snakes.—The *New York State Journal of Medicine* for December, 1901, on the authority of the *Yale Medical Journal*, says that a very interesting case of tuberculosis has just come to the attention of medical experts in Chicago. A large snake has died of tuberculosis, a disease which is very rare among cold-blooded animals. For several months a large African boa-constrictor in the Academy of Science had refused food. Its suffering was so great that the authorities decided to chloroform the reptile, in order to end its misery. To the great astonishment of those present at the autopsy, the bronchial tubes, lungs, and liver, were entirely filled with the true germs of tuberculosis.

¹This expression may refer merely to the performance of some neglected ceremonial religious duty; or, as others think, may imply that Socrates wished to offer to the god of healing the customary thank offering for his recovery from the 'malady of living.' Professor Geddes has cited as a parallel the following from Shakespeare, *Timon of Athens*, V. 2: "My long sickness of health and living now begins to mend."

¹A Greek physician of the second century A. D.

²Rufus of Ephesus, a Roman physician of Trajan's time (98—117 A. D.)

³Haly, Serapion, Avicenna were Arabian physicians of the XI. century; Johannes Damascenus, an Arabian physician of the IX.; Rhasis, a Spanish Arabian of the X, and Averroes, a Moorish physician of the XII century.

⁴A Carthaginian, subsequently a monk; one of the founders of the school of Salerno—late XI. century.

⁵Professor of Medicine at Montpellier; a contemporary of Chaucer's.

⁶A celebrated Oxford physician, early XIV century.

⁷Probably Gilbertus Anglicus (A. D. 1290), author of a medical compendium. The earliest English medical writer whose works have been preserved.

⁸The plague ravaged England in 1348-9, 1362, 1369, and 1372.

⁹*Aurum potabile*, a suspension of finely triturated gold, was much esteemed as a medicine.

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Special Article.

THE OPERATIVE TREATMENT OF TRAUMATIC INTRACRANIAL LESIONS.

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NEW YORK.

There has been published recently a paper concerning the treatment of intracranial injuries, and a subsequent discussion in which several eminent surgeons took part. The impression left upon the mind by reading a report of these proceedings is that a more accurate discrimination of lesions would have led to a more definite understanding of treatment. The paper was valuable and the discussion instructive, and the present recurrence to the subject is supplementary and in no wise critical.

Fracture of the cranium so frequently complicates intracranial injury that its treatment is necessarily at the same time brought in question, especially if the fracture is of the vertex. Fracture of the cranial base rarely requires intervention, though occasionally comminution of the ethmoid, or of the orbital plate of the frontal, or even of the petrous portion of the temporal bone, from direct violence, may necessitate removal of the osseous fragments and the utmost care in subsequent aseptic or anti-septic treatment.

The operative management of depressed fractures of the vertex in all cases was advocated and practised fifty years ago by that eminent surgeon, the late Dr. James R. Wood, who was then opposed by the great majority of his surgical contemporaries. The propriety of elevating depressed bone when no symptoms of intracranial injury are discernible is, I think, not even yet generally admitted, though accepted by a continually increasing number of surgeons. I have advocated for some years still more radical measures. I believe that even a rational suspicion of the existence of a simple fracture, as in case of hæmatoma with a history of considerable violence inflicted upon the head, with or without concurrent symptoms of intracranial lesion, demands explorative incision. This procedure is sustained not only by the necessity of exploration for an intelligent appreciation of existing conditions, but by reason of its absolute safety. Unsuspected osseous depressions and most serious, yet

remediable, complications have thus been discovered, and, where incision has been neglected, have often been disclosed on post-mortem examination. It entails no conceivable danger. The matter of infection is within the control of the surgeon, and the amount of shock or hæmorrhage is inappreciable. I have practised it in a multitude of cases during the past ten years; and when incision has proved unnecessary, have never failed of a primary union. The recovery from immediate shock, a fair constitutional condition, aseptic precautions, the careful repression of hæmorrhage, and the restriction of the wound to the limits required for its purpose, are always to be assumed.

If osseous depression, even though confined to the outer table, or a puncture or a much comminuted or fissured fracture is revealed, conjoined exploration and treatment should be extended. The continued uncertainty as to the amount of injury done to the internal table, which is often disproportionate to that of the external table, the possible laceration of the brain or its membranes, render further operation imperative in the light of accumulated experience, which has demonstrated the danger of an expectant plan of treatment.

The danger of an exploratory craniotomy under aseptic conditions is scarcely greater than that of the external incision; certainly not to be weighed for a moment against the greater danger of immediate septic infection or the remoter effects of pressure or irritation from osseous fragments resting upon or penetrating the brain or its membranes. Dural or cortical abscess, cerebral necrosis, epileptic convulsions, and multiform disturbances of functional control, have been no infrequent results of a so-called conservative policy of inaction. There is scarcely more room for doubt as to procedure if incision reveals no more than an osseous fissure. If the fissure is open the probabilities of comminution of the inner table with possible depression of fragments are still sufficient to require deeper exploration. The same reasons which, in case of obvious depressed fracture, demand a search for osseous fragments, which may disturb or damage the intracranial contents, equally obtain when the fissure is of this character. If the fissure is fine and closed, the probabilities of a more extensive concealed osseous lesion are insufficient to warrant further in-

tervention in the absence of symptoms of intracranial complication. In the presence of such symptoms, while it will be probable that they are independent of the osseous wound, trephining is indicated at the site of injury, not only because of possible error in this inference, but because it will afford the best chance of reaching and relieving the intracranial complication. Whatever may be its nature, the same conditions of care are to be assumed to exist in all these craniotomies as were particularized for external exploratory excisions. Additionally, the means adapted for penetrating the cranium are to be always the simplest possible. Trephining will be only exceptionally a necessary expedient. The chisel, burr drill, and rongeur, singly or in some combination, will ordinarily suffice.

This brief review of the principles of treatment of cranial fracture might be indefinitely illustrated from the histories of recorded cases, if space permitted or occasion demanded.

It is more difficult to formulate general rules of procedure for the treatment of intracranial injuries. Cases have more individuality, and consequently in each case more latitude must be given to the discretion of the surgeon. The lesion is always conjectural; it is no longer within the field of vision; and the same symptoms admit of various interpretations. It will be conceded that successful treatment depends upon correct diagnosis, and the diagnosis in turn upon accurate knowledge of existing pathic conditions. Any study of treatment therefore must begin with at least a brief reference to the lesions involved.

The classification of intracranial injuries in accordance with their structural lesions, rather than from their symptoms, is of the highest importance, since it is essential to the attainment of the most exact diagnosis possible in individual cases, without which treatment must be largely empirical. In adopting this principle of classification comprehensive terms, such as concussion and compression, by which it is sought to group or contrast symptoms without reference to their cause, are discarded and the object of treatment is better defined.

Primary traumatic intracranial lesions may be thus classified:

1. Hæmorrhages;
2. Contusions;
3. Brain lacerations.

Hæmorrhages may be subdivided into:

- a. Supradural or epidural;
- b. Pial;
- c. Cortical.

Contusions are:

- a. Meningeal;
- b. Cerebral.

1. *Hæmorrhages.*—Supradural or epidural hæmorrhage is derived from the diploic or dural vessels, is situated between the dura mater and the cranial wall, and may escape externally beneath the pericranium, or through certain cranial outlets.

Pial hæmorrhage is derived from rupture of the vessels of the pia mater, is primarily confined to its meshes, and may secondarily break into the arachnoid cavity or dissect the pial membrane from the cerebral surface.

Cortical hæmorrhage may be primarily superficial, or it may be subcortical and secondarily gain access to the cerebral surface by rupture of the intervening cerebral substance.

2. *Contusions.*—Meningeal contusion accompanies cerebral contusion, is restricted to the pia mater, and may be local or general. It is indicated *post mortem* by hyperæmia, œdema, subarachnoid serous effusion, and hæmorrhages, punctate or diffuse. Secondarily, it results in arachnitis, acute or subacute or general, regional, or localized in small areas which may be numerous and scattered.

Cerebral contusion may be general or limited, and when general may involve the whole brain or be confined to the cerebrum. The visible anatomical changes are a distention of the parenchymatous vessels, a general formation of minute thrombi, the presence of punctate extravasations, and a more or less distinct œdema. All of these abnormal conditions are simply measures of the general hyperæmia which immediately preceded death. The primary transient changes which induced the later vascular flexion can only be inferred from symptoms and analogy. The character of the symptoms indicates deficient vascular supply. The immediate inhibitory symptoms would seem to depend upon an irritation of the cerebral centres of vascular control with contraction of the cerebral vessels; to this succeed, by continued irritation, paralysis and dilatation. The brain is primarily made anæmic; with the secondary dilatation of its vessels, as hyperæmia becomes excessive, it is again anæmic in effect, from more or less cessation of capillary movement and from œdema. If the cortical centres recover from the shock the circulation is readjusted. It is this condition which has been, and still is, denominated concussion and described as a simple functional disorder.

3. *Laceration of the Brain* may be a direct wound inflicted by a detached osseous fragment, or it may be a disruption of the brain substance, either cortical or subcortical, in any of its parts, but most frequently at a point opposite to that at which force has been applied to the cranium. The original wound is always of unknown extent, since hæmorrhage from rupture of the cerebral vessels is likely to break down the brain tissue to a greater or less de-

gree, proportionate to the calibre of the vessel or vessels wounded. The whole of a lobe, or even of a hemisphere, may be excavated and disintegrated, or the blood from a subcortical laceration may reach and spread over the whole surface of the brain as a cortical hæmorrhage. If the laceration is of trivial or moderate extent its symptoms will be lost in those of general contusion, its invariable attendant; if it is of great extent, death is likely to result from primary shock, though life is often prolonged till otherwise terminated at a later period. Even when in considerable amount, the extravasated blood may be absorbed, and the cavity left be obliterated by contraction and cicatrization.

All of the lesions enumerated may be produced at a point corresponding to the site of external injury; or, as will more frequently happen except in the case of supradural hæmorrhage, at the opposite extremity of some cranial diameter.

If symptoms of intracranial injury exist complicating a cranial fracture which demands exploration, the question of operative treatment will be solved at once both for the fracture and for the lesion. In cases of intracranial injury without implication of the cranial wall, the advisability of operative intervention must be reconsidered in the presence of new conditions. It is an invasion of a heretofore unbroken barrier—the production of a new lesion—and if it prove ineffective, unlike an explorative incision of the scalp or an enlargement of an osseous wound, which at the worst is nugatory, it is in itself the source of danger. It is necessarily in some degree explorative, and it must have sufficient logical basis to justify the risk attendant upon any operation at a time and under the circumstances which will exist when it is most likely to be brought in question. It is unimportant whether or not there is a prevailing impression that operation is a sufficiently frequent resort. The nature and site of the lesion must be determined with whatever accuracy is possible, and the judgment thus informed will best forecast the probable success or hopelessness of intervention under such conditions as exist in each particular instance.

In any case in which from the nature or severity of symptoms operation is brought in question, possible lesions may be considered from a practical point of view as divisible into two classes, supradural and subdural—supradural hæmorrhages on the one hand and all the rest of the structural alterations on the other. The dura mater may be regarded as the inner, as the cranial wall is the outer, barrier of defence for the brain and its essential membranes.

Trephining for the relief of subdural hæmorrhage approximates in safety and effectiveness the simpler operations for the management of cranial wounds,

and, if hæmorrhage is comparatively uncomplicated and is localized in an accessible situation, may be as clearly indicated; it may even be justified or demanded when these conditions are apparently adverse, if the symptoms are urgent. The time of election for intervention will be after the establishment of full or partial reaction, as the extravasation is believed to have ceased or to be still in progress after an interval limited in duration by the judgment of the surgeon.

It is fortunate that the diagnostic indications are often most distinct in this one of the intracranial lesions best fitted for operative relief. It is the form of hæmorrhage in which, with or without primary unconsciousness, an interval of consciousness most frequently precedes its later loss. This fact is the most essential point in diagnosis, and in conjunction with a subnormal or but slightly elevated temperature can hardly be misinterpreted. Hæmorrhage in itself causes a depression of temperature and, while some moderate elevation is usually observed, is attributable to an almost inevitable concomitant cerebral contusion. It is not an exceptional case for a man who has been dazed for a moment by a blow or fall upon the head to walk to his home or to a hospital, thinking himself but trivially injured, and a little later to pass through progressively increasing stupor into coma, or to suddenly fall unconscious. This is not only the result of intracranial hæmorrhage, but with almost equal certainty of its supradural form.

It may be assumed that if a hæmorrhage is supradural it will in all probability be derived from the trunk or from one of the primary subdivisions of the meningeal artery, and the site for operation will thus be suggested. There are other symptoms which may more directly indicate the seat of effusion. The Hutchinson pupil, so called, is pathognomonic of supradural hæmorrhage in the middle basic fossa of the same side, and can be distinguished from a dilatation of the pupil due to cerebral contusion by absence of other symptoms characteristic of that lesion. Local paralysis will point to the opposite parietal region, or respiratory derangements to the posterior fossa. The existence of some contusion, wound, or hæmatoma of the scalp, or of some cranial fissure disclosed by incision, will very often be the obvious indication of the site of the deeper-seated injury, since this is the one intracranial lesion which is likely to be direct rather than by *contre-coup*, as it is called, at some distant point.

The reasonable certainty that an accessible supradural hæmorrhage has occurred, is insufficient to justify operation. The extravasation may not seriously inhibit the cerebral functions, or the rapidly progressive improvement in symptoms may render

its eventual disappearance so probable that the propriety of interference will never be seriously considered. An insuperable bar to operation in a large proportion of cases is the concurrence of still more serious lesions in the brain itself. If these injuries are obviously or presumably of an immediately fatal character, operation will probably hasten rather than retard the fatal issue, though it may confirm the diagnosis. The indications of severe diffuse contusion or of extensive laceration of the brain, added to the evidence of hæmorrhage in sufficient amount to suggest an exploration of the cranial cavity, constitute a general condition which, if not absolutely hopeless, is ill calculated to withstand the infliction of further injury. The slender chances of recovery will be better conserved by inaction. It is only when symptoms point clearly to hæmorrhage as the essential, if not exclusive, lesion that operation for its relief will afford legitimate hope of success.

There are, of course, many cases in which reaction is in some degree unsatisfactory and in which the value of symptoms is indeterminate, in which decision must in each instance rest solely upon the discretion of the surgeon; no formal rules can be described which should control his judgment or guide his action.

If operation is to be done, the time at which it is done may be of vital importance. It would seem unnecessary to say that when shock exists, with one exception to be hereafter noted, no question of operation should be entertained until reaction has been established; but in fact this error is so often committed by those unfamiliar by hospital experience with the exigencies of acute surgery that the warning cannot be made too emphatic. The exceptional instance is in case of hæmorrhage in which the failure of full reaction, or the progressively increasing gravity of pressure symptoms, indicates that the effusion of blood still continues. In such case natural hæmostatics have apparently failed and the immediate resort to direct ligation of the open meningeal vessels brooks no delay. In the more frequent case, that in which possible operation awaits reaction, decision should be as prompt as circumstances will permit. Trephining, like amputation, is safer as a primary than as a secondary resort, though it has proved successful even for large hæmorrhages even after several days have elapsed.

In speaking of operation for subdural lesion, I shall quote from a former publication of my own,¹ of which I have already made much use in writing this paper.

The resort to operation in other forms of intracranial lesion than supradural hæmorrhage is of very limited utility.

Definite indications which can be met by operative measures are usually wanting, and in their absence an invasion of the cranial cavity must be empirical and without justification. The conditions which, when recognized, might be supposed to encourage this procedure are usually complicated by plete atrophy and absolute blindness, and the paws weeks later choked disc appeared, followed by comshowed that it was only a part of the truth. A few it went, was absolutely correct, but the sequel others which render it futile. The occurrence of subdural hæmorrhage or of serous effusion from meningeal contusion occasions dangerous cerebral compression, and operation might be considered practicable and efficacious, as it is in epidural extravasation; and a pial, mistaken for an epidural, hæmorrhage has in some instances been successfully treated in this manner. Such an operation, however, when premeditated, is without adequate reason and can afford no just expectation of success. The epidural clot is usually of limited area and can be removed wholly, or in sufficient degree to avert danger until the remainder has suffered absorption. The pial or cortical hæmorrhage, if in recognizable amount, will be widely diffused, and so entangled in the meshes of the pia that usually little can escape or be withdrawn through the cranial opening. The dropsical effusion which follows the meningeal lesion, if its existence could be positively known or reasonably inferred, might doubtless be drained through this perforation. The further and fundamental fact which contraindicates and makes fruitless the attempt to afford relief by the removal of these subdural accumulations is that the essential lesion remains unaffected. The pial hæmorrhage or serous effusion which results from a meningeal contusion will probably be associated with a like condition of the entire brain substance, and the cortical hæmorrhage will be no more than an incident of the laceration from which it is derived. The added traumatism of the operation will thus be uncompensated by any possible betterment of conditions which depend upon the more important structural alterations produced by the original injury. The shock which attends any operative procedure, and which under favorable conditions may be unimportant when the cranial wall is alone involved, is always of more serious concern when the dura mater is incised and the cerebral surface exposed. If, as in cases already considered, nutritive changes in the intracranial tissues already exist, this danger is still further exaggerated, and must be taken clearly into account whenever under such circumstances so radical a measure may be contemplated.

There can be no advantage from operation when the urgent symptoms are the result of a general cerebral contusion. As an underlying condition of

¹Philpes: *Injuries of the Brain*, New York, 1897-1900.

minor importance contusion may not contraindicate an operation otherwise made necessary; but in itself, or as it approximates a paramount lesion, it is obviously beyond the scope of any mechanical relief. It is scarcely necessary to point out its impossible application to cases of this character, in which existent pressure is intracerebral and diffuse, and incapable of mitigation by any practicable removal of the cranial wall; and in which, moreover, the morbid state is essentially one of nutritive change in which interstitial pressure is merely incidental.

The operative treatment of brain lacerations, as they occur at points remote from the seat of fracture of the cranial vertex, might have the pathological warrant which in the general lesion is lacking, if its employment were practicable. Superficial lacerations of the vertex in connection with fracture are accessible, and, when drained and maintained in an aseptic condition, are usually cicatrized without serious danger to the patient. There is no evident reason why cerebral wounds which occur without cranial injury should not be as amenable to local treatment, if they could be reached; but they are often central, and, if superficial, likely to be situated in some inaccessible region of the cranial base. The impossibility of accurate localization of the lesion, in the vast majority of cases, by any known diagnostic methods is additionally a bar to any justifiable attempt at topical treatment by operative means. It is still a question, beyond that of feasibility, how far operation, if made possible, might increase the chances of recovery. In general, laceration as disclosed in post-mortem examination, except when enormous excavation has been produced by the attendant hæmorrhage, is complicated by diffuse cerebral contusion, which is largely responsible for the fatal result. In a minority of cases the cerebral wounds may be found to be in a septic condition, and it is in these, if their exact position could have been determined and exposed, that a possible danger might have been averted. Altogether there seems little to be hoped for in these cases, now or prospectively, from any operative intervention.

The justifiable use of operation in head injuries is thus seen to be very limited. It may be summarized as properly general in depressed cranial fractures, frequent in comparatively uncomplicated epidural hæmorrhages, and exceptional in subdural lesions, whether of the brain or of the pia-arachnoid membrane. The resort to operative measures, which is essential under favorable constitutional conditions in abscess of the brain and in intracranial gunshot wounds, will be given consideration in the later study of these conditions. If in the general class of intracranial injuries operation is to be but infrequently done, the question of operation will often be raised, and decision as to the course then to

be pursued will entail grave responsibility, since error in judgment may deprive the patient of a chance for life, by increasing the danger of an already critical condition. Action or inaction at the wrong moment has invited disaster on either hand; but instances of too early and unwarranted operative intervention by inexperienced surgeons outnumber those in which the ultra-conservatism of their elders has led to a perhaps fatal neglect.

Original Communications.

ON THE FEASIBILITY AND MANAGEMENT OF A HYGIENIC CURE OF PULMONARY TUBERCULOSIS OUTSIDE OF CLOSED SANATORIA.

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(Concluded from Vol. lxxiv, p. 1143.)

Explicit Directions.—After having talked with the patient and told him the facts in the case, show him carefully exactly what he must do, how he must live, and let him distinctly understand that you will require of him an absolute obedience and will tolerate no insubordination. Written orders covering every detail should be given him for reference, and you should let him know that whatever is not explicitly allowed is forbidden.

Especially should his orders as to sputum disposal be carefully given, and the danger to himself, not less than to others, of their neglect made clear, for in sputum disposal all now admit lies the key to the eradication of this disease.

But even after he has your written orders it will not do to take for granted that he will obey; most men are fools about themselves, sick men more than others, and, if you are to watch the case properly, you will need a detailed information about his life, which he cannot give you satisfactorily even twelve hours after the event.

Record Keeping.—Realizing this, I have adopted the use of a record book, ruled and printed properly for the purpose, in which the patient records, not only his temperature and pulse, but everything he does, how he feels, his hours of outdoor rest, the exact amount and nature of his exercise, his cough and expectoration, his spirits, appetite, digestion, etc. Nothing should be omitted which happens to him during the day. (CHART I, p. 50.)

This plan I have, after a long trial, found most satisfactory and can heartily recommend it. It teaches the patient to study his own case, and,

Tuesday				
DATE			NAME	
June 18th				
TIME	P	H	FOOD	NOTES
8	64	98.0	oat meal Steak bread butter milk coffee	Cough very slight this morn- ing—feel no bad effects from ex- ercise yesterday
4	74	98.6	Lamb potatoes salad milk custard coffee	Sleep appetite & strength good very little ex- pectoration went to town in morning
8	76	98.6	eggs sardine milk	
June 19				
			Pittjohm steak potatoes milk	walk 15 m
8	62	98.0	coffee chicken pota- toes milk sa-	cough as yes- terday—Sleep appetite &
4	78	99.2	lad dessert eggs sardine potatoes milk	Strength good coughed some at 4 P.M.
8	76	98.6		expectoration white
Record kept by a patient. Arrived in April with high fever (104.+) & hemorrhages & much emaciation. Steady improvement.				

CHART 1.—Sample Record Kept by Patient.

though many will say that this is harmful and depressing, it is what the tuberculous patient must do if he is to master his disease, as all the best authorities are agreed. It helps him to avoid imprudences and makes him think twice before he acts once, and keeps you in close and intimate contact with the case. It only rarely makes the patient nervous, and in such cases I, of course, always stop it, but I always closely question him on this point, and it is not often that this is necessary; on the contrary, most take a lively interest in keeping it, and I have often had them tell me that it aids them greatly in obeying orders and is a help and encouragement to them.

I use, in conjunction with this, with great advantage, a specially arranged graphic temperature chart, which I have no trouble in teaching them to keep, and which I have ruled with horizontal red lines at 99.5° F. and 97.5° F. to denote the limits within which the temperature must stay if exercise is to be allowed, and with black lines at 98° F. and 98.8° F. to show the range within which, subject, of course, to special indications, free exercise is permitted. (CHART 2.)

From this they can see at a glance after instruction when to stop exercise and when to increase it, between the times when I see them; while the almost

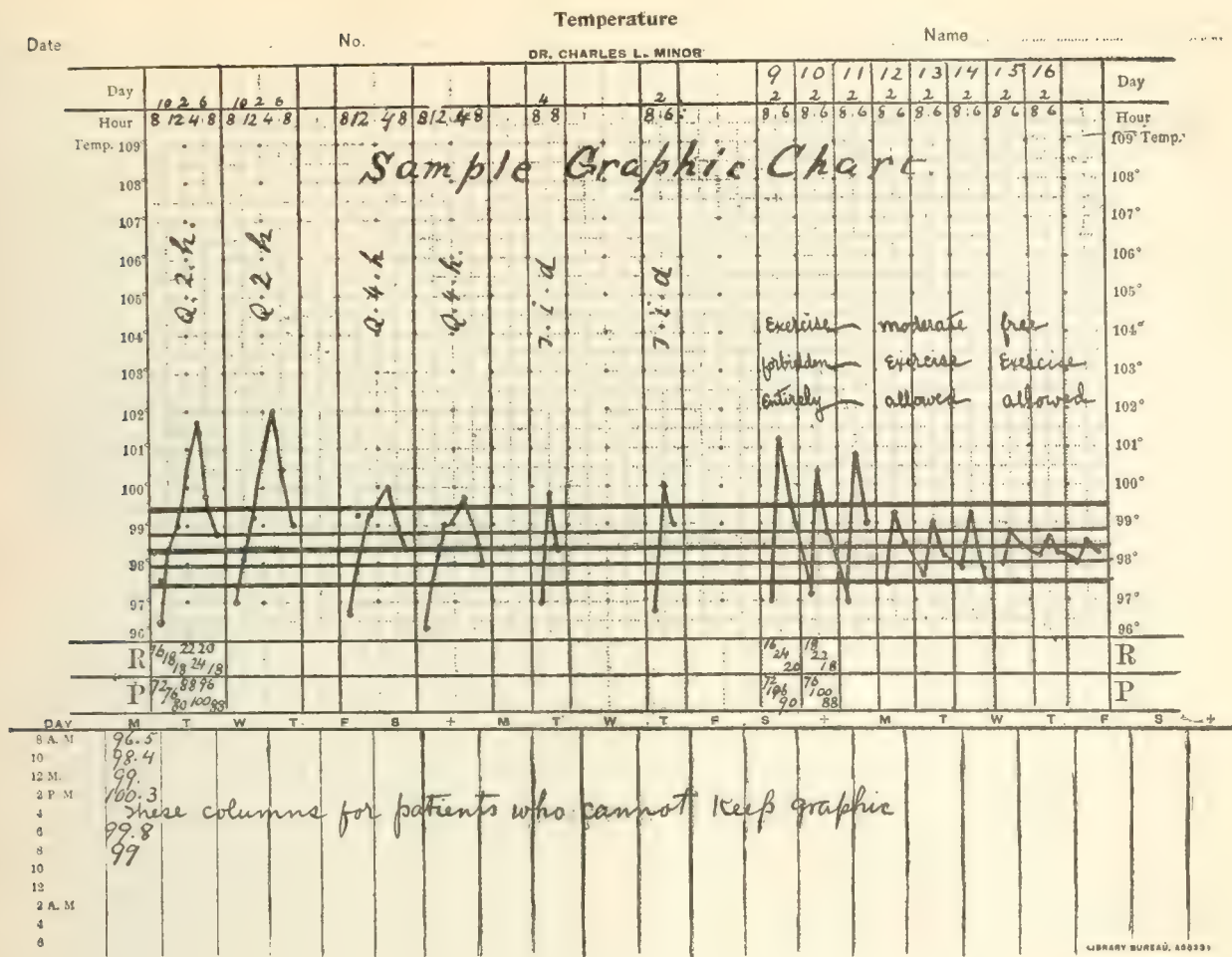
unfailing effect of outdoor rest in reducing temperature is shown so clearly and convincingly by the falling curve, that, aside from keeping me posted as no written list of temperatures could, it greatly encourages the patient. (CHART 4, p. 53.) Without a temperature record I do not believe a tuberculous case can, certainly in the earlier period of the treatment, be properly studied; on the nature of the fever curve depends the treatment and it cannot be intelligently directed without it. (CHARTS 3, 4, and 5, p. 53.)

A knowledge of his life is equally needful, and without these adjuncts I should find great, and I fear insuperable, difficulty in following my cases as closely as they need, and in carrying on this method outside a sanitarium, and should feel like a captain trying to navigate his vessel without a compass.

Temperature Study—With these record blanks and a careful diet list I send him to his quarters, to carry out a week of rest, during which he keeps a two-hourly temperature and pulse record during the daytime, beginning with an entry before rising in the morning and ending with one at bedtime. If exercise were allowed during this week the record would be materially affected by it, hence, even in mild cases, I insist on this week being spent quietly.

A study of this record after the first week, in connection with the history and physical findings, enables one to form a prognosis and plan out the future treatment, and to make any changes in the general orders needed.

So soon as one is familiar with the case, the record is made four-hourly, and finally thrice a day is amply sufficient to keep one informed of the temperature; but, at first, for a month, or more at times, the two-hourly record I believe most important. In severe cases it is not wise to allow the patient to know his own temperature and I have it taken by others; but all cases with any outlook will finally reach a point when the temperature is steady and not very high, when they can be trusted to know it, while those where this does not occur are generally those who have little or no prospect of recovery. In connection with the subject of temperature, I would note that it is necessary to be sure that the thermometer the patient uses is reliable; the records yielded by the cheap thermometers often sold by druggists to laymen are absolutely unreliable, and a thermometer with no error greater than at the most two tenths of a degree Fahrenheit must be used. Then, too, many patients will keep the thermometer in the mouth too short a time; some experimentation on the subject has convinced me that the so-called rapid registering thermometers are not nearly so rapid as is asserted, and that it is wise to keep any thermometer in the mouth and properly under the tongue for a full five minutes, while some, even



after that time, will register a further rise up to as much as ten minutes. These are small points, but it is often on small points that the difference lies between success and failure.

Nursing.—In all but severe cases I find that one can dispense with trained nurses if only a servant is within call to attend to the wants of the patient ; but in the early treatment of active cases which have not yet begun to gain and need every assistance to enable them to start up hill, they are of great use and indispensable ; but a nurse, to care properly for this class of patients, needs even more tact than is demanded for ordinary nursing, and the maximum of patience.

In bringing a bedridden patient slowly back to health, tempting his appetite by delicately served dainties, increasing his nourishment by oil rubs, etc., and doing the thousand and one little things which a good nurse understands, no affectionate relative, however willing, can take her place; in less severe cases, however, where the patients are able to care for themselves largely, and where they are out of doors all day, they can be dispensed with easily, especially if there is an attendant at hand to answer the patients' calls and bring them their nourishment.

Necessary Paraphernalia.—Before beginning the cure the patient must provide himself with certain necessary adjuncts which cannot be conveniently dispensed with.

These are a proper reclining chair, satisfactory wraps for out-of-doors, proper underclothing, a good sputum cup and flask, and arrangements for simple hydrotherapy.

The choice of these should not be left to the judgment of the patient, and the doctor had better specify just the articles needed, otherwise unsuitable ones will often be obtained.

Reclining Chair.—Both the customary sea chair and the wicker reclining chairs made for the purpose are unsatisfactory, as they do not allow of a perfectly horizontal position, such as is needed in febrile cases, or permit of a change of position, which is demanded if the chair is not to be fatiguing.

To lie all day with the back at an angle of 30 or 40 degrees, is not really resting, keeps certain muscles constantly on the strain, and can be most tiring. I therefore insist on a chair, of which several are on the market at various prices, which will allow of all positions from the perfectly horizontal to the upright. By using such a chair I find I can lessen the number of those who, on account of fever, have to

be kept in bed in their rooms, it being easy to wrap patients in blankets and, putting them recumbent in such a chair, to wheel them out of doors where they can spend the day as comfortably as if in bed.

Wraps.—In the matter of wraps, the common blanket, unless very carefully adjusted and frequently watched, leaves too many openings for the air, so I always advise one of the various blanket bags or steamer rugs made in bag form, and in which the patient sits and, by buttoning up the robe in front, is enclosed on all sides from the weather. For those who suffer from cold feet a hot bottle in the foot of the bag is useful, while for those who retain the upright position, a couple of hot bricks in a wooden box in which the feet can be kept serve to overcome the difficulty. However, it is surprising how quickly the patients get accustomed to the cold and do not mind it at all.

Underclothing.—As to the underclothing, despite the commercially exploited claims of various new systems, wool remains the most desirable for winter use, and, since Rubner's work, rests on a firm scientific basis. Its weight should never be excessive and the neck should be cut high, though here one runs counter to the predilections of the fair sex and will often have trouble in enforcing this point. In summer any garment not allowing a too rapid chilling of the surface will do, although the very lightest grade of thin wool is still the best.

Sputum Cups.—A sputum cup is, of course, essential, and for use at home I know nothing at once so good and so cheap as the common square tin frame and cover holding a folded pasteboard container, which can be burned after use, though it could be improved by impregnating the paper with paraffin to render it water tight and to facilitate its burning. It is light, its opening is amply large, which is not the case in any other popular receivers, the flaps folding inward prevent the contents from being disagreeably in evidence or from running out if upset, while the tin lid makes it inaccessible to flies, a most important point, I am satisfied. Save for ambulant cases, it is in every way superior to the glass hand spittoons and the pocket flasks of the Dettweiler model, the openings of which are, as all who have used them must admit, far too small for cleanly use. Of course, in ambulant cases, the flask is at present the best thing we have, but it is to be hoped that, when American ingenuity turns itself to the matter, a better one will be evolved. While it is true that generally before the case has reached the ambulant stage the expectoration has entirely ceased the flask should always be at hand in case the need of it arises.

Two methods of sputum disposal are so unfortunately popular and so very bad that I would stop to note them here; I refer to expectoration into

cloths which are later burned or thrown into the fire. The cloths are an easy means of soiling the hands or the pockets, while those who spit into a fireplace are liable to have parts of the sputum strike in some cool corner or fall through into the ashes, where it may escape incineration and be later blown around. All instructions as to sputum disposal need to be very specific, and infractions should be never excused.

Hydrotherapy.—Simple, but very satisfactory, hydrotherapy can be carried out with such common articles as a tin hat tub, salt, a bath thermometer, and rough towels, as I have elsewhere⁶ fully explained, and so I need not dwell on them here. Patients who are too sick to bathe themselves generally need a nurse who can give such treatments as the doctor orders.

Frequency of Visits.—In caring for cases outside of sanatoria the question of how often it is necessary to see one's patients is of importance. The advocates of sanatoria assert that without seeing a patient many times a day it is impossible to get the necessary oversight of him or to compel the needed obedience, but from practical experience I am satisfied that, with such records as I have described, and having won his confidence and cooperation, you can keep fully in touch with every detail of your patient's life and control him completely while seeing him, according to the severity of the case or his light-mindedness, from once to four times a week. The more intelligent the patient, the less frequently will he need to be seen, and generally one or two visits a week are sufficient. If you have taught him to realize the seriousness of the case, have explained the aims of the treatment and convinced him of its hopefulness, you will get an obedience more minute than he would yield to any other adviser, whether spiritual or legal, and will have no fault to find with his carrying out of your orders. As has been said, the heedless and headstrong have to be seen oftener than the intelligent and docile, but it is not often that patients are so intractable and light-minded as to persist in disobedience after careful warning, and such had best be given up, as no results can be hoped for from them.

Amount of Rest.—A one or two weeks' study of the case, while the patient is at absolute rest, will enable you to decide the amounts of rest and exercise needed, and, as a general rule, unless the temperature passes 101.5° F., it is best from the first to carry on the rest treatment, not in bed in the room, as so many advocate, but on a cot or reclining chair out of doors. "Bed," as I have said elsewhere,⁷ "does a violence to the spirits and hopes which can ill be tolerated, and often turns the balance to the wrong

⁶New York Medical Journal, January 14 and 21, 1899.

⁷New York Medical Journal, January 14 and 21, 1899.

side * * * and robs him of what little strength he still has," and my experience since I wrote this has only confirmed me in the opinion that, while recumbent rest is essential, bed is generally undesirable and to be avoided where possible.

individualizing being more important in the treatment of phthisis than in any other trouble. It is remarkable how quickly outdoor rest will reduce fever and pulse rate and increase strength, even in very severe cases, when a month of it shows

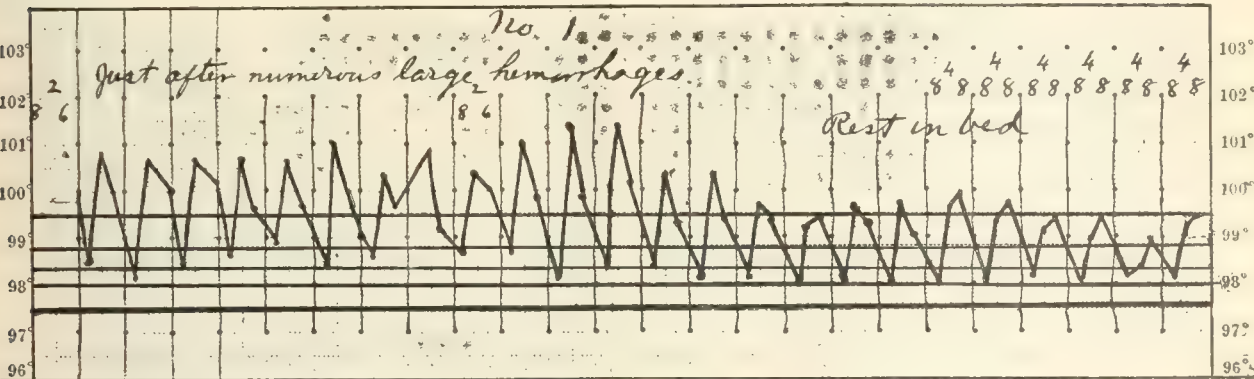


CHART 3.

A patient kept flat, with every muscle relaxed, loses his fever as quickly out of doors as in bed in his room, and misses the depressing effect of being confined to his room and bed. When the tempera-

no effect the prognosis becomes serious. To cite an instance, which, while remarkable, is by no means exceptional, of what rest can do, I would report briefly the following case:

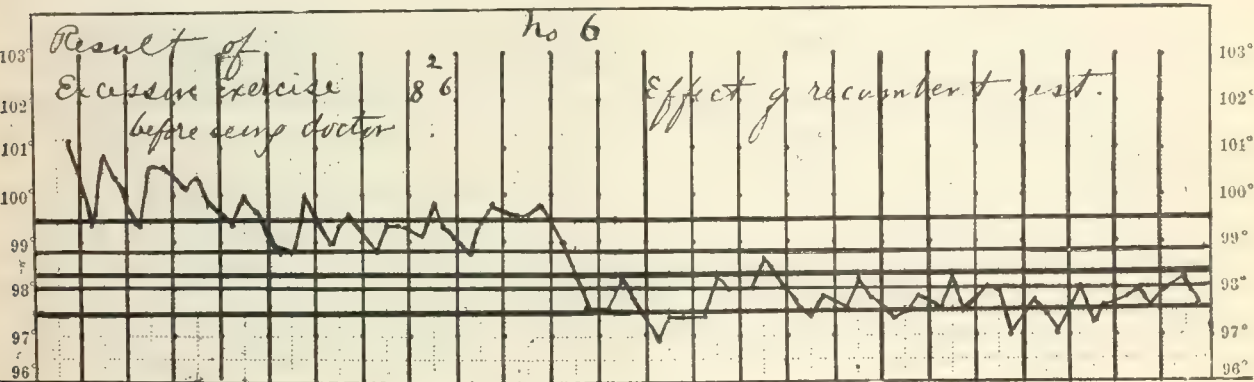


CHART 4.

ture does not pass 100.5° F. I begin to allow sitting up, but never consider exercise till the temperature for a week has not exceeded 99.5° F., and am even then careful of it, save as a further lowering of the

CASE.—A gentleman came under my care in the winter of 1890--'91, who, on arrival, had an active tuberculous bronchopneumonia of the upper half of the left lung around a large cavity, and an active tuberculous bronchitis of the upper third of the

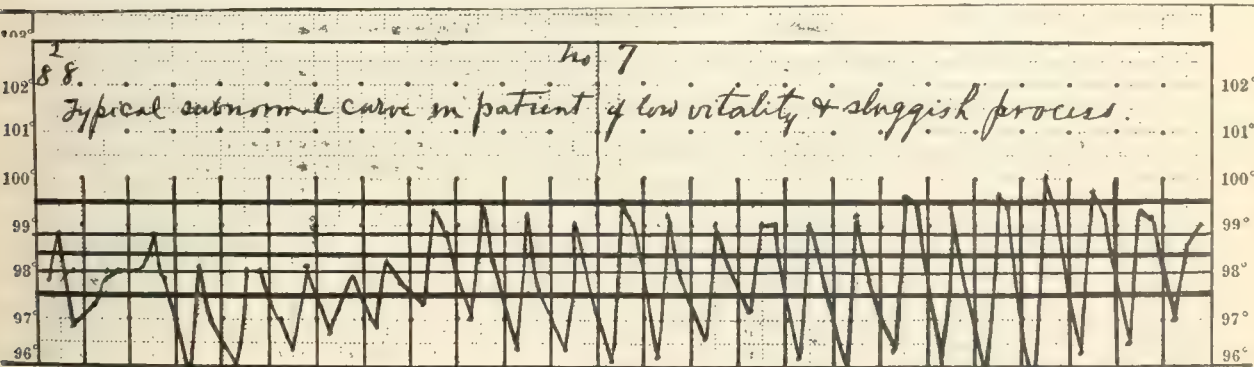


CHART 5.

curve and the absence of any bad effects permit further increase. Of course, there are exceptions to every rule, and at times, in certain patients who cannot stand absolute quiet, exceptions have to be made,

right lung. There were numerous tubercle bacilli and streptococci in the profuse purulent sputum, and both sugar and albumin in the abundant urine. The temperature in the afternoon was 104° F., the pulse 120, the respirations from 35 to 40, and the

able practitioner who sent him had told him the hopelessness of his case, but had allowed him at his own desire to try what the mountains could do for him. Absolute rest, first in bed, and then flat on his back out of doors, with strict regulation of his diet, life, etc., rapidly reduced the fever and other symptoms and improved the signs, and he began to hope and to think he might recover, and made real gains.

When, six months after his arrival, he went home, the activity of the process in the lung had been checked, the cavity was dry, the mixed infection had long ceased, and the tubercle bacilli were much fewer, the sugar and albumin had left the urine, the temperature had not been above 98.8° F. for six weeks, or more, or over 99.5° F. for three months; there was an eighteen-pound gain in weight, the pulse averaged 72 to 96, the respirations 24, the appetite was good and the strength good enough to permit of walks of one or two miles without bad effect, and his spirits were excellent.

Of course, such a case could not be cured in the proper sense of the term, but there had been a marked arrest for such a severe trouble in so short a time, which could only be ascribed to the systematized outdoor rest and the care of his life, while he had acquired such a comprehension of his trouble and such a knowledge of how to handle himself as should be of infinite value to him in the future course of his case.

Exercise.—The question of exercise for these patients needs the closest attention, for, according as it is wisely or foolishly used, it can become a blessing or a curse. Exercise is best measured by time, not distance at first, for it is thus far more easily graduated, and no mistakes can be made when the watch is made the judge. As to the kind of exercise to begin with, save for the very weak, who had best begin with massage, walking is to be preferred to driving as a commencing exercise with rare exceptions. I begin with a short stroll on a level, of from two to five minutes' duration, increasing gradually by from one to five minutes daily, up to an hour, or even more, according to the indications given by pulse and temperature and the sense of fatigue, and promptly returning to the chair if these show a bad effect, or during any increase of symptoms, or, with women, during the period. Used in this way, and choosing for our patients gradually increasing inclines, exercise is as beneficial later on as rest is earlier in the trouble, and those who, like the French school, forbid its use until the temperature is normal, are, I believe, pushing a good idea too far and throwing away an invaluable aid. In the beginning all exercise should be taken in the morning hours, save in those few cases where the maximum temperature rise is at that time, and afternoon exercise had best be reserved till later.

In the beginning all walks should be chosen for the patients, not left to their unassisted judgment, and here a familiarity on the physician's part with

all the paths and roads in the neighborhood is necessary; when the patient can walk for an hour or over he may be left to choose his own paths if he has been well instructed.

Driving.—As a general rule, drives are more tiring than walks at first, and had better not be allowed till walking has been tried; there is more temptation, in driving, to overdo and go beyond one's strength before it is realized. Riding, in convalescents with little or no rise of temperature, is excellent, as Alonzo Clark, and before him Sydenham, long ago taught; but it is too violent to be used where signs of activity are present.

Pulmonary Gymnastics.—Pulmonary gymnastics have lately been opposed by some who allege that, since we put a tuberculous joint at rest, it is irrational to exercise a tuberculous lung; but a considerable experience with them has convinced me that this view is fallacious. When we recall that the occupations that narrow the thorax notably favor the incidence of phthisis, that the advancing disease is always accompanied by a steadily contracting chest, and that improving cases show, with few exceptions, a gradual thoracic re-expansion, I cannot think that we are going against Nature in using this method in properly chosen cases, and regard the tendency to discourage its use as a backward step in phthisiotherapy. When signs of activity are nearly gone, as shown by the disappearance of râles, when the temperature does not go above 99.5° F. and the pulse begins to slow, I have found it an invaluable aid, and believe that it combats the peripheral atelectasis which prepares the way for further spread of the trouble. If an open functioning alveolus, well aerated, offers a stronger resistance to the advancing process than an inactive one, then pulmonary gymnastics, which I have elsewhere described in detail and need not dwell upon here, are certainly of value, for that they increase the thoracic perimeter is easily shown by systematically kept lead-tape tracings; that they markedly increase ease of breathing and expansion is proved by the patient's feelings and by the tape measure; that they increase vital capacity, undoubtedly by opening up collapsed alveoli, is attested by the spirometer; and, when they are used with discretion, neither the pulse, temperature, symptoms, nor physical signs, are harmfully affected, as any one can convince himself who will give them a judicious and fair trial.

Amusements.—Both as a great help and a serious hindrance, according as they are used or abused, the patient's amusements demand close attention, whether in or out of a sanatorium. For those still carrying out a strict rest-cure and kept horizontal, there are few available; but with the lowering of the fever, which is generally soon noted, the semi-upright position is allowed, and then simple games, such

as solitaire, dominoes, checkers, and, for the ladies, light fancy work, are permissible. Any game or occupation demanding mental concentration or excitement has to be forbidden, for mental fatigue is nearly as bad as physical. For this reason, chess playing, studying, or even letter writing in many cases, especially if they are business letters, cannot be allowed.

When the patient begins to walk, the walk will be found a pleasant amusement, which can later be diversified by botanizing, geologizing, sketching, etc., if not followed too eagerly; active games should be reserved for the most convalescent, and there are not many that can be recommended unreservedly. Tennis, rowing, skating and the coasting that is so popular in the Alpine resorts are all too violent, and are not to be thought of; riding and driving I have already referred to. Golf, if wisely restricted, is an ideal sport for the tuberculous, being easily dosed from a little mild physical exertion up to the most active allowable. That all indoor night entertainments are to be forbidden, goes without saying, the theatre, above all; for not only is the physical excitement bad, but the long sitting in a crowded, hot, and draughty room, and the exit amidst clouds of dust into a cold street, is most decidedly harmful for such people. Dancing must be totally given up, not simply during the cure but, I believe, forever, for it combines excitement and over-exertion in a hot, dusty atmosphere. In nothing more than in our control of his amusements, will our hold on our patient show itself, and there is no better test of that control than the willingness on his part to give up some favorite amusement at the doctor's orders. Of course, the close restriction of their amusements will, with the light-minded, meet with much opposition, and it is often the rock on which treatment splits, but the earnest will, if they understand the reasons, not fail to obey.

Worries.—Having spoken of his amusements, let me here refer to the worries that can and often do harm our patients. Frequently setbacks that we are at a loss to understand will be found to result from some family trouble, some business worry, or some other anxiety, and such must be looked for, and, if possible, guarded against. Indeed, this is one of the advantages of removing the patient to a climatic resort, where family worries and business affairs are left behind; the family, if with the patient, should be taught to keep from the sick one all such things, and watched lest they trouble him with matters they should have kept to themselves.

I have under my care a very impressionable young lady who has several times given proof of the bad effect of mental worry on the course of the disease, and who has had two serious setbacks that could only be ascribed to severe disappointments in the inability of a dear friend to come to her. Such

impressionability is by no means rare, and must be reckoned with. In America, our typical nervous business man who can never drop his affairs, who takes them to bed with him at night and thinks of them all day, is a great problem for the phthisiotherapist, and I congratulate the colleague who can so dominate this type of patient as to make him put his business affairs behind him and devote himself with all the ardor he formerly put into them to his restoration to health.

Among the worries that trouble the patient, one is very often spoken of that I do not find so serious after the first week or so, as is often supposed. I refer to homesickness. While all feel it at first, the large majority become interested in their own cure and lose it entirely; in a few, especially with the Irish, I have found it severe, persistent, and troublesome, and, in such cases the patient may have to go home, either for a short stay or permanently. I have seen Irishmen struck by it as by some acute infection, and have seen their *morale* go entirely to pieces under it. Strange to say, I have found men much more subject to it than women, who can more quickly establish a homelike atmosphere about them than can the stronger sex. If they are occupied earnestly with getting well, and not allowed aimlessly to loaf around doing nothing definite, it will not often give trouble.

Hardening the Body.—That most important detail—the hardening of the patient's body to withstand changes of weather, draughts, and chilling, and to make him less susceptible to catching cold—is accomplished best by the combined effects of the constant outdoor life and hydrotherapeutics. (CHART 5.)

Medicinal Treatment.—The medicinal treatment is, I believe, more and more recognized as best when it is purely symptomatic, and though, at first, patients seem to expect a series of prescriptions and are disappointed if they do not get them, they soon cease to look for them, save where definite indications call for them.

Time Needed for a Cure.—The length of time that should be devoted to a hygienic and dietetic cure cannot, of course, be even approximately stated; a cure will naturally be much quicker at a climatic resort than in the patient's home, but wherever it is carried out, it is wise to be cautious in applying the term "case cured," rather than "process arrested," to the final note on the case.

The collection of trustworthy statistics on the results of phthisiotherapy would be greatly facilitated if the profession were more cautious in the use of the term "cured," for, while pulmonary tuberculosis is perfectly curable, a long period of observation should follow discharge before we can feel justified in regarding any case as cured, and the most minute

examination by an experienced physical diagnostician should always be presupposed.

As to the time devoted to the cure, the more incipient cases will often, after a three to six months' stay, have learned so well the lessons of hygienic and sensible living that they have been taught that they can be trusted to return to favorable country localities, near their homes, there to complete, under the family physician's eye, the cure begun in the resort, whose position should in this matter resemble that of the university, which educates its students and then sends them forth trained to carry out by themselves their further education and fulfill successfully their calling in life.

Of course, no exact period can be set; for many patients, six months, or even a year, spent wisely in a health resort under skilled supervision will not produce that absolute quiescence of the trouble which is generally spoken of as a cure, but speaking generally I would risk the statement that, as an average, six months to a year in a resort, followed by two years of great care at home (and a lifetime of common sense thereafter), will generally be successful, while in our cities the time must be much prolonged.

That such a cure carried out outside of sanatoria need be any slower or less successful than one within their precincts, I, from my experience, cannot admit; but I would repeat that it will demand much hard work on the part of the doctor and the ability to win his patient's confidence and to control him, and surely these are things that the majority of our profession have not been wanting in.

Day's Routine.—Before closing, I would give a brief sketch of the day's routine in an average case treated according to this plan. An hour before the patient rises, the servant closes the windows, and, in winter, lights the fire, that the room may be comfortably warm by rising time. The room being warmed to about 55° or 65° F., the patient, who, if he wakes early, has previously drunk his warm milk, takes his morning cool salt bath, lasting but a few seconds, and, after a brisk rub, dresses and, where they are in his orders, goes through his pulmonary gymnastics. Breakfast, which, like all meals, should be very regular and enlivened by conversation, being over, he goes to the porch and his reclining chair, and this, save for a few exceptions chiefly among the aged, whatever the weather. He wraps himself warmly, to be weather-proof, and has at hand such light literature as is allowed. Conversation with others should be encouraged if there is no laryngitis, but symptom-talking should be prohibited.

According to the case, more or less of the morning is spent in the recumbent posture and a regu-

lated portion given to exercise in specified ways from a few minutes to an hour or more.

During the morning, and also in the afternoon, such nourishment as has been ordered between meals is brought out and eaten, and, in cases where digestion is troublesome, a rest on the back on the bed, away from company for the half hour preceding meals, is advisable. The afternoon is like the morning, but exercise, when first allowed, comes in the morning rather than in the afternoon hour. After supper, if there is artificial light, the porch is again used till bedtime; it is most undesirable for patients to sit all the evening in close parlors, and if they cannot use the porch they had best sit in their own rooms, where they can have a few visitors for amusement and where ventilation is more easily controlled.

Bedtime is always early; 9 o'clock in winter and 10 in summer are the best hours. Before going to bed, such gymnastics as are ordered are gone through; in cases where they are called for, alcohol or vinegar rubs, etc., are given, and symptomatic remedies for cough, sweats, sleeplessness, or the like, are taken, and the last thing before bed a glass of hot milk is drunk and the teeth are cleaned, to prevent mouth fermentation. As the condition approaches more and more to the normal this regimen is gradually relaxed and fuller liberty is allowed until the patient leads an ordinary out-door life and is allowed to take care of himself.

The doctor at his visit, which, till the temperature is sufficiently lowered, is at the patient's house and not the office, scans the record carefully and minutely, investigates the diet, corrects errors, keeps a sharp eye out for defects in the table and housekeeping, interviewing the housekeeper if necessary, indicates any faults in the carrying out of his orders, encourages faithful attention to them, and reproves neglect, and watches the patient's mental attitude and physical state, encouraging, controlling, warning, or stimulating, as the case may be; and those who will try it can soon convince themselves that, in this way, the supervision, which some assert is only to be had in sanatoria, can be most satisfactorily obtained in private practice.

If I have taken your time to-day to describe closely the way one can successfully carry out the hygienic and dietetic treatment outside of a sanatorium, and have contended that it is feasible and desirable so to treat a large number of cases, and that in no respect need the results fall behind those attained in these institutions, I have been impelled to do so, not to belittle the splendid efforts they are making to solve this great problem, but in the belief that doctors practising outside of sanatoria do not rightly appreciate the method, or think they cannot apply it in private practice, while those within them

are too prone to think that there alone good results can be obtained.

If the general treatment of pulmonary tuberculosis is to improve, the general practitioner into whose hands such cases first come should realize that they are curable and hopeful. Hopelessness is still too much the keynote in the treatment of this trouble, and the teachings of those whose results long since disproved this have too often fallen on deaf ears.

When I recall the consumptive ward of my old hospital, the long line of beds filled with doomed mortals, the small amount of window space and sunlight, the limited quantity of fresh air and of outdoor life, I do not wonder that I then thought, as still do so many, that the treatment of consumption was the saddest and most hopeless task that ever the medical man was called on to undertake. I can still hear the dismal coughing that every night ran through the ward like a contagion, can still see the hectic in the patients' cheeks and the suffering in their eyes; but "times change and we change with them," and now, with the light of experience of this incomparable method, I feel that the hopelessness which overhung that ward is a thing of the past, that following in the footsteps of Bennett and Brehmer and Dettweiler, we have reached the time when to these poor mortals healing shall come, and men, after having followed for ages the *ignis fatuus* of medicinal treatment, have begun to realize that in the cultivation of the *vis medicatrix Naturæ*, in the building up of the system by food and air, rest and exercise, till it is capable of repelling the invader, lies the solution of the great tuberculosis problem which for centuries has baffled the medical skill of the world.

If the new gospel is anything, it is a gospel of common sense and of hope; and now with all the world aroused to the seriousness of the problem and learning the efficacy of the remedy that has lain unnoticed at our doors so long, the day begins to dawn when this scourge of humanity, held in check in its beginning by a scientific prophylaxis, detected in its incipency by an acute and early diagnosis, and cured in all but its most advanced cases, which, through this very diagnosis will get fewer and fewer, by a rational therapeutics, will cease to be the "white plague" at whose name men's faces now pale and, yearly, millions will be saved to civilization, who heretofore had been doomed to hopelessness and death.

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65 FRENCH BROAD AVENUE.

THE PLASTIC USE OF THE UTERUS IN CYSTOCELE OPERATIONS.*

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Prolapse of the vaginal wall, in a moderate degree, is of almost universal occurrence in parous women; it is the natural sequel to repeated pregnancies and deliveries, which cause the loosening of the vaginal walls from their underlying tissues. While the posterior vaginal wall is never very firmly attached to the rectum, the anterior wall in nulliparous women is closely connected with the bladder. After one or more deliveries this connection becomes loosened, and then, if from some cause the abdominal pressure is increased, and if at the same time, through relaxation, even without laceration, the natural support afforded the anterior wall by a strong pelvic floor and perineal body is lessened, the conditions for the inception of a cystocele are established. Abdominal pressure is consequently increased in emptying the bladder, on account of a distortion of the urethra, or by an occupation which necessitates an upright position for any length of time. Unfortunately, in the majority of cases, the same causes which are responsible for the relaxation of the anterior vaginal wall, tend also to lessen the firmness of the perinæum and the density of

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the pelvic floor, and so we find that prolapse of the anterior vaginal wall, uncomplicated by other mechanical lesions of the pelvic organs, is of comparatively rare occurrence; therefore any measures which are resorted to for the relief of a cystocele should always be accompanied by the restoration of the perinæum.

What rôle the uterus plays in the further development of a prolapse of the vagina, if a retro-displacement, when present, is primary or secondary, has not yet been definitely decided, and therefore will not enter into the scope of this paper; nor shall we discuss the propriety of the different means employed for symptomatically curing the condition. We shall assume that the cases which we have in mind require operative treatment.

The number of different operations employed for the cure of prolapse of the vagina is very large; the modifications of each one still larger; and no other proof need be adduced, to show what difficulty we encounter in curing this condition permanently. While it is the rule, rather than the exception, that in young women a moderate degree of cystocele and rectocele is permanently cured if no further pregnancies occur, it is the reverse when we have higher degrees of prolapse to deal with. The most troublesome cases, and the ones which are very seldom radically cured, are those in which at the time of, or after, the climacterium, the cystocele forms the larger part of the prolapsed organs, and either the vagina is atrophied or its tissue is œdematous from constant exposure.

The majority of operations consists in denuding the vaginal walls to a greater or less extent, in a variety of shapes and figures, and uniting the raw surfaces either in layers, or by one row of sutures; in addition to this, operations on the uterus, either for lacerations or hypertrophied cervix, and colpo-perineorrhaphies are performed. In general, the results have been entirely unsatisfactory, inasmuch as a recurrence of the condition takes place in a large percentage of cases. It appears that operators who have fastened the uterus to the vagina or bladder, either to cure retroflexion, or as an additional safeguard against the recurrence of prolapse, have been more fortunate in their final results.

About five years ago, W. A. Freund used the uterus in closing up a large defect in the posterior wall of the bladder, dislocating the fundus through Douglas's pouch and fastening its edges to the margins of the defect. When publishing this case, he gave expression to the idea that, by using the uterus in this fashion, an important

help might be secured in our attempt to cure obstinate cases of prolapse.

Two years ago Wertheim published two cases of prolapse which he had operated upon according to Freund's idea, differing from his operation only in the route chosen for the dislocation; he brought the fundus of the uterus forward through an incision in the vesico-uterine fold, and fastened it to the anterior vaginal wall. The principle of the operation consists in fastening the dislocated uterus to the denuded anterior vaginal wall, and stitching the fundus as near the external urethral orifice as possible. The uterus then acts as a truss, so to speak, and relieves the anterior vaginal wall from the pressure of the bladder, and, being fixed by the sacro-uterine and broad ligaments in the new position, serves also as a support to the vagina. I have employed this method in three cases, adhering in the main to the description given by Wertheim, departing from it only in some minor points. I proceed in the following way: After the usual preparatory measures, an incision is made through the anterior vaginal wall, from the urethra near its orifice to the cervix; two flaps are bluntly dissected, the bladder loosened and pushed upward as far as possible; the vesico-uterine fold of the peritonæum is then opened and the fundus of the uterus dislocated through it. In two cases in which the uterus was retroflexed, this was done by means of a sound. The posterior surface of the uterus is now fastened with three sutures of chromic gut to the flaps of the anterior wall of the vagina, about one half inch from their edges. In the first case the flaps were not resected, but sewn together with a running suture, and a colpo-perineorrhaphy added in the usual way; in the second and third cases, the flaps were united after resecting a strip about one quarter of an inch in width. The vagina was then packed with gauze and the patient put to bed.

A brief history of these three cases is as follows:

CASE I.—A. L., fifty-six years of age; has had three children, all after tedious labors; entered the climacterium ten years ago; she was operated upon six years ago for prolapse of the vagina, which operation afforded her only temporary relief; her symptoms began to return one year after the operation, and have greatly increased since, the most disturbing ones being a constant desire to urinate, and inability to walk. The anterior wall of the vagina was found to be prolapse to a high degree; in an upright position the cystocele was almost as large as a fist; there was a slight rectocele; the uterus was small, movable, but retroflexed.

This patient was operated upon July 11, 1900, and discharged August 4th. She was seen September 7, 1901, fourteen months after operation, and was in

perfect health, none of her former symptoms having returned; the uterus was still in extreme anteversion, and had become only slightly retracted.

CASE II.—B. G., fifty years of age; has had three children, after normal labors; ceased to menstruate five years ago. For ten years she has suffered from prolapse symptoms and difficulty in micturition; the condition of the general organs was somewhat similar to that in the former case, except that the retroflexed uterus was larger and deeper in the pelvis.

The operation was performed on April 24, 1901, a colpo-perineorrhaphy being also added in this case. The anæsthetic used in both these cases was nitrous oxide and ether. The patient was discharged on May 12th, and was seen again on September 8th; she was then free from any of her former symptoms, and pronounced herself perfectly well. On inspection, there appeared in the vulva a slight protrusion, which, however, was not the prolapsed bladder, but the large fundus of the uterus.

CASE III.—S. S., forty-five years of age; has had eight children; menstruated regularly until one year ago, since then the periods have appeared at intervals of two or three months; the last menstruation occurred two months ago. For several years she has complained of prolapse symptoms and severe backache; no urinary disturbance. The general condition for some time past has been very poor; she suffers from slight cough and palpitation. A cystocele of enormous size was found, with but slight relaxation of the posterior vaginal wall, and a small tear of the perinæum; the uterus was ante-flexed and rather large. Symptoms of myocarditis being present, general anæsthesia was deemed inadvisable, and the operation was performed, on June 3, 1901, under cocaine anæsthesia, which apparently was sufficient, as the patient did not complain of any sensation of pain during the half hour required for the performance of the operation. This patient was discharged on June 22d, and when seen September 8th, pronounced herself perfectly well so far as her former prolapse symptoms were concerned.

The post-operative course of these three cases was in every respect normal; there was no rise of temperature, no unusual pain, and no bladder disturbance; the urine was drawn by catheter for four days. At the end of two weeks the patients were allowed to leave their beds, and were discharged one week later. When seen at the times mentioned, fourteen, five, and four months respectively after the operation, the uterus was in each case in extreme anteversion, the cervix pointing toward the promontory of the sacrum high up in the vaginal fornix.

Patients 2 and 3, who were indulging in their marital relations, had no difficulty in the performance of the act. Naturally these were selected cases chosen from a large number of patients suffering from cystocele, primary and recurrent, and having passed the child-bearing period, were deemed admirably fitted for the employment of this method. Of course, no permanent result can be claimed as yet, but I do not hesitate to state that the result up to date has

surely equaled, if not surpassed, that reached in a vast number of cases operated upon by different methods.

The first patient may justly be considered as already permanently cured, as the uterus in this case was small at the time of operation, and no change in the relations of the anterior vaginal wall, uterus, and bladder, is to be expected from the physiological senile atrophy of the uterus, which, in the other two cases, had not yet been established.

While the small experience which I have had with this method so far does not permit of any decided opinion as to its value when compared with other operations, I can only say that its performance demands less time, and is accompanied by a smaller loss of blood, than any other method which I have so far employed. As a matter of course, its usefulness is a very limited one, as only patients near or past the menopause can be subjected to it. For very old women, upon whom, for some reason or other, prolonged operations under anæsthesia are contraindicated, this method appears to be extremely well fitted, and deserves a thorough trial.

45 EAST SIXTY-FOURTH STREET.

INFLAMMATION AND SCLEROSIS.

By CLARENCE L. KILBOURN, M. D.

With the advance of pathology there is necessarily a constant change in medical nomenclature. The usual tendency for our onomatology is to lag behind, but frequently it keeps abreast, and occasionally outstrips, pathology. This is the case when a particularly attractive and expressive new name is given to some important disease. Immediately there is an attempt to apply a corresponding term to each disease coming within range of the modern, elastic expression. The original term as applied to the particular disease may be scientific, but many misnomers are distributed during the re-christening of others. Medical literature thus fosters a fad.

Taking for an example the suffix "itis," we find it used correctly in many instances, such as "meningitis," "gastritis," "enteritis," etc. But it has been attached to Latin, French, and Anglo-Saxon roots indiscriminately, giving us terms such as "appendicitis," which has a Latin stem and a Greek suffix. Besides this incorrect use of the ending we find it applied to conditions where the pathology does not warrant it. The task of purifying medical nomenclature from rhetorical errors would be difficult, but it is a simpler matter to avoid using misnomers. The name of a disease, even if it does not give a clew to the pathology or ætiology, should surely not

be at variance with them. It is misleading to beginners and meaningless to older physicians.

The suffix "itis" means "inflammation of," and when the word "meningitis" is used it stands for "inflammation of the meninges." Inflammation, in the true surgical sense, means a condition following infection. It is acute in character, although occasionally, as in tuberculosis, its progress is slow.

A term which is often confounded with inflammation is "sclerosis." It is true that a long-continued infection, or repeated infection, leads to hypertrophy and subsequent atrophy. But sclerosis pure and simple is the result of a long period of overwork. The viscera are particularly prone to the condition. Overeating is followed by sclerosis of the stomach wall; high tension of the circulatory and nervous systems gives rise to sclerosis of the heart, kidneys, and arteries. There is no infective process connected with these instances, yet we have in our onomatology such names as "chronic interstitial nephritis" and "chronic myocarditis."

The kidney is subject to acute disturbances of an infective or toxic nature, as in scarlet fever, and the condition is correctly named "acute nephritis." In the small, contracted kidney, however, is an atrophic change due to overwork or strain caused by high arterial tension, and perhaps by extreme nervous tension. It is called "chronic interstitial nephritis," but there are no evidences of inflammatory action, and it is really a "sclerosis of the kidney."

In the heart we have an "acute endocarditis" associated with erysipelas, septicæmia, etc., but the so-called "chronic endocarditis" connected with arteriosclerosis is a "sclerosis of the endocardium"; and the same is true of myocardial diseases. "Acute myocarditis" occurring in infectious diseases and due entirely to infection or toxæmia is properly named. "Chronic myocarditis" is not the true term for degeneration or atrophy of the heart muscle due to the strain of an active life of hard work.

"Cirrhosis of the liver" is an approach to a correct name, but as it refers more to the gross appearance of the organ than to the minute pathology, "sclerosis of the liver" might be properly substituted. But "chronic interstitial hepatitis" or "chronic parenchymatous hepatitis" would be improper.

"Arteriosclerosis" is absolutely pure and correct. Yet Virchow has called the condition "endarteritis chronica deformans."

General paresis, which is due to a cerebral sclerosis, is often wrongly entitled "chronic diffuse meningo-encephalitis."

Progressive muscular atrophy has the scientific name "amyotrophic lateral sclerosis," but it is often called incorrectly "chronic anterior poliomyelitis" or "chronic poliomyelitis."

Hypertrophy of the prostate occurring in aged persons is not a "chronic prostatitis."

Hæmorrhage of the retinal vessels in Bright's disease is not "albuminuric retinitis," but a result of arteriosclerosis.

It must be remembered that the ordinary atonic dyspepsias and indigestions are not cases of "gastritis" and "enteritis." True gastritis and enteritis are as rare as typhoid fever.

These are a few examples only, and serve to show the wide misuse of one term.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows]

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

X.—How do you treat puerperal convulsions? (Answers due not later than March 10, 1902.)

XI.—How do you treat pneumonia in children? (Answers due not later than April 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. George B. Twitchell, of Cincinnati, whose paper appears in Vol. lxxiv, on page 1177, and is followed by Dr. Walker's and Dr. Andrews's.

PRIZE QUESTION NO. VII.

WHAT IS YOUR METHOD OF PREVENTING LACERATION OF THE PERINÆUM IN LABOR?

(Concluded from Vol. lxxiv, page 1197.)

THE IMPORTANCE OF PREPARATORY TREATMENT.

Dr. William F. Barclay, of Pittsburgh, writes:

When I began the practice of obstetrics I seldom, if ever, interfered with labor; more time was afforded to the natural expulsion of the child. Then the perinæum was in Nature's way cared for and, as far as I was competent to judge, never ruptured. Much more time was consumed, but to the great advantage of the woman. Quick delivery, either nor-

mal or artificial, is the first great cause of injury to the perinæum. Wait, retard, afford reasonable time for relaxation of the perinæum and the natural adaptation of the child's head. I never regretted such care of the perinæum. I have regretted being impelled by recent counsel to interfere and use artificial means in expediting delivery. The forceps, in my own hands and in the hands of others within my observation, has been a means of injury to the perinæum. I have turned the child in a large number of cases, and have done so always with safety to the mother and child. I have not observed laceration of the perinæum by this method or loss of the child. Support the body of the child always, and do not allow it to drag downward on the perinæum. Ante-partum care of the perinæum is reasonable in cleanliness, in the application of oils and fats, especially cacao butter and lanolin well rubbed into the perinæum twice a day. It is readily absorbed and its employment is a measure of certain utility. I doubt the utility of applying much pressure against the distended tissues of the perinæum, and I think that much harm is done by this practice. I am certain I have observed much harm done by external pressure. Support is the word; much pressure is injurious, is fruitful of harm to the perinæum. The ante-partum care of the pregnant woman, in my best judgment, is of the greatest possible advantage. When labor sets in, wait, exercise due care, with as little interference as possible, and the dangers are practically nil as regards injury of the perinæum. If the labor is rapid, retard it by judicious advice, appealing to the intelligence of the patient. This can generally be done in the extreme throes of extrusion of the head. After the expulsion of the head, permit Nature to place the shoulder in the best position to give least danger to the perinæum (if possible, gently press the shoulder as far away from the perinæum as you can, permitting the perinæum to care for itself, preferably to pressing against it).

The application of rubber cloth as a support, if attached to a girdle around the pelvis, has seemed to me worthy of careful and extended trial as a means of support to the perinæum. It does not necessarily retard labor. The care required in its application is not so great that it cannot be readily applied.

THE ADVANTAGES OF EPISIOTOMY.

Dr. Stewart Lewis, of Brooklyn, writes:

Preliminary muscular exercises and local massage were recommended a few years ago. The objections are obvious and the advantages exceedingly doubtful.

Before the head reaches the perinæum there occurs a passive congestion of that body, softening its

tissues. If this stage is too protracted or rapid, laceration is favored, also by the well-known principle of physics whereby a string may be broken by a force applied as a jerk which it could sustain if applied gradually. The treatment of these conditions is that of the cause, also "manual dilatation."

Ante-partum douches, especially saline and mercurial, are objectionable as removing natural lubricants. These may, however, to some extent be replaced by sterile vaseline. Digital examinations should be as few as possible, not more than two in the average case.

When the head distends the perinæum, complete exposure, good light, and convenient access are essentials. By sight and touch perineal tension is estimated. The duration from now up to expulsion can be almost completely controlled and in first labors should be rarely less than half an hour. Excessive pains may be limited by ordering the patient to breathe deeply and rapidly and by chloroform, chloral, or morphine. The same drugs relax perineal spasm, and may be aided to do this by warm wet gauze compresses. Manual dilatation seems to me rarely of value. The irritation stimulates uterine and perineal contraction, while the foetal head, properly controlled, forms the natural and ideal dilator.

The left lateral posture is far the best as being: 1. Convenient for the operator. 2. Lessening abdominal contractions. 3. Tilting the sacrum backward. The upper leg is best supported by an assistant. The patient may, however, lie as she pleases until expulsion is imminent.

The management during and just previous to expulsion has been the subject of much controversy. I prefer to do as follows: With the patient at the right edge of the bed, the thumb and outer edge of the finger of the right hand and the finger-tips of the left are held against the foetal head, restraining it, guiding it forward against the pubes and resisting too rapid extension, *i. e.*, preventing the forehead from passing the perinæum until the occiput is well out and the nape of the neck under the symphysis. If necessary, the left arm is passed between the patient's limbs and the right elbow braced against the right knee. I do not touch the perinæum at all, except when it is very long and seems to spread over the child's head, when it may be pushed back and the orifice spread open. The posterior shoulder should be likewise supported. The jerking of this through by impatient operators is no doubt a common cause of rupture.

The term "support the perinæum" is an unfortunate one. Pressure applied to its side may be used to guide the head, while efforts at relaxing it may be dictated by the judgment of the operator. Goodell's method, hooking forward the perinæum

by two fingers of the left hand in the rectum with the thumb on the head, seems sometimes of value. The objections are obvious and it seems unlikely to come into common use.

Episiotomy, the much-maligned "tyro's operation," is a last but often successful resort. The advantages are: 1. A less ragged wound. 2. A better position for drainage. 3. It is less deep, therefore unlikely to retain discharges. The incision may be sutured as soon as the child has been expelled.

Malpresentations greatly endanger the perinæum, but often present more important indications. A posterior occiput, especially if an effort is made to drag it through, renders laceration almost certain, as does any rapid delivery. The after-coming head is less malign if managed manually. The forceps should, whenever possible, be removed at the perinæum; otherwise it may be used to guide the head. During its removal the fingers should support the head and guard the perinæum if necessary.

GUIDE THE MECHANISM.

Dr. Harold Duncan Cochrane, of Albany, says:

Rigidity of the perinæum, excessive driving force, and faulty mechanism form a ratio of factors, any one of which may be responsible for the accident under consideration in an otherwise normal occipito-anterior presentation. How may we best meet these difficulties?

Much may be accomplished in the overcoming of a rigid perinæum by directing the patient to massage the parts with cacao butter during the last two months of pregnancy and by the application of hot, moist, sterile gauze after labor has actually begun. Toward the close of the second stage, if the perineal body still remains firm and resistant, it is my practice to place the patient on her left side and, standing behind her, apply the first two fingers of the right hand to the occiput, the thumb in the rectum, and intermittently, between the pains, distend the perinæum by means of the head which is completely under control. Develop the elasticity of the soft parts to the fullest extent practicable.

Excessive driving force must be bridled toward the end of the second stage. Directing the patient to breathe rapidly and avoid bearing down is often insufficient, as the expelling force may be quite beyond the control of the patient. We have, however, two effective agents to retard an unduly rapid delivery: Chloroform and digital pressure on the advancing head. Chloroform, administered at the beginning and continued to the close of a pain, does much to inhibit excessive uterine contractions. In practising digital pressure, place the patient on her left side, thighs flexed, and with your index and middle finger of each hand control the advance of

the head, pressure being made synchronously with the pains. Do not allow the head to be born during a pain, but rather between them, when relaxation is greatest.

Our last difficulty in occipito-anterior presentation is faulty mechanism. Insufficient head flexion is a fertile cause of lacerations. With our patient in the position above described, firm pressure upward on the sinciput just anterior to the vaginal border of the perinæum will greatly aid us; also the support of the perineal body by our outstretched palm is of assistance. The long cephalic axis must be kept at a right angle with the plane of the outlet of the soft parts.

Our vigilance should not abate with the birth of the head, for the rapid advent of the shoulders is often responsible for much mischief.

Keep the anterior shoulder well up behind the symphysis by supporting the infant's head, and allow the posterior member to escape first. Never allow both shoulders to be born simultaneously. Be not hasty in their delivery.

I have avoided mentioning my management of presentations, other than occipito-anterior, on account of space; however, the fundamental principles for the protection of the perinæum are the same, namely, relax the soft parts; control auxiliary expulsive forces; correct errors in mechanism.

AVOID MANUAL DILATATION.

Dr. Victor E. Neesen, of New York, writes:

In the ordinary, or normal, presentation, position and posture, there are certain things that can be done to prevent laceration of the pelvic floor and orifice of the vagina.

1. Retard the expulsion of the head with the thumb or fingers.
2. Keep the occiput close up under the pubes.
3. Apply hot-water stupes to the perinæum during the expulsion of the head.

The reasons for these three procedures are palpably apparent. Retardation of the head causes slower and better dilatation. Keeping the occiput up under the pubes prevents the nose and chin from ploughing into the pelvic floor. The hot water induces relaxation and incidentally diminishes the pain.

After the head is born, the neck is held up under the pubes until the lower shoulder is out, then the upper shoulder is extracted.

In cases where the forceps is used, the perinæum can frequently be saved by removing the forceps when the head is about to emerge.

In no case should any attempt be made to assist Nature by dilating with the fingers before the head engages; at no time during the progress of a labor

should the fingers be used to dilate. The unequal pressure of the fingers may "strain" the muscular fibres in spots, thus causing weakness and promoting the tendency to laceration.

In mal-presentations these same rules hold good so far as they apply.

In old primiparæ, where laceration is otherwise inevitable, bilateral incision will prevent it and permit of nicer reparation afterward.

MORPHINE AND CHLOROFORM AS ADJUVANTS.

Dr. Robert E. Coughlin, of Brooklyn, says:

Probably one of the most important duties of the obstetrician is the proper management of the perinæum in labor, to prevent it from becoming unnecessarily lacerated. Many methods have been advocated. What is true regarding remedies in disease is also true in regard to methods of treatment, namely, the greater number of methods advocated, the greater is the chance of any one of them failing in a given case. If any one method were known to be certain, no others would be suggested. Among those recommended are the methods of Goodell, Playfair, Fasbender, Olshausen, and Ahlfeld, and the operation of episiotomy. Goodell's method is very objectionable, both to patient and physician. That of Playfair is better and may be employed in conjunction with the method of lifting the occiput or presenting part upward, the right hand on the occiput and the left on the perinæum. Fasbender's is as objectionable as Goodell's, likewise Olshausen's and Ahlfeld's. Episiotomy the writer does not believe advisable, owing to the fact that we make two incised wounds to save one occurring. There is also the danger of infection occurring at the site of these incisions. Lacerations, slight and extensive, are altogether too frequent in the opinion of the writer, and he is confident that if his suggestions are acted upon fewer tears will be the result. The frequency of pelvic floor lacerations, as set down in most text-books, is about 35 per cent. in the first and 10 per cent. in subsequent labors. Half of these are believed to be unavoidable.

The methods suggested are these: During the second stage of labor, or when the head descends into the pelvis, a quarter of a grain of morphine, either by the mouth or hypodermically, is to be administered. This tends to soften the tissues of the perinæum. If pains are strong and frequent, with the cervix about or very nearly dilated, try to gradually dilate or stretch the ostium vaginæ with the index finger of the right hand describing a half-circle along the border of the perinæum. This should be performed before the head begins to bulge the part. When the bulging of the perinæum begins, this manipulation may be continued till the perinæum becomes quite thin, then the head should

be supported and an upward movement of the head imparted, so that all the unoccupied space beneath the arch of the pubes is made available. This tends also to prevent the dragging of the perinæum which is so often the cause of extensive lacerations. Should the pains be so strong that the head cannot be held properly, tell the patient to stop bearing down, and if this fails a few whiffs of chloroform may be administered. This acts well also when the perinæum is rigid and unyielding. Applications of towels wrung out of hot water will also help to soften a rigid condition of the perinæum. When the forceps has been applied, this method may be used with great success, as we are then enabled to hold the head up perfectly. In fact, the writer's experience is that no laceration should occur, as a rule, when the forceps is applied and this method instituted unless there is greatly disproportionate size of the child's head. During the passage of the shoulders it is well to be very careful lest a slight tear of the frenulum be made to extend to the perinæum, owing to the dragging of the lower shoulder. We must on this account push the upper shoulder well up inside the pubic arch and lift up on the lower shoulder, allowing the uterus to expel the body rather than using any traction. To recapitulate:

1. Wait until the head begins to descend into the pelvis and before it begins to bulge the perinæum, then try to gradually stretch or dilate the upper border of the perinæum.
2. Give chloroform if the pains are so strong as to interfere with the proper support of the occiput.
3. Support the head or occiput rather than the perinæum by imparting an upward movement, so that all the unoccupied space beneath the arch of the pubes may be made available.
4. Employ proper management of the shoulders by crowding the upper shoulder under and behind the pubic arch during the birth of the lower shoulder.
5. If one wishes, he may employ the method of Playfair in conjunction with this lifting up method.
6. Discard entirely all other methods, including the operation of episiotomy.
7. Attention to asepsis is demanded at all times.

RETARD THE DELIVERY.

Dr. Thomas C. Duncan, of Chicago, says:

Lacerations of the perinæum, according to my experience, are usually due to one of three causes:

1. Rapid delivery.
2. Small or contracted canal.
3. Large child—head and shoulders.

1. To consider the second cause first—we might say that many women have a poorly developed pelvis, from lack of bony material and from lack of de-

velopment of the muscles. Defective habits of sitting and walking during girlhood are chiefly responsible. Sitting with the legs crossed or curled up, so that the sacrum is the point of rest, tends to narrow the pelvis. The Indian woman and those with a broad pelvis, in walking, "toe in," and that position increases the breadth of the pelvic bones and the strength of the muscles of the hips. The habit of stooping and retaining the infantile bend of the spine corresponding to the letter C tends to contract the pelvis and weaken the muscles thereof.

It is in these immature, imperfectly trained bodies that we find a narrow canal. This condition may, to a certain extent, be corrected by sitz-baths during the latter months of gestation. The squatting position also helps in pelvic development. This is a preparatory work that may be rendered more effective by oiling the parts.

I have little confidence in the use of preparatory remedies. They may produce a spinal hyperæmia about the lower end of the cord, so as to render the patient less sensitive to pain, and in that way make relaxation and dilatation more satisfactory. If the vaginal canal is also narrow, laceration can be prevented, if at all, only by the most skillful management.

2. If the child is large (head and shoulders), even with an ample vaginal canal, the presenting part may cause such a stretching of the perinæum that it will give way in spite of the most skillful management. The large size of the child is dependent upon two things, as a rule: 1. Over-feeding. 2. Inactivity of the mother in the latter months of gestation. The popular idea of abstaining from meat and food that is supposed to increase bone defeats its purpose, because this very mental effort of the mother tends to increase the size of the brain. When sensible food is eaten and the mother takes proper exercise, lives the life of an oyster, the tendency to rupture is very much lessened. If the patient cannot exercise these muscles, they must be exercised by massage and baths, as already mentioned. In these cases we cannot, as a rule, depend upon the expulsive power of the muscles, and should put on the forceps early and then control the presenting part and so prevent laceration.

3. From an experience of thirty-five years, I feel satisfied that the most frequent cause of laceration of the perinæum is rapid delivery. In the management of a case of labor, I at once ascertain the presentation, position, and relations of the parts. A large head is usually slow in becoming engaged and in dilating the os. Usually the membranes are ruptured early and a dry labor is expected. If possible, the forceps is then introduced into the superior strait, and dilatation of both cervix and perinæum is slowly but steadily effected. When the head en-

ters the canal, the forceps is readjusted and rotation favored. Now comes the tug of war and the danger time. With the patient under chloroform from before the time when the forceps was applied, the effort is made to secure regular pains with plenty of rest between. Now is the time to retard the labor. If the muscles are strong, the danger of rupture is increased. To secure good lubrication, if the waters are deficient, oil, lard, or any bland agent, like vaseline, may be smeared about the parts, and especially on the inside and outside of the perineal muscles. Now with the head in the forceps, with one hand make traction, and during the time for a pain, with the fingers of the other hand, make downward pressure on the perinæum.

Competent assistants can do good service here. The assistants needed are one to give the chloroform, one at each limb, and the most skillful one at my left side. After every pain I push the presenting part back as far as possible and sweep the fingers on the inside of the vagina to ascertain the integrity of the floor of the pelvis. Then, when the time for the pain comes on, I make steady traction. The dilatation must be ample to allow the head to pass freely upward and outward.

There is danger with the forceps of carrying it too far over, so as to come in contact with the pubic bones, forming a strong lever upon the perinæum, which is sure to rupture. I hold the forceps with one hand straight up, and ascertain how the head is emerging. If the perinæum is stretched to its utmost and must yield another half inch, I drop the head back, push it back, lubricate the perinæum well, and try again.

As the head is about to be extruded, introduce two fingers into the rectum under the head, and with the palm support the perinæum, while the thumb and two other fingers make pressure upon the sides of the vulva, in that way lifting and crowding the head through the outlet and supporting the perinæum at the same time.

The head must pass freely, for usually the shoulders are wider and cause many cases of laceration. If they are large, then time for further dilatation must be allowed. After the head is born, it must be carried forward if the patient is on the side, and upward if on the back. The dorsal decubitus seems the best for the severe labor cases. Here rotation again must take place to allow the shoulders to come out without danger of rupturing the perinæum.

Complete narcosis is only necessary at two stages: 1. When applying the forceps. 2. While the presenting part is being piloted through the inferior strait. Dilatation of the cervix by the two fingers is usually resorted to early, for that also assists in dilatation of the perinæum. Rupture cannot be avoided in all cases, do as we will.

Correspondence.

LETTER FROM TORONTO.

The Toronto Orthopædic Hospital.—Physicians' Fees from Hospital Patients.—The Late President McKinley's "Alien" Nurse.—A New Hospital in Toronto.—The Lack of Post-graduate Instruction in Toronto.—The Toronto Hospital for Sick Children.—Osteopathy and the Law.—The Late Dr. Sweetman.—The Victorian Order of Nurses.—The New Dean of the McGill Faculty of Medicine.—The Hospital Treatment of Consumptives in Toronto.

TORONTO, December 14, 1901.

The Third Annual Report of the Toronto Orthopædic Hospital presents a review of the work done in that institution during the past year, the hospital year ending on the 30th of September. It has now been in existence for three years, and the duration of patients' stay in the hospital for each year successively is as follows: 3,306, 5,582, and 8,599 days. During that time the receipts have risen from \$2,601.52 to \$12,343.23, which is conclusive evidence that the hospital is in a prosperous condition. The patients have come from all parts of the Dominion of Canada, and no patient has ever been refused admission because of inability to pay. So great have been the demands upon the accommodation of the present buildings that new premises have had to be secured, improvements to which are now under way upon which the sum of \$30,000 is being expended. When they are completed, there will be accommodation for sixty patients.

A case was recently tried before Judge Morson, in this city, which has caused a good deal of comment among the profession, as it involved the rights of medical practitioners to fees for their services from patients undergoing hospital treatment. A leading surgeon of the city had performed an operation on a patient for appendicitis in St. Michael's Hospital. Payment was refused, so an action was brought in the County Court to recover \$30, a very moderate fee, indeed. The judge delivered his decision in favor of the defendant, placing himself on record at the same time as follows: "The public has a right to assume that the treatment is free. These institutions are supported by public charity, donations, grants, etc., and therefore the presumption is, at least so far as the public wards are concerned, that all treatment is to be free. The *right* to pay depending upon *ability* to pay is not recognized in law. If patients have to pay, then it is not a public institution. Doctors on the staff cannot recover unless they first notify the patient of the rules and regulations of the hospital." Truly may one ex-

claim: How long, O Lord, will physicians continue to lie under these oppressive burdens?

The "alien" nurse seems to have greatly perturbed the editorial mind of some of our Canadian medical journals, to say nothing of two or three American periodicals. When the editor of a Detroit medical journal made the slip of the pen which caused him to apply this appellation to the young lady who was so distinctly honored with such important duties as devolved upon her when she was selected to superintend the nursing of the late lamented chief executive officer of the United States, little dreamt he of the tempest he was brewing. It is very doubtful if the editorial mind is always keenly alive to the proper selection and use of words amid the multifarious subjects arising from month to month to be dealt with and discussed in the different departments of a medical journal. The whole affair is hardly likely to cause much friction, but where commercial interests clash, the editorial mind may become biased as well as in other walks of life.

Last week Toronto opened another new hospital. It is an up-to-date institution for small-pox patients, and the house-warming was no sooner over than it received a tenant. This occupant was transported thither from St. Michael's Hospital, where the disease had appeared in a patient lately admitted into that institution from Manitoulin Island, where small-pox is said to exist. As a result, the whole medical side of St. Michael's Hospital is quarantined, and no cases are being received into that department. The new institution is known as the Swiss Cottage Hospital, and is the best of its kind in all Canada. The building is a substantial structure of brick, erected at the cost of \$5,000, and has accommodation for twenty-five patients.

The passage of time goes on apace, and the profession in this city slumbers on in its conservatism. Now and again some one boiling over with the vim of youth starts up to remark that Toronto is doing nothing in the way of post-graduate medical work, and that the medical colleges are too busy filling the ranks of the profession with new recruits to take any note of the fact that there is such a thing in the outside medical world as original medical research—even no farther away than Montreal; but apathy and indifference remain in possession of the field. A writer has recently noticed this in the medical press, and now another, a country practitioner, has called attention to two prominent deficiencies of the medical status present in Toronto which should be remedied, and the writer referred to does this through the medium of the public press. First, he says, there is absence of provision for polyclinic or post-graduate study. Second, there is neglect of original clinical and laboratory research. Will the

heads of the profession and the medical teachers, the professors, please wake up to the fact that something can be done in both these directions in this city of 225,000 people?

The Twenty-sixth Annual Report of the Toronto Hospital for Sick Children shows what a vast amount of good has been done for the children of the Dominion of Canada. During the past year 770 patients were cared for in its wards, and there were 5,500 cared for in its out-door departments. During the twenty-six years that the hospital has been in existence, 43,204 children have been treated, and 20,000 have been restored to the full vigor of health. There were forty-two deaths in the institution during the past year. Seven died within three hours after their admission, eight within six days, five within two weeks, and twelve within the month, so that, out of the forty-two, thirty-two were almost if not altogether beyond hope of life when admitted. This hospital has accommodation for 195 patients, and its summer branch on Toronto Island, the Lakeside Home, the largest of its kind in the world, can accommodate over 200 children. There is at present a deficit of \$13,000 in the funds, and an earnest effort is now being advanced to wipe off this encumbrance.

The case against the osteopaths in whose parlors a young lady of this city recently died suddenly just after treatment for goitre came up before the police magistrate this week. The Crown Attorney had caused the books of the irregular practitioners to be impounded, and from this source it was ascertained that the so-called osteopaths had been in the habit of treating diseases caused by traumatism, rheumatism, gall-stones, gastritis, jaundice, and various forms of nervous diseases. Some of these had been treated for gain, while others escaped scot free. The magistrate seemed to have no faith in osteopathy, and intimated that he would impose a fine of \$25 and costs in a week. It is understood that an appeal is to be taken.

By the death of Dr. Leslie M. Sweetman, Toronto loses one of its foremost surgeons. On November 4th Dr. Sweetman operated on the arm of a young man suffering from gangrene following upon a gunshot wound. The patient died a few days later. While performing his toilet after the operation the late surgeon punctured one of his fingers with a bristle of the nail-brush. Blood-poisoning ensued and Dr. Sweetman went to Baltimore for treatment, where he died on the 11th inst. He was forty-two years of age. Dr. Sweetman took his medical degree from Toronto University in 1881 and also from Victoria University. At the time of his death he was clinical professor of surgery at Toronto University and surgeon to the Toronto General and St. Michael's hospitals. His funeral took place from

his late residence on the afternoon of Friday, the 13th inst., and was attended by nearly all the physicians in the city, several even coming from outside points to attend the last sad rites. Dr. Howard Kelly and Dr. Thomas S. Cullen were present from Baltimore.

Since the establishment of the Victorian Order of Nurses in this city, in 1897, to commemorate the Diamond Jubilee of her late Majesty Queen Victoria, much good work has been done by this order, and 8,658 visits have been paid by the nurses in that time. Thirteen nurses have been trained, and all of them are now working in different parts of the Dominion. The number of physicians in Toronto who have availed themselves of their services is 224. In connection with the order an admirable cottage hospital scheme has been inaugurated by Lady Minto, which is enabling the order to extend and strengthen its work in a most useful way.

Dr. Thomas G. Roddick, M. P., of Montreal, has been nominated by his fellow-members of the Faculty of Medicine of McGill University for the position of dean rendered vacant by the resignation of Dr. Craik. The new dean was born at Harbour Grace, Newfoundland, in 1856. In 1868 he graduated from McGill as Holmes gold medallist, and subsequently served for six years as house surgeon in the Montreal General Hospital. Dr. Roddick at present holds the chair of surgery at McGill. He has been president of the Medicochirurgical Society of Montreal, is a past president of the Canadian Medical Association, and was president of the British Medical Association when that body met in Montreal in 1897, the first time in the history of that great organization when a citizen of the British dominions beyond the seas was appointed to the position. Dr. Roddick entered Parliament in 1896, and ever since has been earnestly striving to bring about interprovincial registration. Dr. Craik is to be accorded the unusual honor of being appointed on the board of governors of the university.

After having closed their doors to consumptives for the past two years, the Toronto hospitals are re-opening them under popular demand. The action is significant. The past week has been an exciting one with regard to this vexed question, and the public press has been very energetic. So persistently have tuberculosis and its contagiousness been kept before the public mind for the past two or three years that a panic had almost ensued, and the people had virtually gone mad on the subject. A demand was made that a by-law should be at once submitted to the people that they could at once raise the funds and go on and erect and maintain their own sanitarium for the consumptives of this city. But the National Sanitarium Association seems to be jealous of any competitors entering the field, so they

immediately came forward with a promise to have a sanitarium for 100 patients within the space of twelve months, provided the citizens' project was dropped. To this the health authority of the city consented, so there will be nothing further of a by-law. A letter to the mayor with regard to the immediate needs of the consumptives, which was addressed to him by one of the city's practitioners, turned all eyes upon the hospitals, a demand was made that they open their doors, and the entire medical profession was canvassed as to their opinions in the matter. The Toronto General Hospital was the first to accede to the demands of the medical health officer, Grace Hospital soon followed, and the others are expected to fall into line within the next few days. The whole subject had reached a high tension in this city, and it is to be hoped that there will now be a turn of the tide, and that the unfortunate victim of tuberculosis will not be completely ostracized.

Therapeutical Notes.

Phenolphthalein as a Laxative.—Vamossy (*Pharmaceutische Zeitung*, 46, 858; *Pharmaceutical Journal*, December 7, 1901) finds that phenolphthalein, in doses of from 1½ to 2½ grains, is a useful aperient, equal to magnesium or sodium sulphate. It is very mild in its action, so that it may safely be given even to infants and young children.

An Inhalation for Mixed Infection in Pulmonary Tuberculosis.—Dr. H. E. Lewis (*Vermont Medical Monthly*, December 25, 1901) says that in cases of mixed infection with markedly purulent expectoration, for the purpose of allaying laryngeal irritation and cough, the following inhalation has proved most satisfactory:

℞ Compound tincture of iodine. . . 4 drachms;
Tincture of tolu. ½ an ounce;
Tincture of cinnamon. 1 drachm;
Carbolic acid. 1 "
Chloroform. 1 "
Alcohol, enough to make. . . . 4 ounces.

M.

Use in a bottle with a large cork through which two glass tubes are run. Inhale by drawing through the shorter tube, which must not reach down to the liquid.

The Treatment of Hydrocele by Injections of Zinc Chloride.—Dr. Fieux, in a Lyons thesis, 1901 (*Lyon médical*, December 15, 1901), recommends the following as a simple and rapid procedure in hydrocele, which is not liable to the inconveniences of iodine injection, viz., pain, the necessity of a long stay in bed, the possibility of a suppurative inflammation of the sheath, or a phlegmon. A Pravaz syringe of a ten-per-cent. solution of zinc chloride, freshly prepared, is used. In children and

in small hydroceles, half, or even a quarter of a syringe of fluid, may be used. The injection is made slowly, almost drop by drop, and gentle manipulation of the scrotum is used. Unless the hydrocele is very small and but little tense, it is necessary to precede the injection by the evacuation by means of the syringe, of a little of the fluid, varying according to the volume of the hydrocele from thirty to forty grammes as a rule.

Many cases are given, and but in one case was there severe reaction. There were no serious accidents. In only two cases did a return occur, and these in old hydroceles with thick walls.

For Diarrhoea in Hand-fed Children.—Hayem speaks highly of the following:

℞ Lactic acid. 30 grains;
Syrup of raspberries. 1 ounce;
Distilled water. 3 ounces.

M.

To be taken in coffeespoonful doses in the twenty-four hours.

In the same manner the three following mixtures may be administered:

℞ Hydrochloric acid. 3 minims;
Syrup of acacia. 1 ounce;
Distilled water. 3 ounces.

M.

Or ℞ Bismuth salicylate. 30 grains;
Syrup of *Consolida* (*Symphytum officinale*). 1 ounce;
Lime water. 2 ounces.

M. Shake before taking.

Or ℞ Extract of rhatany. 15 grains;
Paregoric elixir. 10 drops;
Syrup of quince. 5 drachms;
Decoction of rice, to. 3 ounces.

M.

Another (attributed to West):

℞ Extract of logwood. 60 grains;
Tincture of catechu. 120 minims;
Syrup. 150 "
Fennel water. 525 "

M. One coffeespoonful thrice daily.

℞ Bismuth subnitrate. 30 grains;
Laudanum. 1 drop;
Cognac. 150 minims;
Syrup of quince. 300 "
Boiled water. 750 "

M.

One coffeespoonful thrice daily. Shake before use.

The following is ascribed to Archambault:

℞ Laudanum. 1 drop;
Syrup of catechu. 375 minims;
Lime water. 300 "
Peppermint water. 600 "

M. One coffeespoonful thrice daily.

Saint-Philippe eulogizes the following:

℞ Antipyrine. 7½ grains;
Syrup of orange flowers, } of each. . 750 minims.
Tilia water, }

M. From five to six coffeespoonfuls daily.

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DISEASE-BEARING MOSQUITOES IN NEW ORLEANS.

An interesting investigation has lately been carried on in New Orleans by a commission of the Orleans Parish Medical Society, whose report appears in the January number of the *New Orleans Medical and Surgical Journal*. The commission was composed of Professor George E. Beyer, of the Department of Biology of Tulane University; Dr. O. L. Pothier, pathologist to the Charity Hospital; Dr. M. Couret, assistant pathologist to the same hospital; and Dr. I. I. Lemann, assistant demonstrator of microscopy in the New Orleans College of Dentistry. These gentlemen handsomely acknowledge the assistance they have received from Dr. H. B. Parker, of the United States Marine-Hospital Service; Dr. J. D. Bloom, house surgeon to the Charity Hospital; Mr. A. C. Eustis, resident student of that hospital; and Dr. Quitman Kohnke, health officer of New Orleans.

The commission appear to have satisfied themselves that the *Bacillus icteroides* of Sanarelli is the pathogenic organism of yellow fever, and that *Stegomyia fasciata* is the mosquito that conveys the disease from one person to another. This mosquito, though doubtless it was originally a native of tropical America, is now so abundant in New Orleans that its larvæ have been found in the water of 128 out of 210 such receptacles as cisterns, barrels, troughs, and kettles examined by them. *Stegomyia fasciata*, to the previously known life-history of which the commission have been able to add some important facts, breeds in cisterns by preference, but, unfortunately, in the suburbs of New Orleans, does not confine itself to such receptacles. The eggs hatch in from ten to twenty-four hours, the

larvæ under favorable conditions are full-grown in from six and a half to eight days, and the pupa releases the complete imago within two days. "In general, consequently, this species requires for its development from two to even four days less than the ordinary *Culex pungens* and fully two weeks less than any *Anopheles*." Hence even stricter measures are required for its suppression than for that of other mosquitoes, and very close-meshed screens are necessary to bar its access to dwellings and cisterns. It is essentially diurnal, though during the height of its flight it is very troublesome in the evening and night. The commission think that the chief danger of infection from it is in the daytime and especially during the afternoon hours.

The commission are not hopeful of the complete eradication of mosquitoes, but they are properly alive to the necessity of doing everything possible to reduce their number to the minimum, and they urge that measures to that end should be made peremptory. Opposition is expected, as well from those who allege no reason for it as from those who say: "The screening of cisterns would deplete our pockets and enrich the wire-screen makers," or assert that there could be no use in protecting the cisterns or oiling the gutters, "as any wind would blow the mosquitoes into the city from the swamps." To this last-mentioned objection the reply made by the commission is: "In the first place, these wind-driven mosquitoes are pretty rare in our city, notwithstanding the assertions of people who, as a rule, never seek for primary causes; and, secondly, these swamp mosquitoes, if *Anopheles*, are rarely infected, and, if of such species as *Culex perturbans*, *taniorrhynchus*, or *solicitans*, are not capable of remaining and breeding in the city." It has been said that petroleum may be spread on the surface of drinking-water in cisterns without impairing its palatability, provided the water is drawn from the bottom of the receptacle, but it is properly pointed out in the report that the film of oil, while not imparting its taste to the water, prevents its proper aeration and so causes it to become offensive to both taste and smell. Therefore screens or wooden covers are recommended for cisterns, the covers to be provided with a central opening about thirty inches square, which would admit enough air to preserve the water, and this opening to be protected by eighteen-mesh wire netting. But the commission

look forward to the total abolition of cisterns in consequence of the establishment of proper water works, and we hope that our New Orleans brethren will not have long to wait. At all events, we feel confident that at last efficient steps are to be taken to purge their city of yellow fever and free it from the disastrous effects of that pestilence.

A NEW YORK STATE CENSUS OF CONSUMPTIVES.

The State Department of Health has recently issued to the physicians of the State a blank form for the return of data concerning the prevalence of pulmonary tuberculous disease. The subheading of the blank reads: "Collective investigation through local boards of health for the purpose of securing a census and allied data of consumption in the State." Inasmuch, however, as the return envelope is directed to the State Department of Health, we fail to see how the investigation has to do with the local boards. But this is a minor matter. Presumably the data asked for pertain to those who are now under medical observation, but it is not so stated. The information called for includes the age, sex, and initials of the sick, the initials being desired to obviate duplicate reports; the town, village, or city in which the patient lives; his occupation and nationality; the duration of the disease; the source of infection, in case it can be traced or inferred; the family history as regards tuberculous disease; the condition of other members of the household as to present or recent infection; the sanitary condition of the surroundings; the character of the dwelling as to whether or not it is a tenement house; and what precautions, if any, have been taken to prevent the spread of the disease. A circular accompanying the blank states that the department is seeking to ascertain as accurately as possible the number of tuberculous persons in the State and the conditions by which they are surrounded, and the intention of instituting a personal registry of consumptives or a system of sanitary inspection or isolation is expressly disclaimed.

The department's undertaking seems to us altogether commendable, though it is hardly to be expected that it will call forth reports that will soon be available for purposes of generalization. Even if it fails entirely to secure data that can be turned

to practical account at once, it shows that our State sanitary officials are in active sympathy with the present world-wide effort to learn all that is to be known concerning the chief source of human mortality, to the end that the most efficient measures may be taken to reduce that great death rate. The State has already shown its readiness to take part in plans for the relief and cure of its consumptives, and it will doubtless be encouraged to further action by the results of this attempt to obtain a census of consumptives. Hence the department's blanks should be promptly and accurately filled out by all physicians who receive them.

THE TERMINATION -ITIS.

There still prevails largely the erroneous idea that there is some Greek word which is transliterated into *itis*, and that it means inflammation. The error has repeatedly been refuted, but it still crops out almost as often as "per orem" for *per os*. Even so competent a writer as Dr. Kilbourn, whose excellent article on Inflammation and Sclerosis we publish in this issue, while he recognizes that there is no such independent word as *itis*, speaks of it as a suffix and says that it means "inflammation of." It is true that modern convention has almost, but not quite, restricted the termination -itis to the meaning of inflammation, but no such idea pervaded the Greek language. We prefer to say termination rather than suffix, for -itis is nothing more than the feminine form of an adjective termination. The masculine form is *-ίτης*, and the feminine is *-ιτις*, and neither of them signifies inflammation any more than the Latin adjective terminations *-us*, *-a*, *-um* mean inflammation or, indeed, anything else beyond agreement in gender with the noun, expressed or understood, to which they apply.

All our medical substantives ending in -ites are really adjectives agreeing with a masculine noun understood; for example, the full name for *ascites* is *ὑδρωψ ἄσκιτης* (the bag-like dropsy), that for *tympanites* is *ὑδρωψ τυμπανίτης* (the drum-like dropsy), and there are numerous names of wines which, though little used, are instances of the same formation, such as *κεστρίτης*, a wine flavored with *κέστρον* mentioned by Dioscorides (*οἶνος* understood), and *ἀψινθίτης*, wine of wormwood. To pass now to the feminine forms, in all the multitudinous words in

-itis conventionalized to mean inflammation, the noun understood is νόσος, disease, and the full ancient Greek name for pleurisy was νόσος πλευρίτις, meaning simply the *pleura* (or *side*) *disease*, with not the remotest reference to its pathology. It is interesting to note that the word δακτυλίτις has two meanings, namely, *dactylitis* (pertaining to or resembling a finger or toe—conventionally inflammation of a finger or toe) and some plant mentioned by Dioscorides and conjectured to have been *digitalis* (the plant foxglove). In both instances, it will be seen, the underlying idea is precisely the same. Both φλογίτης (masculine) and φλογίτις (feminine) were anciently applied to the gem carbuncle (λίθος, a stone, understood, being used both as a masculine and as a feminine noun).

THE COUNTY ASSOCIATION'S PLAN OF MUTUAL DEFENSE.

We have always advocated the formation of defensive unions in the medical profession, and we are glad to learn that the New York County Medical Association has instructed its executive committee, consisting of the association's officers together with Dr. George T. Harrison, Dr. Frederick H. Wiggin, and Dr. Charles S. Benedict, to assume the legal defense, after a member's compliance with suitable conditions, of such actions for malpractice as may be brought against him, or, if defense seems unwise, to effect a compromise, but not without the member's consent. We may be sure that whenever a successful defense seems practicable, the committee will be far less ready to resort to compromise than an individual physician often is, and this fact in itself ought to go far toward checking suits which are little if at all different from pure blackmailing schemes.

"OSTEOPATHY" IN THE STATE OF NEW YORK.

The "Osteopaths" are reported to be rampant again in their scheme to obtain legal sanction of themselves as practitioners of medicine. Every legislator ought to know that anybody who seeks recognition as a physician without passing the State examination, the same for all applicants save in the matter of therapeutics, feels that he cannot pass it; and the legislator ought to know, too, that the ignorant practitioner of medicine does harm, not alone by applying his panacea injuriously, but by withholding other measures that ordinary professional knowledge would teach him the need of. The physicians of the State should continually din this into the ears of legislators.

AN EXPLANATION.

Our attention has been called to the fact that an advertisement has been printed in certain daily newspapers in which is quoted what appears to be an endorsement by the *New York Medical Journal* of the Bear Lithia Water for certain purposes. It should be understood that the matter quoted appeared in a paid advertisement of the Bear Lithia Company, printed in the advertising pages, was not an editorial expression of this journal, and did not appear in its text pages.

TROUBLE DUE TO THE WISDOM TEETH.

So generally have abnormalities of the teeth been relegated to the dentist that they are scantily treated of in the text-books of surgery. We think, therefore, that M. Moty (*Revue de chirurgie*, 1900, Nos. 5-7; *Centralblatt für Chirurgie*, November 23d) has done a distinct service by his systematic study of the accidents connected with the wisdom teeth. His researches point to the occasional necessity of looking into the condition of these teeth, sometimes even before their eruption, to account for and to remedy such manifestations as hemi-crania, swelling of the gum, moderate trismus, a swollen state of the parotid gland, and phlegmon, to which may be added the formation of a fistula due to osteoperiostitis, especially if the neighboring teeth are carious.

THE FEES IN THE CASE OF THE LATE PRESIDENT.

We note with regret that the subject of the physicians' fees in the case of President McKinley is still being made the subject of widespread newspaper comment. It seems to us that the proper method for this matter to have been brought to public notice would have been the introduction of a bill into Congress, providing for the payment by the nation of all the expenses incurred in connection with the treatment of the President. There is no question but that the American people would gladly assume responsibility for these expenses. The introduction of such a measure would have brought the subject before the public in a definite and dignified manner which would have admitted of discussion, so far as it was necessary to arrive at public sentiment, without involving any infringement of professional dignity. It unfortunately happens that the matter is being discussed in the lay papers at large in a vague and indefinite way and, on the whole, in a manner which is hardly befitting the solemnity and dignity of the occasion. The purely financial aspects of the case can, of course, scarcely be ignored; but we cannot but regret that public notice should have been directed to the matter through the newspapers, and not through Congressional action.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 13th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, January 14th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private) (election); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, January 15th.—Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, January 16th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 17th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Dr. Mundé's Health.—Dr. Paul F. Mundé, of No. 20 West Forty-fifth Street, who has been ill, is now recovering and hopes soon to be able to resume his practice.

Small-pox is Epidemic in London, there being more than 750 cases now under treatment in that city. A steamboat and twenty-eight new ambulances have been purchased.

Still Practising at the Age of One Hundred.—Dr. John P. Wood, of Coffeyville, Kans., who is still in active practice, celebrated his one hundredth birthday on January 5th. Dr. Wood is believed to be the oldest living practitioner of medicine in the world.

"Qui plantavit curabit."—The Latin quotation on the monument to James Henry Roosevelt in the yard of Roosevelt Hospital is *Qui plantavit curabit*. The medical students in the college across the way have, according to the *New York Sun*, this free translation of it: "We plant a bit, cure a bit."

To License Osteopaths?—The osteopaths, the *Sun* says, have converted Senator Thomas C. Platt to their side, and the result is that Senator Edgar T. Brackett has a bill providing for the licensing of practitioners of osteopathy in the State of New York after July 1st next. All candidates for a certificate are to pass a regent's examination.

The Registrations in Michigan.—Under the new law requiring physicians to register, 4,350 doctors have appeared before the Michigan State Registration Board and complied with the law. This is on average of a doctor for every 504 people in the State.

Compulsory Vaccination in the Philippines.—Recent advices by steamer state that, owing to an outbreak of small-pox in some of the Philippine Islands, the civil commission has prepared an act for the compulsory vaccination of all persons resident in the islands.

Collection for the Hospital Saturday and Sunday Association.—Frederick F. Cook, the general agent for the Hospital Saturday and Sunday Association, states that the collections in the churches this year for the association will probably net about \$15,000. The actual figures have not been made up yet. The church collections last year amounted to about \$12,000.

The United States Health Service.—A bill changing the name of the Marine-Hospital Service to the United States Health Service has been introduced in Congress. The bill states that it shall not be construed as discharging any officers now in the service. The jurisdiction of the service is increased to some extent, and its officers are to be under orders in time of war.

Health Commissioner-elect Lederle Appoints his Private Secretary.—Dr. E. J. Lederle, who is to be the new health commissioner of New York under Mayor Low, has appointed as his private secretary R. C. W. Wadsworth, who has accepted. Mr. Wadsworth is assistant city editor of the *Evening Post*, which position he has held for eight years. He is a graduate of Yale, '93, and has been long interested in the work of the Health Department and in social settlement work on the east side.

The Discoverer of Diphtheria Serum Awarded the Nobel Prize.—United States Minister Thomas has reported to the State Department that events of unusual importance and interest took place, December 10th, at Stockholm and at Christiania, in connection with the first award of the Nobel prizes. The distinguished scientist, Alfred Nobel, the discoverer of dynamite, who died five years ago, in his will directed that his fortune to be divided into prizes to be awarded to the worthiest, without regard to nationality. These prizes consisted of five allotments, each of more than \$40,000, which Minister Thomas says, in kind as well as in amount, are unparalleled in the history of science, literature, and humanity, being sufficient to place each recipient in independent circumstances and to permit him untrammelled to pursue his investigations and life work. The award in medicine went to Emil von Behring, professor at Halle, the discoverer of the diphtheria serum. The prize diplomas were awarded by the crown prince in person at Stockholm in the presence of a great gathering of distinguished people, and at Christiania, the award was made by the Norwegian Storting, convened in solemn session.

The Cleveland (O.) Medical Society held its one hundred and fifteenth regular meeting on December 27, 1901. The speakers were Dr. M. J. Lichty, Dr. J. B. McGee, Dr. John Perrier, Dr. F. E. Bunts, and Dr. C. B. Parker. The ninth annual meeting will be held on January 10th, at which time officers for the year will be elected. The candidates for president are Dr. P. Maxwell Foshay, Dr. H. W. Rogers, and Dr. H. G. Sherman.

The New York Post-graduate Hospital has issued its annual report for the year ending October 1st last. It shows that there were 2,095 free patients occupying beds in the hospital during the year and that these received 33,191 days of free hospital care. The number of days of hospital care both for free and pay patients was 53,058. This hospital is a part of the Post-graduate Medical School, but none of the attending physicians or surgeons to the hospital receives any salary. The directors appeal to the public for an endowment of the institution. The report also contains a brief account of the medical school and the Margaret Fahnestock Training School for Nurses.

A Microscope Stolen.—A Leitz microscope and stand complete, bearing the number 34,515, together with a Leitz one-twelfth inch objective numbered 25,607 and two Zeiss apochromatic 4 mm. lenses, numbered 11,207 and 11,235 respectively, were stolen from the laboratory of the Willard Parker Hospital, on Sixteenth Street, between November 20 and December 26, 1901. The total value of the microscope and lenses is placed at about \$300. As the instrument would be of little value to any one not an expert, it is possible that it may be offered for sale to some physician. If the instrument should be offered to any of our readers, they are requested to communicate by telephone with Captain Titus, chief of the detective bureau of this city, who will at once send a man to apprehend the person offering the instrument for sale.

New York Academy of Medicine.—At the meeting of the Section in Surgery, which is to be held on Monday evening, January 13th, the following programme will be presented: Operation for Intra-peritoneal Rupture of the Bladder, by Dr. James Pedersen; Oophorectomy for Inoperable Cancer of the Breast, by Dr. Franz Torek; Removal of Malar Bone for Epithelioma of Cheek, by Dr. G. H. Peck; Operation for Intra-abdominal Omental Torsion, by Dr. H. Lilienthal; Removal of Whole Omentum for Intra-abdominal Torsion, by Dr. J. Wiener, Jr.; The Cure of Hydrocele by the Injection of Minute Amounts of Carbolic Acid, by Dr. W. B. Coley; Clinical Memoranda in the Study of a Case of Anuria, by Dr. A. W. Moschcowitz; new instrument to increase the safety of general anaesthesia, by Dr. Frederick Griffith. At the stated meeting of the Academy, to be held on Thursday evening, January 16th, Dr. Joseph E. Winters will read a paper on The Food Factor as a Cause of Health and Disease during Childhood. The discussion is to be participated in by Dr. Leroy Milton Yale, Dr. William P. Northrup, Dr. John

Dorning, Dr. Floyd M. Crandall, Dr. David Bo-vaird, Jr., Dr. Rowland G. Freeman, Dr. Allen M. Thomas, Dr. Thomas S. Southworth, and Dr. J. Milton Mabbott.

One Hundred Thousand Dollars for Post-graduate Hospital.—Dr. D. B. St. John Roosa, president of the Post-graduate Hospital Association, has announced that a man, whose name is withheld, has made a conditional gift of \$100,000, to be applied to the liquidation of the hospital's debt. Dr. Roosa said the total debt of the hospital was a little under \$400,000. The condition attached to the gift is that the remaining \$300,000 is to be raised before the \$100,000 becomes available.

The Finances of the New York Academy of Medicine.—The report of the treasurer of the New York Academy of Medicine for the year ending December 17, 1901, has been submitted. It shows: Total receipts, \$18,927.85; expenditures, \$18,395.78, of which \$11,573.21 was for Academy account, and \$4,119.06 for library account. The report of the treasurer of the board of trustees shows: General permanent fund, \$297,265.59; general library fund, \$20,858.10; library and other funds, \$62,704.31; total, \$380,828. Income account, including balance of \$1,519.95, \$9,313.97; expenditures, \$6,712.24, leaving a balance of \$2,601.73.

Munificent Bequest in London for a Sanitarium for Consumptives: Prizes Offered.—From London it is announced that £200,000 has been placed at King Edward's disposal for charitable or utilitarian purposes. The donor is said to be Sir Ernest Cassel, a merchant and financier, who was made a Knight Commander of St. Michael and St. George for his services in relation to Egyptian finance.

King Edward has decided to devote this gift to a sanitarium for consumptives, to accommodate one hundred patients. Twelve of the beds are to be reserved for the wealthy sufferers, while the remainder will be for those who are only able to afford a small fee. King Edward has appointed an advisory committee, composed of leading physicians, including Sir William Broadbent, Sir Richard Douglas Powell, Sir Francis Laking, and Sir Felix Semon.

Three prizes of £500, £200, and £100, respectively, have been offered in connection with this scheme for the best essays on, and plans for the construction of, the sanitarium, and the advisory committee will be guided by the result of this competition in the execution of his Majesty's wishes. The competition is open to medical men of all nationalities.

Sir William Broadbent explains that it is intended to employ the open-air treatment for consumptives, the success of which is now absolutely established. He is unable to give details, but believes that the sanitarium is to be within easy distance of London, for it has been shown that the open-air treatment can be conducted almost as successfully in England as in Switzerland.

No Yellow Fever in Havana.—Major W. C. Gorgas, chief sanitary officer at Havana, in his report to Governor-general Wood for November, says: "During the month we have had no cases and no deaths from yellow fever. This can be said of no preceding November since 1762. Last year we had, during this month, 214 cases and 54 deaths. This year the last case of yellow fever occurred on September 28th; that is, we have gone over two months without a single case or death belonging to Havana. I consider this a demonstration that Havana has at last been freed from the infection of yellow fever. It must be remembered that October and November are the months when yellow fever is rife in Havana, and that, for the past century, there has never been a day during these two months when there were not many cases in the city. This result I consider due to the system, introduced last February, of killing infected mosquitoes in the neighborhood of each point of infection as it developed."

The New Form of Government for the City Hospitals.—On February 1st Bellevue, Fordham, Harlem, Gouverneur, and the Emergency hospitals will pass out of the Department of Charities and come under the control of a board of seven trustees, to be named by the mayor, the commissioner of charities being *ex-officio* a member of the board. Mr. Low, the newly elected mayor, stated to a representative of the *New York Medical Journal* that the members of this board would be appointed by him within the first ten days of January. The United Hebrew Charities, the Particular Council of New York of the St. Vincent de Paul Society, and the Association for Improving the Condition of the Poor have each the privilege of presenting for the mayor's consideration a list of double the number of trustees to be appointed. These lists may be wholly or partly duplicates and the mayor is not limited to them in making his selections. The trustees serve for seven years without compensation. The first appointees, however, will be appointed for periods ranging from one to seven years, so as to insure a certain continuity in the board. The Sinking Fund Commissioners are to prepare a plan for the separation of Bellevue and the allied hospitals from the charities department. Provision is made for the retention of all employees and subordinates in the institutions when the trustees take office. The charter further provides that the medical board of Bellevue and allied hospitals shall be composed of the attending and consulting physicians and surgeons on February 1st, and vacancies in this board are to be filled by appointment by the board of trustees. The members of the medical board are to hold office as long as they satisfy the members of the board of trustees. The medical board shall nominate, and the board of trustees on its nomination shall appoint medical and surgical house officers of the hospitals.

All of the members of these boards and the officers mentioned to be appointed by the board of trustees as surgical and medical officers are to serve without pay, and the members of the board of trustees are debarred from holding any office or emolument under the city, State, or national government, except the offices of notary public, commissioner of deeds or offices in the National Guard.

On the trustees the whole responsibility of the government of the hospitals will rest, from the top to the bottom, and they will be more free from the possibility of interference by the mayor in the performance of their duties than any other officers of the city government. The mayor will be able to remove any head of a department without making any explanation of his reasons, but he cannot remove a member of this board without cause.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 4, 1902:

DISEASES.	Week end'g Dec. 28		Week end'g Jan. 4	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	20	14	45	10
Scarlet fever.....	220	16	265	17
Cerebro-spinal meningitis.....	0	2	0	5
Measles.....	601	34	702	25
Diphtheria and croup.....	205	61	286	41
Small-pox.....	19	4	8	2
Tuberculosis.....	209	146	235	139

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 4, 1902:

BLACKWELL, E. M., Assistant Surgeon. Ordered to the *Columbia*.

BUCHANAN, J. B., Assistant Surgeon. Detached from the *Columbia* and ordered to the *Constellation*.

FAUNTLEROY, A. M., Assistant Surgeon. Detached from the Naval Academy and ordered to the Naval Hospital, Norfolk, Virginia.

HOLCOMB, R. C., Assistant Surgeon. Detached from duty with the marine battalion, Cavite, Philippine Islands, and from the *Helena*, and ordered home to await orders.

MCDONALD, P. E., Assistant Surgeon. Ordered to the Naval Academy.

YOUNG, R. M., Assistant Surgeon. Detached from the *Constellation* and ordered to the Asiatic Station as the relief of R. C. HOLCOMB, Assistant Surgeon.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending January 4, 1902:

BAKER, DAVID, First Lieutenant and Assistant Surgeon, will report in person to the commanding officer, Fort Leavenworth, Kansas, for duty at that post.

EVE, ROBERT C., Contract Surgeon, is relieved from duty at Fort Sam Houston, Texas, and will proceed to San Francisco for transportation to the Philippine Islands.

EWING, CHARLES B., Major and Surgeon, will proceed to Fort Preble, Maine, on or before January 3, 1902.

FOWLER, ERNEST W., Contract Surgeon, is relieved from duty at Fort Preble, Maine, and will proceed to Fort Terry, N. Y., to relieve JOSEPH C. GARLINGTON, Contract Surgeon, who will proceed to San Francisco for transportation to the Philippine Islands.

HALSELL, JOHN T., Contract Surgeon, is relieved from further duty in the Division of the Philippines and from temporary duty at the Presidio of San Francisco, and will proceed to San Antonio, Texas, for duty at Fort Sam Houston.

KIEFFER, CHARLES F., Captain and Assistant Surgeon, is relieved from further duty in the Division of the Philippines, and will proceed to San Francisco for further orders.

TRUBY, ALBERT E., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended two days.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 4, 1902:

Smallpox—United States			
California....	San Francisco...	Dec. 15-22...	9 cases.
	San Pedro...	Dec. 7...	1 case.
Indiana....	Evansville...	Dec. 21-28...	5 cases.
Kentucky....	Lexington...	Dec. 21-28...	4 cases.
Louisiana....	New Orleans...	Dec. 1-8...	1 case.
Maine....	Portland...	Dec. 21-28...	1 case.
Massachusetts....	Boston...	Dec. 21-28...	27 cases.
	Cambridge...	Dec. 21-28...	1 case.
	Fall River...	Dec. 21-28...	1 case.
	Acquaford...	Dec. 21-28...	1 case.
	Quincy...	Dec. 21-28...	4 cases.
	Woburn...	Dec. 18-21...	1 case.
Minnesota....	Minneapolis...	Dec. 15-22...	22 cases.
	Winona...	Dec. 15-22...	3 cases.
Missouri....	St. Louis...	Dec. 19-26...	1 case.
Nebraska....	Omaha...	Dec. 21-28...	20 cases.
New Hampshire....	Nashua...	Dec. 21-28...	1 case.
New Jersey....	Camden...	Dec. 1-8...	16 cases.
	Newark...	Dec. 21-28...	20 cases.
	Passaic...	Dec. 15-28...	4 cases.
New York....	Binghamton...	Dec. 21-28...	1 case.
	New York...	Dec. 21-28...	19 cases.
Ohio....	Ashtabula...	Dec. 21-28...	1 case.
	Cincinnati...	Dec. 20-27...	9 cases.
Pennsylvania....	Hazleton...	Dec. 24-31...	11 cases.
	Lebanon...	Dec. 21-28...	35 cases.
	Norristown...	Dec. 21-28...	5 cases.
	Philadelphia...	Dec. 21-28...	79 cases.
Rhode Island....	Providence...	Dec. 21-28...	1 case.
South Carolina....	Greenville...	Dec. 15-21...	2 cases.
Tennessee....	McMinn Co...	Dec. 15-21...	24 cases.
	Memphis...	Dec. 21-28...	2 cases.
	Polk Co...	Dec. 15-21...	4 cases.
Utah....	Salt Lake City...	Dec. 21-28...	2 cases.
Wisconsin....	Green Bay...	Dec. 22-29...	10 cases.
	Milwaukee...	Dec. 21-28...	2 cases.

Smallpox—Foreign.			
Belgium....	Ghent...	Dec. 7-14...	5 deaths.
Brazil....	Pernambuco...	Nov. 1-30...	130 deaths.
	Rio de Janeiro...	Nov. 10-24...	119 deaths.
Canada....	Halifax...	Dec. 21-28...	11 cases.
	Quebec...	Dec. 15-28...	56 cases.
	Winnipeg...	Dec. 15-21...	2 cases.
Colombia....	Cartagena...	Dec. 9-15...	2 deaths.
	Panama...	Dec. 16-23...	15 cases.
France....	Lyons...	Nov. 30-Dec. 7...	1 death.
	Paris...	Dec. 7-14...	8 deaths.
Gt. Britain....	London...	Dec. 7-14...	29 deaths.
Mexico....	Merida...	Nov. 23-30...	506 cases.
Russia....	St. Petersburg...	Nov. 30-Dec. 7...	1 case.
	Warsaw...	Nov. 23-30...	4 deaths.
Spain....	Corunna...	Dec. 7-14...	2 deaths.
			1 death.

Yellow Fever.			
Brazil....	Rio de Janeiro...	Nov. 10-24...	3 deaths.
Mexico....	Merida...	Nov. 23-30...	1 death.
	Vera Cruz...	Dec. 14-21...	9 deaths.
West Indies....	St. Lucia...	Dec. 16...	Present.

Cholera.			
Java....	Batavia...	Nov. 16-23...	21 cases.
Straits Settlements....	Singapore...	Nov. 8-16...	15 deaths.
			10 deaths.

Plague—United States.			
California....	San Francisco...	Dec. 15-22...	1 case.

Plague—Insular.			
Hawaii....	Honolulu...	Dec. 11-14...	4 deaths.

Plague—Foreign.			
Brazil....	Rio de Janeiro...	Nov. 10-24...	23 deaths.
Mauritius....	Mauritius...	Nov. 28-Dec. 5...	37 deaths.
So. Africa....	Massell Bay...	Nov. 23-30...	5 cases.
	Port Elizabeth...	Nov. 23-30...	1 case.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending January 2, 1902:

BURKHALTER, J. T., Assistant Surgeon. Relieved from duty at Mobile and directed to proceed to the Gulf Quarantine Station, relieving Surgeon P. C. KALLOCH.

CARMICHAEL, D. A., Surgeon. Upon being relieved by Passed Assistant Surgeon H. S. CUMMING, to proceed to Vineyard Haven, Massachusetts, relieving Surgeon F. W. MEAD.

CLARK, TALIAFERRO, Assistant Surgeon. Granted leave of absence on account of sickness for seven days from December 18, 1901. Granted twenty-one days' extension of leave of absence on account of sickness, from December 26, 1901.

COBB, J. O., Passed Assistant Surgeon. Granted leave of absence for twenty days from January 2d.

CUMMING, H. S., Passed Assistant Surgeon. Directed to assume command of the San Francisco Quarantine Station, relieving Surgeon D. A. CARMICHAEL.

DUDLEY, D. F., Acting Assistant Surgeon. The Department letters of October 10, 1901, granting Acting Assistant Surgeon DUDLEY leave of absence, on account of sickness, for thirty days from October 7, 1901, and leave of absence for thirty days from November 7, 1901, amended so that the sick leave shall be from October 9, 1901, and annual leave from November 28, 1901. Directed to proceed to Immigration Depot, New York, and report to Surgeon G. W. STONER, for duty.

EBERSOLE, R. E., Acting Assistant Surgeon. Granted leave of absence for five days from December 31, 1901, under paragraph 181 of the Regulations.

GASSAWAY, J. M., Surgeon. Granted leave of absence for five days from December 26, 1901. Granted two days' extension of leave of absence.

IRWIN, FAIRFAX, Surgeon. Granted leave of absence for seven days from December 27, 1901.

KALLOCH, P. C., Surgeon. Upon being relieved by Assistant Surgeon J. T. BURKHALTER, to proceed to Washington and report for orders, preliminary to going to Portland, Maine.

LAVINDER, C. H., Assistant Surgeon. Granted leave of absence for two days.

MEAD, F. W., Surgeon. Upon being relieved by Surgeon D. A. CARMICHAEL, to proceed to Pittsburgh, relieving Acting Assistant Surgeon R. C. CRAIG.

SIBREE, H. C., Acting Assistant Surgeon. Granted leave of absence for seven days from December 30, 1901.

Board Convened.

Board convened to meet January 6, 1902, at the Marine-Hospital, Chelsea, Massachusetts, for the physical examination of an applicant for appointment in the Revenue Cutter service. Detail for the board: Surgeon FAIRFAX IRWIN, chairman; Assistant Surgeon M. W. GLOVER, recorder.

Births, Marriages, and Deaths.

Married.

BROWN—UPSHUR.—In Washington, on Tuesday, December 31, 1901, Dr. Alexander G. Brown, Jr., of Richmond, and Miss Kate Marion Upshur.

CROFF—CUMMINGS.—In Buffalo, on Tuesday, December 24, 1901, Dr. James Brainard Croff and Dr. Carro Julia Cummings.

EARLY—LLEWELLYN.—In Baltimore, on Thursday, January 2d, Dr. Bernard Heath Early, of Blue Ridge Springs, Virginia, and Miss Bernadine Peyton Llewellyn.

GREEVER—WITTEN.—In Tazewell, Virginia, on Wednesday, December 25, 1901, Dr. C. W. Greever and Miss Nannie Witten, daughter of Dr. Thomas W. Witten.

Died.

BELL.—In Benton Harbor, Michigan, on Sunday, December 29, 1901, Dr. John Bell, in the sixty-second year of his age.

BIGELOW.—In Chicago, on Saturday, December 28, 1901, Dr. John F. Bigelow.

CRONIN.—In Lancaster, Wisconsin, on Thursday, December 26, 1901, Dr. F. M. Cronin, in the fifty-fifth year of his age.

GANOW.—In Detroit, on Saturday, December 28, 1901, Dr. Robert Ganow, of Sanitaria Springs, N. Y., in the twenty-fifth years of his age.

McLAUGHLIN.—In Chicago, on Sunday, December 29, 1901, Dr. J. F. McLaughlin, in the forty-fifth year of his age.

McLEOD.—In Detroit, on Sunday, December 29, 1901, Dr. Duncan McLeod, in the fifty-fourth year of his age.

McNEILL.—In Battle Creek, Michigan, on Monday, December 30, 1901, Dr. George E. McNeill, in the fifty-fifth year of his age.

WRIGHT.—In Washington, on Tuesday, December 24, 1901, Dr. T. H. Wright, of Pickens, Mississippi.

Pith of Current Literature.

American Medicine, January 4, 1902.

Note on the Fever of Hodgkin's Disease; Recurrent (Rückfall) Fever: Ebstein's Disease. By Dr. J. H. Musser.—According to the author, Hodgkin's disease is, in all probability, a lymphatic tuberculosis. Fever, recurrent in type, occurs commonly in this affection of the glandular structures. So-called recurrent fever is a symptom, not a disease. In a few rare instances the clinical diagnosis, when such fever prevailed, was malignant lymphoma (Pel), sarcoma (Völckers), myelosarcoma (Hammer), and lymphosarcoma (Remus and Witt-hower; Seeböhn). It must be remembered that such distinguished authorities as Ehrlich and Lazarus believe that Hodgkin's disease is a lymphosarcoma, and that the tuberculous process is accidental. Sternberg, on the other hand, has pointed out the differences, and insists strongly upon the tuberculous as *the* process giving rise to the adenitis of Hodgkin's disease. He believes that the symptoms are different from those of other forms of tuberculosis, the anatomy of the gland having much to do with the process. The author agrees with the conclusions of Sternberg.

Preliminary Notes on the Virulence of the Bovine Tuberculosis Bacillus for Monkeys, and the Effect of Tuberculins Made from Tuberculosis Bacilli Derived from Different Animals. By Dr. E. A. de Schweinitz and E. C. Schroeder, M. D. V.—These preliminary results are published for the purpose of showing that experiments point to a greater, rather than to a decreased, virulence of the bovine bacilli for man. The apparent morphological differences between the human and bovine bacilli, when grown upon artificial culture media, are not greater than the morphological differences seen in the bovine bacilli obtained from the different organs of the same animal.

Triple Ectopic Gestation. By Dr. Wilmer Krusen.—The case here reported may be classified as a true unilateral triple tubal gestation, as the interstitial structure of the uterus was uninvolved.

The Therapeutic Value of Hypnotism. By Dr. Charles W. Burr.—The author states that in organic disease, hypnotism is practically of no therapeutic value. Two great classes are the stamping-ground of medical and non-medical hypnotists—the psychoses and the neuroses. In hysteria and in morbid emotionalism there is frequently an extreme susceptibility to suggestion, a willingness to accept ideas. On this, and not on the hypnotism itself, except in so far as hypnotism sometimes increases susceptibility to suggestion, hangs whatever success there is in hypnotic therapeutics.

The Personal Elements of Error in Therapeutics. By Dr. George F. Butler.—Until the personal element of error arising from the mixture of the misleading old axiom as to causation with mild bacteriological and antiseptic theorizing ceases to dominate the mind of the average practitioner, absurd treatment will continue to be exploited. These elements of error must be eliminated from therapeutics before it can attain the authority which recent

advances in chemistry, pharmacology, and physiology justify it in assuming.

Practical Office Methods of Diagnosis, with Special Reference to the Röntgen Ray. By Dr. A. W. Crane.

A Case of So-called Malignant (Staphylococcus) Carbuncle of the Upper Lip, followed by Pyæmia. By Dr. William B. Wherry.

Address to Nurses. By Rear-Admiral George Melville.

Philadelphia Medical Journal, January 4, 1902.

The Propagation of Yellow Fever by Mosquitoes. By Dr. W. C. Gorgas.—It has been proved that the female *Stegomyia mosquito* does give yellow fever, and Dr. Reed and the army commission have proved that there is a definite period of incubation in the mosquito, from the time at which the infected person is bitten to the time at which the mosquito is capable of transmitting the infection. This would point to the probability of this mosquito being the only insect capable of conveying the infection. Then the sanitary department, basing its work upon the truth of this theory, succeeded in eradicating yellow fever from Havana, where it had been constant for the last one hundred and fifty years. If this is not a strong enough proof of the theory, it is certainly a strong enough proof in that direction to cause any of our Southern cities that may become infected with yellow fever in the future to add the method of killing mosquitoes to their methods of disinfection. The disinfection of fabrics can safely be done away with.

Rheumatic Fever and Its Counterfeits. By Sir Dyce Duckworth, M. D.—In a clinical lecture, delivered at St. Bartholomew's Hospital, November 29, 1901, the author lays down as an axiom that all forms of arthritis, or chronic joint disease, with the one exception of gout, are the result of some infection. One can say that rheumatic fever has come as much under beneficial control by salicylate treatment as have the violent movements and jactitations of chorea since we have learned how to use chloral hydrate. The employment of these drugs constitutes an advance in therapeutics which has operated very greatly for the benefit of humanity.

The Trial, Execution, Autopsy, and Mental Status of Leon F. Czolgosz, Alias Fred Nieman, the Assassin of President McKinley. By Dr. Carlos F. MacDonald. **With a Report of the Post-mortem Examination.** By Dr. E. A. Spitzka.—Published in the *New York Medical Journal*, January 4th.

Journal of the American Medical Association, January 4, 1902.

The Specific and Non-specific Lesions of the Brain, Resulting from Syphilis and their Influence upon Diagnosis, Prognosis, and Treatment. By Dr. J. T. Eskridge.—The author points out that multiple lesions in syphilis of the brain are the rule. It is not uncommon to find most of the larger arteries at the base of the brain affected with gummatous deposits. In cases of syphilitic tumors of the brain it is the exception to find the blood vessels healthy. On the other hand, the walls of the ar-

teries are the seat of numerous gummatous deposits, while the other structures of the brain are free from the appearance of syphilitic disease. We may conclude from this that the blood-vessel walls are the most vulnerable intracranial tissue to the virus of syphilis.

Treatment of Neurasthenia. By Dr. J. G. Biller.—According to the author, the first requisite is that the patient should have confidence in the physician, and that the latter's visits should not be too hurried or too far between. As for the diet, all cases of neurasthenia do not require to be put on a stuffing diet; but nearly all want considerable attention. The importance of fresh air in the treatment of these cases cannot be overestimated, for patients suffer more from the want of it than we fully realize. Both mental and physical rest should be procured for them. Good feeding and good air does much to make them sleep, but occasionally, and sometimes frequently, for a time, these people must have a soporific. The medicinal treatment of one of these cases by using the so-called tonics, will be disappointing to both the patient and physician. The beneficial remedies are those that aid in digestion and increase the activity of the liver. A surprising benefit will result from the use of a quarter of a grain of calomel every second night for a week or so.

The Nervous Relation in Diseases of the Nutritive System. By Dr. Henry S. Drayton.—The author asserts that we have resorted to methods in treating dyspeptic cases that were either quite unnecessary or contributory to greater disturbance of the alimentary organism. Instead of inducing calm we consider it necessary to give excitants and stimulants, to arouse the weak and atonic stomach, when what is really required by its nervous apparatus is rest.

Living on Bread. By Dr. Alexander Haig.

Metamorphopsia Varians. By Dr. William H. Dudley.

A Plea for Greater Uniformity of Strength and Exactness in Our Medical Armamentarium. By Dr. C. F. Wahrer.—The author believes that much evil results from the fact that many doctors do not study their texts on materia medica as assiduously as when they crammed for their diplomas, but they read trade journals and floating literature on semi-proprietary preparations. A more faithful study of our materia medica, the physiological actions of medicines, and their bearing on pathological lesions will cause, in a short time, much of this evil to pass away.

Standardization of Crude Drugs and Galenical Preparations. By Dr. Albert B. Lyons.—The practical questions which just now vitally interest the physician are those of the actual standards to be fixed in the new pharmacopœia. The settling of these questions we cannot afford to leave wholly in the hands of mere pharmacists. In the matter of tinctures, the author favors the plan of making the various tinctures of such strength that the ordinary dose would be in each case a certain quantity.

The Proper Management of the Tuberculous Lung. By Dr. Norman Bridge.—This article treats of the great value of immobilization of the

diseased side by means of numerous strips of adhesive plaster or some other apparatus, as a plaster-of-Paris splint or one made of some other material.

The Nature and Histo-pathology of the Epipharyngeal Tonsil. By Dr. Norval H. Pierce.

The Röntgen Rays in Differentiating between Osteomyelitis, Osseous Cyst, Osteosarcoma, and other Osseous Lesions, with Skiagraphic Demonstrations. By Dr. Carl Beck.

A Case of Relaxation of the Pubic Joints during Pregnancy. By Dr. Joseph B. De Lee.

A Case of Fatal Vaccination Infection which Resembled Appendicitis. Peritonitis following Inguinal Adenitis and Retrocæcal Purulent Infiltration. By Dr. F. H. Russell.

Medical Record, January 4, 1902.

The Trial, Execution, Autopsy, and Mental Status of Leon F. Czolgosz, Alias Fred Nieman, the Assassin of President McKinley. By Dr. Carlos F. MacDonald.—Published in the last issue of the *New York Medical Journal*.

The Post-mortem Examination of Leon F. Czolgosz. By Edward Anthony Spitzka.—Published in the last issue of the *New York Medical Journal*.

A Case of Facial Hemiatrophy. By Dr. Louis F. Frank.—This case is interesting mainly on account of its great rarity.

Medical News, January 4, 1902.

Sanitary Aspects of the Panama and Nicaragua Canals. By George A. Soper, Ph. D.—The author points out that both routes pass through a country which is extremely unfavorable to health; the rainfall on the Panama route, however, is distinctly less unfavorable to health. Considerations of soil, topography, and the nature of the engineering work to be done are also in favor of Panama. After construction, the difficulty of controlling health conditions along the line would be greater along the Nicaragua route. The shorter Panama route would cause passing vessels to be exposed to the possibilities of infection for a much briefer interval, and the danger of communicating diseases to and from the isthmus is fairly represented by the difference in the time which it would take ships to pass from ocean to ocean by the two routes. The likelihood of the canal becoming a disease focus, thus interfering with commerce, by requiring all healthy ports to quarantine against ships passing the isthmus, is much greater in the case of Nicaragua than Panama. Whichever canal is selected, extraordinary care will be required to maintain satisfactory health conditions during construction and after completion of the work. Plans and preparations in detail for the organization of an efficient sanitary and medical department should be made as early as possible, so that the measures necessary for the prevention of disease may be carried on in harmony with the engineering projects.

The Trial, Execution, Autopsy, and Mental Status of Leon F. Czolgosz, the Assassin of President McKinley. By Dr. Carlos F. MacDonald.—Published in the last issue of the *New York Medical Journal*.

The Post-mortem Examination of Leon F. Czolgosz. By Dr. Edward Anthony Spitzka.—Published in the last issue of the *New York Medical Journal*.

A Report of Forty-five Unpublished Cases of Hæmorrhage Treated by the Internal Administration of the Suprarenal Capsule.

Hysterical Hemiplegia Treated by Suggestion, with Report of a Case. By Dr. Henry Lyle Winter.—“Once let the medical profession do for a legitimate fee what the Christian Scientist now does for the half (or whole) of one’s fortune, and the public will not be slow to leave the impostors to take care of themselves.”

The Requirements of Modern Surgery. By Dr. J. H. Carstens.—The author concisely states these requirements as follows: (1) A patient brought to the highest state of resistance to microbic infection and made as clean as possible; (2) an operating room, preferably in a hospital where everything has been made thoroughly sterile, this includes anæsthetizers, assistants, and nurses; (3) a surgeon who has a mechanical hand and has received a long and thorough training.

On the Absorption of Alexins by Tubercle Bacilli. By Dr. P. A. Levene.

Boston Medical and Surgical Journal, January 2, 1902.

Cases of Rupture of the Spinal Ligaments. By Dr. Charles F. Painter.—An analysis of these eighteen cases would seem to justify the following conclusions: 1. Spinal ligaments, during life, may be ruptured without fracture or dislocation. 2. Nerve pressure symptoms may occur from a simple flexion of the vertebral column. 3. Recovery in these cases requires prolonged rest in a position which favors the repair of ligaments, and the effects of treatment speak more for the ligamentous rupture than for luxation or fracture. 4. The force which commonly produced the injuries is one which, *a priori*, would be most likely to produce ligamentous rupture, and is applied almost invariably from above downward upon a flexed vertebral column, or from below upward.

The Treatment of Placenta Prævia. By Dr. Frank A. Higgins.—The author believes that it is clearly demonstrated, on study of the conditions that, under modern methods of treatment and reasonable aseptic precautions, the mortality from placenta prævia is not over ten per cent., and under favorable circumstances, in skillful hands, it is below five per cent. In the author’s opinion, the only cases of placenta prævia in which Cæsarean section is ever justified are those at full term, with complete prævia, with a rigid os, and when seen before the occurrence of any severe or dangerous hæmorrhage, and with the mother and foetus in good condition.

Privileged Medical Communications. By Dr. Arthur H. Nichols.—As regards any amendment to our rules of evidence, the author believes that the whole matter of privileged testimony can be safely entrusted to the discretion of the presiding judge, with the understanding that, in the interest of public morality, it would be a distinct advantage if evi-

dence affecting the honor or social standing of individuals or families could be given in private before a referee.

Traumatic Apnoea or Asphyxia. By Dr. H. L. Burrell and Dr. L. R. G. Crandon.

Rendering First Aid in Railroad Wrecks. By Dr. Lucien Lofton.—The author believes that the conductor of a train, assisted by his crew, should carefully render whatever aid possible. The chief surgeon should have the men examined at stated intervals, and they should be taught to know when and how to stimulate patients, judging by their pulse and appearance. Every train should have its first-aid surgical chest, which should contain half-inch rubber tubing for stopping the flow of blood, bichloride and lint bandages, bichloride gauze, adhesive plaster, scissors, and one hypodermic set containing a supply of one-fourth grain morphine sulphate tablets, one-sixtieth grain strychnine nitrate tablets, one-one-hundred-and-fiftieth grain atropine sulphate tablets. The cry of the railroad surgeon is, “Death was due to shock”; but it is well to remember that hæmorrhage from lack of appliances and immediate attention will cause this condition in ninety per cent. of all cases.

Lancet, December 21, 1901.

The Practice of Medicine and Original Research.—The Purvis Oration. By Dr. J. F. Goodhart.

Modern Methods of Vaccination and their Scientific Basis. By Dr. S. M. Copeman.—The author gives the history of the so-called National Vaccine Establishment from its foundation, in 1809 under Dr. Jenner, to the present day. In 1891 the author discovered and introduced the glycerinization of vaccine pulp for the purpose of the inhibiting of extraneous micro-organisms without injuriously affecting the specific contagion of vaccinia. A brief description is given of the methods at present employed by the government in the production, preparation, and storage of vaccine lymph, and of the work performed by the staff. A warm solution of boric acid is the best solution for use in disinfecting the skin of the arm, and the best and simplest form of instrument is the ordinary triangular-headed surgical needle. The lymph should be blown out upon the area of skin which has been cleaned and disinfected. The skin, put slightly on the stretch, is then scarified through the droplet of lymph. In this way the corium is thoroughly opened up, and the emulsion brought into intimate relation with the cells of the true skin. The author reports the results of a series of experiments which show that, whereas human small-pox material could not be got to “take” directly on the calf, nevertheless results typical of ordinary vaccination were obtained when the strain of lymph, after inoculation with it of a series of monkeys, was again transferred from the inoculation vesicles on the monkey to the epidermis of the calf.

Observations on the Ætiology and Morbid Anatomy of Tuberculous Meningitis. By Dr. E. Cautley.—The author’s paper is based on the observation of twenty-seven cases of tuberculous meningitis coming under his care, all of which came to the

autopsy table. His deductions as to the ætiology and pathology of the disease are as follows: 1. *Age distribution.* No less than 22 of the 27 cases occurred during the first five years of life, and only five during the second five years. The distribution for the first five years was fairly equal. Neither sex predominated—there were 14 males to 13 females. 2. *Influence of heredity.* In 22 cases there was no history of phthisis in the family. In only 1 of the remaining five cases was the mother stated to be affected. 3. *Injury as an ætiological factor.* In only one instance could injury be elicited as the exciting cause of the disease. 4. *The channel of entrance of the bacillus into the system.* The post-mortem evidence may be summed up shortly as proving that the respiratory tract is the great channel of infection. The danger from swallowing tuberculous cow's milk has been greatly exaggerated. There is no evidence at all strongly in favor of infection of the blood stream through the intestinal tract. 5. *Evidence derived from the diet of the patients.* Many of the patients were nourished from the breast alone, or on condensed milk. These facts suggest that cow's milk is not a very virulent source of infection. 6. *The state of the brain as indicative of the prospect of operative treatment proving beneficial.* Operative treatment would only relieve pressure in about one third of the cases, and even in those it would do little or no good on account of the softening which is so often present and which is dependent upon deficient blood supply rather than on an excess of fluid. 7. *Classification.* It is possible to divide the cases on anatomical grounds into three groups: (1) Simple tuberculous meningitis, in which the disease is limited to the brain (very rare); (2) tuberculous meningitis secondary to a localized tuberculosis with little dissemination; and (3), general miliary tuberculosis—cases in which the meningeal symptoms bear a comparatively unimportant relationship to the disease.

Ovariectomy in Pregnancy: Three Recent Cases. By Dr. J. B. Hellier.—The author reports three cases of ovariectomy for cystic tumor performed in consequence of pregnancy. All three made good recoveries, two bearing living children at term; in the third case the child was still born.

Ovariectomy is now recognized as the best treatment for almost all cases of pregnancy complicated by ovarian tumor, and the earlier it is done the better. About one fifth of the cases abort. The best results for the child are obtained between the third and fourth month. Even double ovariectomy has yielded good results.

A Case of Epidemic Diarrhœa in an Infant Treated by Irrigation of the Bowel. By W. B. Bennett, M. R. C. S.

Some Observations on Certain Trophic Hindrances to Bony Growth. By H. Bigg, F.R.C.S.

British Medical Journal, December 21, 1901.

Remarks on the Bacteriological Examination of Potable Waters from the Public Health Point of View. By A. C. Houston, M. B.—The conclusions reached by the author are as follows: 1. Knowledge is required, not so much as regards those microbes peculiar to pure water, but rather as regards those which are adventitious and pos-

sibly dangerous. 2. As sewage is the most common and dangerous source of the pollution of potable water, further knowledge is required of the bacteria characteristic of sewage. 3. The question of the relative abundance of micro-organisms of different sorts in pure water and sewage has hitherto been almost entirely neglected by bacteriologists. 4. This question of relative abundance is most important; the biological distinction between pure and impure water is so great as to be almost inconceivable to render the adoption of stringent bacteriological standards unnecessary, and to allow the bacteriologist to detect in a water the presence of polluting material in quantity so small as to be beyond the reach of chemical analysis. 5. Streptococci, the colon bacillus, and the *Bacillus enteritidis sporogenes* are altogether absent or relatively so from pure waters. 6. The above-mentioned organisms are present in crude sewage in the greatest abundance. 7. The bacteriological tests far surpass in delicacy any chemical tests. 8. A stage may be reached in the pollution of water by sewage when the contaminating material is so small in relation to the bulk of water as to be inappreciable by chemical tests and yet to yield to bacteriological tests unequivocal evidence of gross pollution with microbes of intestinal origin. 9. The presence of streptococci indicates extremely recent pollution, of colon bacilli less recent pollution, of an animal sort. The presence of *Bacillus enteritidis sporogenes*, however, is not necessarily due to animal evacuations. 10. Streptococci and the colon bacillus are either relatively or entirely absent from virgin soils, while present in abundance in soils recently polluted with animal matters. 11. The presence of streptococci in any number in a water supply indicates that the antecedent conditions could hardly have been of so unfavorable a character as to destroy the vitality of seemingly more hardy microbes; for example, the typhoid bacillus. 12. Organic matter *per se* is harmless; it is the bacteria likely to be associated with the organic matter that constitutes the element of danger. 13. Chemical analysis cannot show the presence of organic matter in one drop of sewage; yet a like quantity can be shown bacteriologically to harbor objectionable germs in great abundance. 14. It is not necessary to demonstrate in a polluted water supply the presence of definitely pathogenic microbes to prove that there is danger in drinking such water. 15. It is sufficient to show that microbes indubitably of intestinal origin are present to condemn that water; such microbes may be accompanied at any time by pathogenic micro-organisms. 16. The bacteriologist can show that, between a pure water and a water contaminated even with minute traces of excremental matter, there exists a biological difference not only of degree but of kind. 17. Under like conditions the chemist may fail to appreciate the pollution altogether. 18. Chemical methods are based on an assumed relationship which may or may not exist between the amount of organic matter and the number and character of the associated bacteria. 19. Chemical analysis of water should in the future occupy a secondary position as a means of judging the purity of water supplies. 20. Until these facts are recognized and acted upon, progress in the prevention of water-borne disease must needs remain unsatisfactory.

On Rubella, Scarlatina, and "Fourth Disease."

By Dr. P. W. Williams.—The questions here discussed by the author are in brief as follows: Are there two types of rubella, namely, rubella morbillosa and rubella scarlatinosa, or are those two types in reality two distinct diseases, the one not protecting from the infection of the other? Does scarlatina exhibit departures from its normal course so as to present a group of symptoms indistinguishable from Dukes's "fourth disease"? His conclusion, based upon observations made in a number of epidemics, is that when it can be shown that an attack of "fourth disease" protects the patient from rubella and yet occurs in those who have previously had scarlatina, the evidence of its being a distinct exanthem will certainly be very convincing, but hitherto such evidence is lacking.

Post-scarlatinal Diphtheria and Rhinorrhœa and Otorrhœa. By Dr. E. H. Williams.—The author concludes as follows: 1. That it is advisable to cultivate all cases of rhinorrhœa, other than acute, and otorrhœas in scarlet fever cases, especially in hospital practice. 2. That bacilli when found at all resembling the diphtheria bacillus, must, in the present stage of our bacteriological knowledge, be regarded as a modified variety of that organism. 3. That systematic isolation of these rhinorrhœas and otorrhœas is not only justified, but advisable. 4. That such isolation may reasonably be expected to reduce the post-scarlatinal diphtheria incidence. 5. That it is an open question whether such mild cases require antitoxine treatment. 6. That these discharges, unassociated with sore throats or symptoms, and therefore easily overlooked, may be the cause of the often unaccountable outbreaks among school children.

Pneumococcus Arthritis, with Notes of Seven Cases. By Dr. N. Raw.—From an observation of a large number of cases of pneumonia, the author is convinced that the pneumococcus is capable of producing very serious lesions in other parts of the body than the lungs. Arthritis as a complication occurred in seven out of 817 cases of pneumonia—equal to about one per cent. Of these seven cases, four patients recovered and three died. In all seven cases the pneumonia was right-sided, and the joints affected were all on the right side. The joint affection may either precede the lung symptoms, or follow the crisis, or develop intercurrently. The only treatment is evacuation of the pus if it can be reached. It is possible that many isolated cases of synovitis or arthritis occurring either during or after an attack of pneumonia, or even independently of pneumonia, may be due to the pneumococcus.

Case of Anthrax in which the Infection Arose from a hitherto Undescribed Source. By J. C. Wilson, L. R. C. P.—The author reports a typical case of anthrax occurring in a "picket maker," aged twenty-six years. A "picket" is that part of a weaving loom which, having a hole pierced in it, receives into that hole the metal point of the shuttle. Such pickets are made of untanned hide, such hides coming from India and South America. It was as a handler of such hides that the patient had been working for ten years when he contracted the disease. This was the first case to occur in the manufactory.

Lyon médical, December 1, 1901.

Inoculation of Herbivora with Human Tuberculosis.—M. S. Arloing has succeeded in these experiments in inducing typical tubercle tissue with the presence of the tubercle bacillus. The experiments are noted in detail.

Treatment of Chronic Prostatic Gonorrhœa. By M. Carle.—(*Continued article.*)

Movable Kidney with Renal Crises.—M. Adenot relates a case in which ureteral catheterization completely and immediately relieved the symptoms and resulted in a marked amelioration of the general condition.

Gazette hebdomadaire de médecine et de chirurgie, November 28, 1901.

Facial Herpes following Intra-vertebral Injection of Cocaine.—M. C. Achard and M. C. Laubry narrate three cases of this kind, in one of which the skin lesion appeared after the injection of eucaïne. The eruption appeared in each case in about forty-eight hours and did not bear other marks to make it reasonable to believe that it was purely a toxic eruption.

Intra-spinal Cocainization as a Method of Inducing Labor.—M. L. J. Audebert has attempted in two cases to induce labor by the intra-arachnoid injection of cocaine. In both cases, the method was a total failure.

Münchener medicinische Wochenschrift, November 26, 1901.

Diagnosis of Appendicitis and Inflammation of the Cæcum.—Professor H. Curschmann says that when an appendicular inflammation is purulent, or is even suspected of being so, it should be turned over at once to a surgeon. A leucocytosis is one of the constant and striking signs of a perityphlitis and appendicular inflammation. If the process is accompanied by no hyperleucocytosis, or only by a mild one, it may be generally assumed that the exudate is not suppurative and that the course of the case will be mild. After the lapse of considerable time, a hyperleucocytosis will always be found. (*To be continued.*)

Contributions to Renal Surgery. By Dr. H. Lindner.

Influence upon Symptoms of the Menopause by Ovarian Extract.—Dr. A. Flockemann reports twenty-eight cases, in six of which there was a great improvement in women whose two ovaries had been removed and who suffered from the so-called "menopause symptoms." In four cases, there was marked improvement, in eight but little, and in nine none at all. The author concludes that the ovarian preparations, while not certain of relieving these symptoms in castrated women, have an action in a certain number of cases that makes it worth while trying, especially as the preparations are harmless. He emphasizes the desirability of preserving part of an ovary, if possible, at the time of operation, to prevent the appearance of these symptoms.

Septicæmia and Amputation.—Dr. Heinrich Wolff says that the indications for amputation are: 1. When, despite the widest opening of a phlegmon,

it continues and spreads and causes constitutional symptoms which threaten the life of the organism. 2. When the process continually lights up anew and the general condition becomes worse and worse, despite the apparent closing off of the products of the putrid wound. 3. When the extremity has become functionally useless through great destruction of bone and soft parts, together with necrosis of muscles and tendons, purulent arthritis, etc., and when, under these conditions, amputation will save the patient months of illness. He reports illustrative cases.

Cancer and Malaria.—Professor Kruse, from a statistical study, reaches the conclusion that, in climates where malaria is prevalent, cancer is not often found. He does not attribute this to the presence of malaria, but rather to an immunity of the tropical races to cancer.

Tetanus after Injections of Gelatin. By Dr. F. Kuhn.

Epidemic Dysentery in a Fœtus. By Dr. Marckwald.

Riforma medica, October 11, 1901.

The Relation between the Increased Resistance of the Blood and the Number of Red Blood Cells that Stain with Methylene Blue in the Fresh Condition in Severe Anæmias. By Dr. Adriano Ceradini.—Poggi, in 1898, described a new variety of blood-corpuscles, namely, red blood cells which stained in the fresh state with methylene blue, and which were said to occur in severe forms of anæmia. These cells are supposed to be the youngest forms of blood cells and to enter the circulation prematurely, before they are fully developed. According to Poggi, these globules do not possess a marked degree of resistance and are easily destroyed. Viola, on the other hand, showed in 1894 that the presence of young blood elements increased the resisting powers of the blood. The author performed a series of experiments in order to determine the relation of Poggi's corpuscles to the resistance of the blood. By the resistance of the blood is meant the resistance of the red blood cells to agents which deprive them of hæmoglobin. The author found that there was a very constant relation between the resistance of the blood and the number of Poggi's corpuscles, and that an increase in the number of these cells meant an increase in the resistance of the blood. This increase, however, is probably due to the fact that in these cases of grave anæmia there is an active formation of new cells, and these, more mature than Poggi's corpuscles, are more resistant than the "blue cells" of Poggi, so that their presence increases the resistance of the blood. The increase in resistance, therefore, is coincident with the increase of Poggi's corpuscles, but not dependent upon it.

October 12 and 14, 1901.

Cellular Inclusions, Cellular Degenerations, and Intracellular Parasites in Malignant Tumors. By Dr. Francesco Sanfelice.—Recent studies on the ætiology of cancer show that the authors do not distinguish clearly the intracellular parasites recognized as blastomycetes by Plimmer, Leopold, and

the author himself. The parasite has been therefore confounded with cellular degenerations and inclusions. Thus, Nicols, who obtained negative results with inoculations of the blastomycetes described by Sanfelice into guinea-pigs, undoubtedly mistook such degenerations for parasites. Borrel asserted in a recent article that all the parasites described by Nils, Sjöbring, Sondakevitch, Foa, etc., were atypical forms of cellular elements occurring in malignant tumors. This criticism is not to be considered seriously, as the structures which Borrel considered as parasites are nothing else but misshapen cells, and in appearance resemble only the parasites described by the authors named. The statement of Borrel that he had not seen the parasites in the interior of epithelial cells, is opposed by the results of Plimmer's and Leopold's investigations, which show that Sanfelice's parasite occurs intracellularly.

The results of Gaylord's work are of some importance, but they only confirm those obtained by Plimmer. Gaylord obtained an epithelial growth in the lung of a guinea-pig which had been inoculated with fluid from a cancer taken from the peritonæum of a man. The present author asserts, however, that Gaylord did not see, as he has affirmed, the parasites of Plimmer in this growth, but simply degenerated forms of cells. This is proved by the fact that Gaylord says that these parasites are not blastomycetes, for on inoculating them into other animals he found that they bred entirely different forms. Gaylord thinks that the parasites which he saw were protozoa, simply because they resembled the parasites of vaccine injected into the cornea of the rabbit. It has not been completely demonstrated as yet that the latter parasites are protozoa.

October 15, 1901.

A Case of Vaginal Hysterectomy for Epithelioma of the Cervix in the Puerperium. By Dr. Ettore Bidone.—In three cases the apparent benignity and small size of the growths were such that they were taken for myomata. The author emphasizes particularly the necessity of making a histological examination in such cases, in spite of the fact that the growth is apparently benign. These growths recur with great rapidity, especially in the puerperium. In the case reported here there was a recurrence after about a year.

Gazzetta degli Ospedali e delle Cliniche, December 8, 1901.

The Treatment of Tuberculosis. By Professor E. Maragliano.—The author sums up the clinical and experimental evidence concerning the efficiency of his anti-tuberculous serum, as it appears in 182 publications devoted to the subject. During the past nine years the scientific basis of antituberculous serum therapy has been laid, and the numerous observations of cases have shown what can be expected of this form of treatment. Maragliano's serum is now no longer manufactured by a commercial house, but by a scientific institution, the new Institute for the Study of Tuberculosis and other Infectious Diseases established in Genoa. In reviewing the various methods of treatment in tuberculosis, the author says that the coal-tar derivatives have no antitoxic action and have no effect upon

tubercle bacilli in the proportions in which these drugs occur in human blood. The results obtained with these drugs *in vitro* must not be taken as a standard, but it must be shown experimentally that the animals or patients receiving them are enabled to resist effectually the toxine of tuberculosis and the bacilli of this disease. This is the only standard of efficiency to be considered. Regarded in the light of this standard, not one of the remedies used against tuberculosis has shown this antagonism against the tubercle bacilli. It is, however, an undeniable fact that many patients have been benefited by the use of these remedies, particularly by creosote and guaiacol. This beneficial effect is due to the action of these remedies against the accessory infections which exist in tuberculosis and which often dominate the clinical expression of the trouble. The truth of the principle, first enunciated by the author many years ago, that without the accessory infections a case of tuberculosis runs a benign course, is daily receiving stronger corroboration by clinical experience. The severe pulmonary lesions, such as bronchopneumonia, are produced by the invasion of the air passages by pyogenic bacteria. The antitoxic serum has no effect upon these pyogenic germs, while the coal-tar products act against these organisms. The latter remedies, therefore, are useful in improving the condition of tuberculous patients, but it must be remembered that, after the improvement, the patients are and remain just as tuberculous as they had been before. On the other hand, hygienic measures, such as overfeeding, sojourn in a proper climate, baths of pure air and of light, have a positive effect against tuberculosis because they help the animal organism to develop antitoxines. The antituberculous serum acts in the same manner and is the only substance which has a demonstrable specific action against tuberculous.

A New Method of Laryngotomy for Subglottic Laryngitis. By Professor Giulio Masini.—In the case reported by the author, gradual dilatation of the glottis by means of Schroetter's cannula and intubation, were tried without success, and the subglottic stenosis rapidly increased, giving rise to accesses of dyspnoea which threatened life. The patient improved somewhat after a tracheotomy and mechanical dilatation was again attempted without success. A radical operation was then decided upon, laryngotomy performed according to the usual method, and a subglottic swelling removed by means of a series of properly shaped spoons. The swelling was so hard and there was so much danger of wounding the crico-arytænoid joints, that the mass was not removed as thoroughly as was desirable. The edges of the thyroid cartilage were then sutured accurately into place. A slight oedema and pain on swallowing followed the operation, but the patient recovered both vocal powers and free respiration.

Vratch, November 24 (December 6, New Style), 1901.

Graphic Methods of Recording the Variations in Blood Pressure in Man. By Dr. I. M. Levaschoff.—The author describes the various appliances used in clinically recording blood-pressure curves, and devotes particular attention to the sphygmograph invented by Franc. This apparatus

consists of a system of levers, one of which bears the recording-point and another a small metallic disk fixed at right angles to a steel shaft which is attached to the lever. The levers are so mounted that when the disk is placed upon the first joint of a finger the blood pressure, as expressed in the pulsations of the digital artery, causes vibrations in the system of levers which magnify the oscillations of the point. Mosso, with his plethysmograph, attempted to study the variations in blood pressure independently of those of the heart action of respiration. According to the present author, Mosso's instrument is not applicable at the bedside on account of its complicated constructions and of the necessity of using fluids in which the limb is immersed. (*To be continued.*)

On the Effect of Antipyrine on the Animal Organism. By Dr. E. Soudzilovsky (*concluded*).—The evidence of the author's experiments is the basis for the following conclusions: 1. Antipyrine markedly increases nitrogenous metabolism. 2. It increases the absolute quantity of urea. 3. It increases the quantity of urine to a considerable extent. 4. In staphylococcus infection, and also probably in other infectious febrile diseases, antipyrine may evoke marked pathological changes in the liver and in the kidneys, particularly in the latter. 5. In fever antipyrine possesses marked toxic properties. It should therefore be administered with great caution.

On the Ætiology and Pathogenesis of Eczema. By Dr. G. A. Kiuzel.—(*A preliminary communication*).—The causes and pathology of eczema are not as yet well established. While the French school of dermatologists, including Reyer, Bazin, and Villan, maintain that a vesicle of characteristic form and mode of development, having a reddened base, is the essential clinical attribute of a true eczema, those of the Vienna school agree with Wilson, Hardy, and von Hebra, who say that eczema includes a series of dermal inflammations more or less related to the vesicular type, and consider the variability of the lesions as one of the characteristics of eczema. The ætiology of eczema is still in a state of confusion, but the latest theories ascribe its origin to the presence of micro-organisms. An investigation of the bacteriology of eczema conducted by the author showed that in the diagnosis of eczema there was no absolute clinical standard. He believes that eczema may be called cattarrh of the skin. Eczema should be distinguished as a separate disease from the eczematoid affections of the skin such as seborrhœal eczema, impetigo, etc. Eczema cannot be called a constitutional disease in the true sense of the word, but there can be no doubt as to the connection of eczema with disorders of the internal organs. It is sometimes the result of intoxication and self-intoxication of the organism, especially on the part of the digestive tract. Disturbances of the nervous system and trophic changes are connected with the causes of eczema. The specific germ of eczema has not been demonstrated, for the skin of eczematous patients offers a rich medium for various bacteria, among which those most constantly met with are the *Staphylococcus albus* and *flavus*, and the *Streptococcus pyogenes*. Fresh initial lesions (vesicles) of eczema are sterile. The germs found in the older lesions are probably of secondary origin. In-

oculations of the staphylococcus into the skin produce only occasionally impetigo simplex, but not eczema.

On Intra-uterine Injections. By Dr. B. A. Liboff (*concluded*).—In speaking of the influence of intra-uterine injections upon the reflex hæmorrhage occurring during the change of life, the author states that he has not obtained any favorable results in a single case among seven in which he has used this method. In some of these cases the treatment produced an increase of the hæmorrhage. In beginning myomata this method only palliates and has no effect upon the regression of the growth. The treatment of salpingitis by this means is not only useless but dangerous, although Grammatikati considers it efficient as a palliative method.

Summing up the value of intra-uterine injections, the author says that the results by this method are not encouraging. The temporary climacteric described by Grammatikati which these injections produce is a double-edged tool. On the one hand it gives relief from some forms of uterine disease, but, on the other hand, it also causes changes and even atrophy in the ovaries, especially if the treatment is prolonged. It must be noted that a prolonged course of treatment is necessary in many cases. The treatment reacts upon the whole organism in an injurious manner when, as is often the case, the temporary climacteric lasts for so long a period as five or six months. The author concludes that the intra-uterine injection of iodine and carbolic acid can occupy only a limited range of usefulness in gynæcology.

Miscellaneous.

Polyorrhymenitis.—Dr. J. C. Verco (*Australasian Medical Gazette*, September 20, 1901) after referring to Dr. Frederick Taylor's comprehensive lecture (*British Medical Journal*, 1900, vol. ii, p. 1693), says that polyorrhymenitis is not really a disease, but only a group of symptoms; and the causing disease has in every instance still to be determined after the group has been recognized.

The serous membranes included under this term are the pleuræ, the pericardium, and the peritonæum. The affection may be acute, sub-acute, or chronic.

The causes of the acute form are (1) the diplococcus of pneumonia, causing pleurisy (generally with pneumonia) and pericarditis, or empyema and pericarditis; (2) the streptococcus or staphylococcus of pyæmia and septicæmia, causing double empyema and purulent pericarditis, or purulent peritonitis; (3) the rheumatic poison, causing pericarditis and pleurisy; (4) the tubercle bacillus, causing pleurisy and pericarditis, or pleurisy and peritonitis. This more frequently sets up a sub-acute or chronic affection than an acute one.

The sub-acute or chronic form often begins in one sac, but, after an interval, varying from a few weeks to some months, invades the others. The sequence of invasion, in order of frequency, is said to be (a) the peritonæum, then the pleuræ, especially the right; (b) the pleuræ, then the peritonæum; (c) one pleura, then the other; (d) one pleura (generally the left) then the pericardium; (e) one pleura, then the peritonæum, then the other pleura.

Picchini and the Italians say that these sub-acute and chronic forms are practically always tubercu-

lous. Taylor confesses that they often are, but asserts that, in many cases, neither during life nor after death is there any proof of the presence of tubercle.

The author then reports four cases.

The diagnosis of polyorrhymenitis may be regarded as two-fold—namely, its separation from secondary non-inflammatory serous effusions, and the determination of its cause.

Effusions into one or both pleuræ, the pericardium, and the peritonæum, are quite common events in advanced disease of the heart, of the kidneys, and of the liver. The discovery of any of these complaints, sufficiently severe to occasion such effusions, distinguishes them at once from polyorrhymenitis.

The determinations of its cause may be very easy or very difficult. In the acute forms a remembrance of the possible causes—namely, pneumonia, pyæmia, rheumatism, and tubercle, may be sufficient to indicate the actual origin. The first would be diagnosed by the accompanying inflammation of the lungs; the second by rigors, arthritis, an evident explanation—*e. g.*, a wound; the third by joint affection without rigors, acid sweating, endocarditis, previous attacks of rheumatism; and the fourth perhaps by some external tuberculous manifestation or by pulmonary affection.

In the more chronic forms differentiation may be at times impossible. If the dictum of the Italian school is accepted, that all sub-acute and chronic cases are tuberculous, the matter is absolutely simple. But if we do not give in our adhesion to this theory, can we distinguish between the tuberculous and the non-tuberculous forms? Pyrexia and emaciation favor the supposition of tubercle, but are not data sufficient to establish such a diagnosis: for the fever may subside, the health and strength be regained, and the effusions completely disappear. If there is persistent diarrhœa, even though it be mild, the probability of tuberculosis is greater. If there are physical signs of apical pulmonary disease, the tuberculous nature is almost, if not quite, certain.

The author suggests a slight extension of the term polyorrhymenitis. This usually includes only the pleuræ pericardium and peritonæum. But the arachnoid membrane of the brain and cord is a kind of serous sac; and so a tuberculous meningitis, associated with an ascites, would fall under this heading. This recalls Dr. Marten's case [reported] of ascitic peritonitis with subsequent death from meningitis. So we may have diplococcal meningitis complicating a pleuro-pneumonia.

The recognition of the group of symptoms does not aid much in distinguishing the various causative diseases from one another, and hence is of very little value, especially in the acute forms. In the sub-acute or chronic it may be a convenience and of some advantage by preventing us from concentrating our attention too exclusively upon one of the combined inflammatory effusions to the relative neglect of the others, and so from committing errors of diagnosis such as ovarian tumors, malignant disease. It may also save us from too gloomy and unfulfilled prognoses; for we have learned the possibility of complete recovery from these primary combined effusions, even without "letting daylight into them" by operative interference.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

*Fourteenth Annual Meeting, Held in Richmond,
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The President, DR. MANNING SIMONS, of Charleston, in the Chair.

(Concluded from Vol. lxxiv, page 1173.)

Suprapubic Prostatectomy.—Dr. FLOYD W. McRAE, of Atlanta, followed with a paper on this subject in which he advocated early resort to this method of treating enlarged prostate rather than palliative measures or the seemingly simpler operations of suprapubic cystotomy, vasectomy, orchidectomy, and the Bottini operation. His reasons were that the seemingly simpler operations were followed by a mortality disproportionate to their magnitude, that the relief obtained from them were frequently slight and temporary, and that the pathological conditions were not infrequently aggravated, especially by the Bottini operation. He reported three complete prostatectomies done since May, 1901. The point of originality alleged for the operation was the method of draining. He put in a retention catheter through the urethra, and closed the bladder and overlying tissues snugly around a parachute drainage-tube made of a soft-rubber rectal tube with a single opening at the end, by making four longitudinal slits beginning about a quarter to three eighths of an inch from the end of the tube, each slit about an inch long and the slits equidistant from each other, around the circumference of the tube. The four sections were then approximated above and below by means of a small rubber band put through in the form of a Halsted suture with a large needle. As these sutures were drawn taut, the sections were approximated and the ends flared out somewhat like a parachute. When the bladder was closed, this tube was drawn up so that the flared portion was in firm contact with the anterior bladder wall. The overlying tissues were then closed snugly around the tube and one silkworm gut suture was put through the tube flush with and through the skin to hold it in position. The flaring of the tube enabled the surgeon to draw it firmly against the anterior bladder wall, and by means of the suture put through it and the skin it was prevented from protruding too far into the bladder, avoiding the disagreeable bladder contraction that always took place if the tube was too long. By this method of drainage the outer ends of the catheter and the tube were then put into a urinal, which was kept between the legs when the patient was lying on the back, or in front of the thigh when the patient turned from side to side. The advantages alleged for this method of drainage were that the patient was kept absolutely dry and was allowed to turn freely in bed, lying on the back or either side.

Median Perineal Prostatectomy; Total Removal of the Prostate Gland.—A paper with this title was read by Dr. ALEXANDER HUGH FERGUSON, of Chicago. He referred to the work of Nicoll, Alexander, Syms, and von Dittel, raising objections to each of the methods followed by those gentlemen.

He then proceeded with illustrations and the exhibition of instruments to describe his own operation. The patient was put to sleep with chloroform, and placed in the exaggerated lithotomy posture. The prostatic depressor was inserted into the bladder through the urethra, and handed over to a trusty assistant. A sponge was pushed into the rectum to prevent the escape of liquid feces. The middle finger of the left (gloved) hand was then introduced into the rectum and pressed against the urethra at the junction of the membranous and prostatic portions; a long, narrow-bladed knife was passed into the perinæum through the raphé in the median line, two inches in front of the anus, until it reached nearly to the tip of the finger in the rectum, and with one stroke all the structures were cut through to the prostate, without injury to the urethra, prostate, rectum, or anal sphincter. The surgeon should refrain from doing this in his first cases. The skin incision was now enlarged, if necessary, for the introduction of two fingers. Suitable retractors were placed, one on each side, in the wound, by blunt dissection the prostate was exposed, and with the depressor in the bladder it was forced into the perineal wound. The capsule was opened with knife or scissors in a transverse direction, sufficiently to admit one or two fingers. The retractors were placed within the capsule. This was important because traction made on them dragged the gland still farther into the wound and held it firmly while enucleation and extirpation were being performed. It had been found that by traction from below and depression from above the prostate was fixed within easy reach for its entire removal. No effort was made to save the posterior portion of the prostatic urethra. Indeed, injury to it could not be avoided when the entire gland was removed. While *morcellement* was in progress, it was advantageous to advance the retractors within the capsule and introduce the middle finger into the bladder. The forceps could be rapidly thrust between the two fingers to the object to be removed by it, without any danger to the surrounding structures, for when the instrument was closed, its end was perfectly smooth and round. The lateral lobes could be reached to any extent without damaging the mucous membrane of the bladder, and projections of the middle lobe into the bladder were detected and removed without difficulty. The bladder was flushed very thoroughly with a weak antiseptic solution. A large stream of water must be used, for the ordinary irrigating toy generally used only did harm. Any water that was in the bladder and wound was mopped out with gauze and a drainage-tube surrounded with iodoform gauze was introduced through the wound into the bladder. Two horsehair stitches closed the part of the skin wound not occupied by the tube, and at the same time prevented the gauze from coming out too soon. The sponge was then removed from the rectum and a comfortably firm dressing was placed over the perinæum and held by a T bandage. Now a long rubber tube was attached to the external end of the drainage-tube, and the operation was finished. If the patient's urine had been scanty or should he show depression or shock, it was better to introduce two or three pints of normal salt solution, at a temperature of not less than 115° F., beneath the skin,

while he was still in the operating room, than to wait until he was taken to his bed.

The advantages of the operation were that it was the most direct route to the organ, and that the prostate could be removed without injuring any important structures; that it was easily performed; that the removal of the gland piece by piece enabled one to work through a small opening and prevented the bruising of the surrounding parts by the finger which attended the removal of the gland *en masse* through the perinæum; and that hæmorrhage was avoided so long as one was careful to work within the capsule. The hæmorrhage in suprapubic prostatectomy or in the combined method was often very alarming. On one occasion the writer had had to leave pressure forceps on blood-vessels and keep the bladder packed tightly with gauze for twenty-four hours. The patient narrowly escaped death from hæmorrhage and sepsis. Sepsis and intoxication from pus and fetid urine coming in contact with the prevesical tissues and wounded and raw surfaces within the bladder were great sources of danger in the suprapubic operation. The bladder might be opened in two stages, it was true, and the prevesical space thereby greatly protected; but the traumatism of the bladder over the prostate, even though done with a cautery knife, furnished an opportunity for sepsis. Perineal drainage after suprapubic prostatectomy was not so complete as when the prostate was attacked from below. It had been found by the writer that the danger from septicæmia was not at all prominent after perineal prostatectomy. There was less danger of uræmia. The operation took a shorter time, the anæsthesia having therefore less effect upon the kidneys, and a minimum opportunity for sepsis made it easier for the kidneys to perform their functions. Uræmia was always to be dreaded, irrespective of the operation performed. When pyelonephritis or renal sclerosis was present, the shock and the anæsthetic largely contributed to the onset of uræmia. The suprapubic operation was accompanied with far more shock than the author had found following perineal prostatectomy.

Foreign Bodies in the Œsophagus.—Dr. JOHN W. LONG, of Salisbury, N. C., in a paper thus entitled, stated that this accident occurred usually in children and lunatics. It was always possible when a patient was under an anæsthetic, and even food might become impacted in the œsophagus. The presence of a stricture, pouch, or malformation increased the liability to this accident. A foreign body in the œsophagus carried with it both immediate and remote dangers. If lodged high up, there would be dysphagia, retching, and sometimes suffocation, as in a case seen by the writer two years before, in which an inch screw entered point downward the upper end of the œsophagus of a three-months-old infant and impinged upon the trachea. When the foreign body was lodged lower down, the danger was more remote and less easily remedied. Unless removed, foreign bodies almost invariably penetrated or ulcerated into some important structure, such as the pericardium, the aorta, the mediastinum, or the pleura. The longer the object remained *in situ* the greater the danger incident to its removal.

After calling attention to the special anatomy of the œsophagus, the author mentioned the different

methods of removing foreign bodies from it. He condemned emetics, except in cases where the nature of the object made it not apt to do violence to the œsophagus. Many objects were removed by manipulation through the mouth or pushed into the stomach. Unduly prolonged or rough manipulations through the mouth were dangerous, even more so than œsophagotomy.

The author reported two cases in which a penny whistle was lodged low in the œsophagus, opposite the fourth dorsal vertebra, in children four and seven years old respectively. In both instances the foreign body was removed by external manipulation, although it was well down within the intrathoracic portion of the œsophagus. Removal of the foreign body was done under chloroform. He also reported one case of an open safety-pin lodged low in the œsophagus of an infant forty-six days old. The pin had been *in situ* eighteen days, but by means of œsophagotomy it was easily removed. In this case the baby was put immediately to the breast. All the patients recovered. In the three instances metallic substances were discovered by means of the x ray.

Gunshot Wound of the Abdomen.—Dr. JOHN C. WYSON, of Clifton Forge, Va., reported a case in which a 0.38-calibre ball entered about three quarters of an inch above the left anterior superior spine of the ilium. The patient was anæsthetized fifteen hours after receiving the wound, having been transported a long distance. The author first enlarged the wound in the skin, and with his finger as a probe followed the track of the bullet until he felt the opening in the peritonæum. He then made an incision in the median line below the umbilicus, which was afterward extended from a little above the navel to near the pubes. The omentum was very short, not reaching as low as the umbilicus, and the coils of intestines presented immediately under the incision. The first knuckle picked up showed two perforations, which were immediately cleansed and closed with Lembert sutures, using fine chromicized catgut, and he continued to close the openings as he came to them, until he had sewed up nine perforations. Following the gut still farther, he found a portion seven or eight inches in length in which there were six more perforations. As some of these openings were very close together, he feared that in repairing them he might constrict the gut or that there might be subsequent sloughing. He therefore excised that portion of the intestine, doing an end-to-end anastomosis by means of a Murphy button. Recovery was uninterrupted.

Penetrating Wounds of the Abdomen.—Dr. E. D. FENNER, of New Orleans, gave the histories of six laparotomies for penetrating wounds of the abdomen and statistical tables of 152 cases of operation at the Charity Hospital. The records of the hospital showed that from January, 1892, to January, 1901, 152 laparotomies had been performed for penetrating wounds of the abdomen, with 87 deaths, a mortality of 57.23. The table showed 105 cases of gunshot and stab wounds of the abdomen, with visceral injuries, followed by operation, of which 74 were fatal, a total mortality of 70.47 per cent. Of these 105 cases with injuries of the viscera, 96 were gunshot wounds, of which 71 were fatal, a mortality of 73.95 per cent.; and 9 were stab

wounds, of which 3 were fatal, a mortality of 33.33 per cent. In spite of the high rate of mortality shown by these tables, the author did not think they should discourage the operation. A mortality of 73.95 per cent. from gunshot wounds with injury of the hollow viscera meant, in his opinion, that 26 per cent. of these patients had had their lives saved by the operation; and a death rate of 33.33 per cent. from stab wounds, with the bowels cut, meant that two thirds had been saved from certain death.

Nephro-ureterectomy.—Dr. J. WESLEY BOVEE, of Washington, D. C., reported two cases. (To be published.)

The Use of Adhesive Straps for the Prevention of Laceration of the Perinæum in Forceps Delivery was advocated by Dr. GEORGE H. NOBLE, of Atlanta. He also described a method of removal of fibroid tumors through the vagina by continued spiral incision.

Hepatotomy for Biliary Obstruction.—Dr. W. E. B. DAVIS, of Birmingham, Ala., reported the fourth case in which he had performed this operation, the first having been done in October, 1898. The operation was indicated in cases of obstruction with enlarged liver, where the gall-bladder or ducts could not be isolated, or the patient's condition from exhaustion and cholæmia would not permit of a protracted search for the bladder or ducts, and it was intended to carry the patient over for a radical operation. It would be only exceptionally called for, but was the only available procedure in such cases. The bile would escape from an incision in the liver as it did in a cholecystostomy, and after the patient's condition had improved, the stone might be removed from the duct. The operation would be less frequently called for as the surgeon's experience increased in choledochus operations, as he would then be better able to locate the bladder and ducts so much changed. The operation should also be resorted to in hepatitis before it had reached the stage of pus formation, if the liver did not rapidly become smaller after drainage of the gall-bladder or ducts.

A Foreign Body in the Peritoneal Cavity.—Dr. JOSEPH TABER JOHNSON, of Washington, D. C., reported a case in which a medical man had attempted to produce abortion at about the tenth week of gestation by inserting into the uterus a No. 8 flexible bougie. Some difficulty was experienced in getting it to pass the internal os, but after persistent effort the instrument was pushed up nearly its entire length, leaving perhaps two inches protruding into the vagina. The bougie was supposed to be coiled up in the uterus. Its expulsion was prevented by a cotton tampon placed high in the vagina. A physician informed the writer that when he removed the tampon the foetus and a portion of the membranes came away. He was unable, however, with the most diligent search to find the bougie, and finally came to the conclusion that it must have slipped out, without the patient's knowledge, during one of her many visits to the closet in the night. The second day after the abortion the patient had a severe chill, followed by a considerable acceleration of pulse and temperature, with gradual but steady increase of abdominal pain and distention. Dr. Johnson saw the patient in consultation, did abdominal section, and removed the bougie from the peritoneal cavity.

Ruptured Umbilical Hernia.—Dr. JOHNSON also reported a case in which several feet of intestine had been out on the surface of the abdomen and covered with unsterilized cloths and bandages for at least seventeen hours. The patient had had the hernia for fifteen years, and was fifty-seven years of age. The intestines were very dark and very cold and dirty. A thorough cleansing and warming with hot salt solution succeeded finally in getting them and the skin adjoining the abdominal wound into a tolerably fair condition. About a pound of omentum was removed, which bled in a number of places from which adherent clots had been detached. The tight rim encircling the protruding gut was incised above and below, and the three feet of intestine returned to the abdominal cavity, which was subsequently filled with hot salt solution. A rather long and difficult operation was then performed for the radical cure of an old umbilical hernia through a very fat abdominal wall. The woman gave every promise of getting well for seven days; then she suddenly grew weak and collapsed and died on the eighth day, apparently of general septic peritonitis.

Inguinal Hernia of the Ovary.—Dr. WILLIAM P. MATTHEWS, of Richmond, Va., reported this case. The patient, aged seventeen, strong and robust, was born with a swelling in each inguinal region, which did not occasion any alarm or produce any inconvenience until she reached her fourteenth year, when they began to enlarge and at intervals became so tender as to confine her to bed for two or three days. Pressure on them produced pain and nausea. She never menstruated. The author operated for the relief of the hernia, following the Bassini method. The sac was firmly adherent to the internal ring and to the adjacent part of the canal. The sac was opened and a tumor enclosed in several layers of fascia was exposed, carefully dissected out, and examined. It proved to be an adenoma of the ovary, though it looked more like a testicle than an ovary. Inquiry into her family history revealed interesting facts. Her great-grandmother was an only daughter. She was twice married, and bore children in each union. Of the female descendants of the first marriage, there were eight that were never unwell in their lives, and all lived to be over twenty years old. Of the second marriage, there was one of the two daughters who was never unwell. Two aunts of the patient had never menstruated, and one had a double reducible inguinal hernia. Five first cousins of the patient had never menstruated, and two of these were ruptured just as she was. One sister of the patient had never menstruated, and had a reducible hernia on the left side and an irreducible one on the right. These women who had never menstruated had hardly any hair in the axilla and on the pubes, and were not troubled by any unpleasant odor from the perspiration.

A Modified Hodgen's Splint for Fractures of the Thigh was shown, and its use demonstrated, by Dr. GEORGE S. BROWN, of Birmingham, Ala.

The following officers were elected for the ensuing year: President, Dr. W. E. B. DAVIS, of Birmingham, Ala.; vice-presidents, Dr. J. WESLEY BOVEE, of Washington, D. C., and Dr. JOHN W. LONG, of Salisbury, N. C.; secretary, Dr. W. D.

HAGGARD, Jr., of Nashville, Tenn.; treasurer, Dr. F. W. McRAE, of Atlanta. Cincinnati was selected as the place for holding the next annual meeting, beginning on the second Tuesday in November, 1902. Dr. Thaddeus A. Reamy was selected as the chairman of the committee of arrangements.

Book Notices.

BOOKS, ETC., RECEIVED.

Outlines of Gynecological Pathology and Morbid Anatomy. By C. Hubert Roberts, M. D. Lond., F. R. C. S. Eng., M. R. C. P., Physician to the Samaritan Free Hospital for Women, etc. With 151 Illustrations, mostly Original. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xxii-332. (Price, \$6.)

Handbook of Physiology. By W. D. Halliburton, M. D., F. R. S., Professor of Physiology, King's College, London. Seventeenth Edition. With 680 Illustrations, including Colored Plates. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xix-888. (Price, \$3.)

A Manual of Clinical Laboratory Methods. By John Benjamin Nichols, M. D., Professor of Normal Histology in the Medical Department of Columbian University, Washington, etc. Illustrated. New York: William Wood & Company, 1901. Pp. 303.

Textbook of Histology, including the Microscopic Technic. By Dr. Philipp Stöhr, Professor of Anatomy at the University of Würzburg. Fourth American based upon the Ninth German Edition. Translated by Dr. Emma L. Bilstein, Woman's Medical College of Pennsylvania. Edited, with Additions, by Dr. Alfred Schaper, Professor of Anatomy, University of Breslau, etc. With 379 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xx-17 to 503. (Price, \$3.)

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume IV. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. vi-17 to 409.

Venereal Diseases. A Manual for Students and Practitioners. By James R. Hayden, M. D., Chief of Clinic and Instructor in Venereal and Genito-urinary Diseases at the College of Physicians and Surgeons, Columbia University, etc. Third and Revised Edition. Illustrated with 66 Engravings. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 5 to 301.

Manual of Physical Diagnosis for the Use of Students and Practitioners. By James Tyson, M. D., Professor of Medicine in the University of Pennsylvania, etc. Fourth Edition, Revised and Enlarged. With Colored and other Illustrations. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xii-9 to 298. (Price, \$1.50.)

The Practical Medicine Series of Year-books, comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume I. Edited by Frank Billings, M. S., M. D., Dean of the Faculty of Rush Medical College, Chicago, etc. With the Collaboration of S. C. Stanton, M. D. Chicago: The Year Book Publishers, 1901. Pp. 3 to 270.

A Laboratory Guide to the Study of Qualitative Analysis. By E. H. S. Bailey, Ph. D., Professor of Chemistry, and Hamilton P. Cady, A. B., Assistant Professor of Chemistry in the University of Kansas. Fourth Edition. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. 5 to 234. (Price, \$1.25.)

Gynecological Pathology. A Manual of Microscopic Technics and Diagnosis in Gynecological Practice. For Students and Physicians. By Dr. Carl Abel, Privat Dozent, Berlin. Translated and Edited by Samuel Wyllis Bandler, M. D., Adjunct Gynecologist to the Beth Israel Hospital, New York. With a Chapter on the Embryology of the Female Genitalia and the Pathological Growths de-

veloping from Embryonal Structures. Illustrated by 100 Engravings. New York: William Wood & Company, 1901. Pp. xvi-237.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. Th. Puschmann, Weiland Professor an der Universität in Wien. Zweite Lieferung. Jena: Gustav Fischer, 1901. Pp. 117 to 352.

L'Intervento Chirurgico nella Cirrosi epatica. Pel Dr. G. Pascale, Prof. I. di Semiotica Chirurgica nella R. Università, etc. Con una tavola ed una fotografia. Napoli: Tocco & Salvietti, 1901. Pp. 58.

Thirty-second Annual Report of the State Board of Health of Massachusetts.

Transactions of the Twenty-third Annual Meeting of the American Laryngological Association, held in New Haven, May 27, 28, and 29, 1901.

Miscellany.

Myasthenia Gravis (Asthenic Bulbar Palsy).

Dr. Edwin Bramwell (*Scottish Medical and Surgical Journal*, May) considers myasthenia gravis a disease with which every practitioner should be acquainted, because it is often mistaken for hysteria, often fatal, and, in some cases at least, a fatal issue may be averted. He has had, probably, a larger number of cases than any other practitioner in Scotland. Up to the present between eighty and ninety cases have been reported.

The author reports *in extenso* a case which he epitomizes as follows:

"A girl of twenty-three, who had previously enjoyed good health, without apparent exciting cause gradually develops difficulty in speaking, swallowing, and chewing, weakness of the ocular muscles, of the palate, of the neck, and of the arms. In the morning she is usually free from symptoms, but as the day goes on, weakness in these various muscles develops. If she continues using any of the above-mentioned muscles, a state of temporary paresis results, associated with a feeling of fatigue. The muscular weakness is unaccompanied by atrophy; the Faradaic contractibility in the affected muscles (biceps) is rapidly exhausted; the deep reflexes are brisk; the plantar reflex is of the flexor (normal) type; the sphincters are unaffected; there is no objective disturbance of sensation, and no affection of the special senses."

Symptomatology.—The most prominent clinical feature of myasthenia gravis is the facility with which the muscles become fatigued by voluntary effort. The term *myasthenic state* seems applicable to this phenomenon. A voluntary movement, which is at first perfectly carried out, becomes rapidly feebler each time it is repeated; finally, if persisted in, *all* power of performing the movement may be temporarily lost; after a short rest movement can again be performed with almost as much power as on the first attempt. A variable degree of persistent paresis is often present in the affected muscles, which is usually slight, but may be complete, and probably represents an advanced stage of the myasthenic state. In the author's case reported, not only was any muscular exertion followed by fatigue in the muscles involved, but the tired effect extended to other muscles also.

Varying degrees of motor weakness are accompanied by proportionate Faradaic excitability, the muscles becoming rapidly fatigued by the Faradaic current. This condition is termed the *myasthenic* reaction. The muscles react normally to galvanism.

Pathology.—In eighteen cases collected and analyzed by Dr. Harry Campbell and the author after post-mortem examination, there was no lesion present which would account for the symptoms. Dejerine and Thomas reported "findings" at the Paris Congress in 1900, but it remains to be seen whether the changes are constant and connected with the disease. The author thinks it likely that the disease is due to a toxine of endogenous origin. There may be abnormality in the construction or functioning of the neuromotor apparatus.

Most writers consider the seat of lesion to be in the nervous system rather than in the muscles, and clinical evidence suggests the lower motor neurone. Males and females are equally affected. Acute infective diseases and hereditary neuropathy may be contributory causes.

Diagnosis is based on: (1) The presence of weakness, which is often slight in degree and is unassociated with atrophy—the muscular weakness varies greatly in intensity from time to time and tends to affect in varying degree all the voluntary muscles—the muscles of the extremities and trunk as well as those innervated by the cranial nerves. (2) The facility with which the muscles become exhausted both by voluntary effort (myasthenic state) and by Faradism (myasthenic reaction). (3) The absence of sensory symptoms, apart from the fatigue of exhaustion, of sphincter trouble, and of mental disturbance. The deep reflexes are usually brisk, while the plantar reflex shows no characteristic alteration from the normal.

In distinguishing myasthenia gravis from hysteria the absence of a neurotic temperament and of sensory symptoms and the presence of ocular and facial paresis, weakness of the neck muscles and of the myasthenic reaction are the chief points of diagnostic value. More advanced cases of myasthenia gravis are often mistaken for chronic progressive bulbar palsy.

Points of special diagnostic importance are the absence of muscular atrophy in myasthenia, the presence of ocular and upper facial paresis, of the myasthenic reaction, and, above all, of variability in the severity of the symptoms.

The *prognosis* is a matter of great uncertainty. In most cases the disease runs a course which is characterized by temporary improvement and relapses. The disease is often fatal. Of sixty cases collected and analyzed by Dr. Harry Campbell and the author, twenty-three ended fatally. In the great majority of fatal cases death has been due to an attack of dyspnoea. The end is usually sudden.

Treatment.—While no specific treatment is known, palliative measures are of great importance. Muscular exertion and mental excitement increase the severity of the symptoms, and must be avoided. Psychological impressions exert great influence on the course of the disease, whence the

author advises a favorable prognosis, but the gravity of the condition should be made known to the friends, who must clearly understand that the disease is not hysteria. They must neither make light of his symptoms, nor encourage him to fight against the weakness when it appears. Special care should be taken to spare the muscles chiefly affected by the myasthenic state. If the symptoms are severe, the patient should be confined to bed. Cold is to be avoided, since it increases the myasthenia.

The feeding of patients suffering from myasthenia gravis requires most careful attention. When there is much weakness of the muscles of mastication and deglutition, the patient should be enjoined to take the larger portion of his food early in the day. All solid food should be minced in order to spare the muscles of mastication, and to avoid, so far as possible, the risk of choking. Faradism is on no account to be used, since it increases the myasthenic state. Massage appears to be of no service. Weak galvanic currents applied to the affected muscles have been said to do good and may be tried. Although a number of drugs have been employed one cannot say with certainty that any had a distinctly beneficial effect. The attacks of dyspnoea may sometimes be relieved by drawing forward the tongue. In a severe attack in which the patient's life is threatened, artificial respiration should be resorted to. It is possible that in such a case inhalations of oxygen and transfusion with saline fluid may prove of value.

Technical Onomatology.—Greenhough and Kittredge in their admirable work, *Words and their Ways in English Speech*, say: "The propriety of using technical terms in speaking or writing depends on a common-sense principle. A remark should be intelligible, not merely to the speaker, who is presumed to know what he wishes to say, but also to the person addressed. Otherwise, it can hardly be called language in any proper sense. To be very technical in conversation not only savors of pedantry, but makes the speaker unintelligible; and the same is true of a book addressed to the great variety of readers! Among specialists, however, one can hardly go too far in the employment of technicalities, provided the terms belong to the accepted vocabulary of the science or art in question. That form of pedantry which consists in changing well-established designations for others that seem to the writer more appropriate is extremely common, and, indeed, may be called one of the weaknesses of the scientific temperament."

An Estimate of Alcohol.—Dr. G. Sims Woodhead (*Edinburgh Medical Journal*, August) closes *Some Notes on Alcohol* in its Medical and Scientific Aspects, presented as an introductory paper to a discussion at a meeting of the Edinburgh Medico-chirurgical Society, with the following words:

"May I be allowed to sum up my own opinion of alcohol in a few words. It is a narcotic poison, of which the pernicious effects are to be seen at all times and on every hand. It is a drug which, under certain conditions, may be valuable, but it is a dangerous medicament in the hands of any one but a

physician; and even in the hands of the physician or surgeon, its exhibition is attended with dangers that attach to the prescription of no other substance in the pharmacopœia; these dangers are not moral only, but physical dangers, resulting from the action of alcohol on the tissues generally, but especially on those of the nerve centres. Its food value under ordinary conditions is practically nil, and, put in the most advantageous light, can only be temporary, and then of an extraordinarily slight and, I believe, wasteful character."

Physicians of Old: Avicenna.—Ibn Sina (or, in full, *Ibn Ali Al-Hossein Ibn Abdallah Ibn Sina*), Latinized to Avicenna, was an Arabian physician, born A. D. 980, at Charmatain, near Bokhara. He was a remarkable student of science from his youth, and is said to have practised with great reputation and success at the early age of sixteen years. His scholarship extended, not only to medicine, but also to mathematics, philosophy, astronomy (then including astrology), chemistry, and botany; the botanical genus *avicennia*, of the natural order *myropodaceæ*, is named after him. He was educated at the great academy of Bagdad, founded by the Khalif Almonzor (A. D. 753-775), and amplified by his grandson, the Khalif Haroun-Al-Raschid (A. D. 786), and the Khalif Al-Mamun (A. D. 813-832), the last of whom raised it to the rank of a great scientific centre and established great libraries. Avicenna was physician to several kings of the Samanide and Dilemite dynasties, and came into high court favor through curing the King of Khorassan. But his enemies accused him of having caused a fire that destroyed the king's libraries, in order that he might arrogate all knowledge to himself, and he was deposed from his office as Vizir of Harmadan, imprisoned, his property confiscated, and even his death contemplated. He was restored, however, about two years later; but in the mean time he had given himself up to intemperance, and this and incessant toil undermined his health, so that he died in his fifty-sixth year A. D. 1037.

Avicenna was a noted metaphysician, and his works, which were many and voluminous, were classics in the medical world for several centuries, professors largely relying on them as text-books. The scholarship of those ages, instead of pursuing original investigation, devoted itself to elucidating supposed mystic interpretations in the writings of authors of repute, more often read into them, no doubt, than legitimately deduced from them. The *Canon of Medicine*, of Avicenna, lacks the graphic clinicism of many other ancient writers, and consists largely of catalogues of symptoms without any unifying method. It is largely made up of extracts from Galen, Rhazes, and Haly Abbas. His works, all of which were written in Arabic, were translated into Latin and printed in the fourteenth and fifteenth centuries, in Venice. The principal one is the *Kanun fi 'l Tibb*, or *Canon Medicine*, in five books, of which I and II deal with physiology, pathology, and hygiene; III and IV, with treatment, which is based on the works of Galen and Aristotle; and V, with pharmaceuticals. Among his other extant works are *De Viribus Cordis*; *De Removendis Nocumentis in Regimine Sanitatis*; *De Sirupo Acetoso*; *Cautica, seu breve Ius Cautivum Medicarum*

Compendium; and *De Medicinis Cordialibus*. They may all be seen in the library of the surgeon-general, at Washington, D. C.

Antipyretics in Typhoid Fever.—Erb (*Therapie der Gegenwart*, 1901, Vol. xlii, p. 1; *Medical Chronicle*, July) says that since the introduction of the salicyl preparations into therapeutics, almost the whole of the series of modern antipyretics has been tried in typhoid fever and enthusiastically commended. Latterly, however, there is a general consensus against the indiscriminate use of these remedies, and for their limitation to cases in which a rapid, though transitory, fall of temperature is desirable, or in which it is wished to increase and prolong the effects of the bath. Among the older antipyretics, quinine, which formerly occupied an important place in the treatment of typhoid fever, has again been resorted to by Erb, in the belief that not only does it produce a relatively prolonged diminution of temperature, but also, in many cases at least, favorably influences the whole course of the disease—that it is not merely an antipyretic, but in some degree a specific. He administers the drug in the evening, when the temperature has reached its maximum (7 p. m. to 8 p. m.), 15 to 20 (rarely 30) grains, divided into two doses and given shortly one after the other. This is repeated on the third evening, and so on, every other day (in rare cases every day), till defervescence is well established.

The effect, as shown by the charts of 200 cases, is to produce, not only a marked morning remission, but also a lessening of the subsequent evening's exacerbation; each dose of quinine producing a diminution of 0.5° to 1° F. in the evening temperature. This effect goes on progressively, indicating a beneficial influence on the whole disease and a shortening of its duration. It is in cases of moderate severity that these results are best seen; in others, particularly protracted severe cases with complications (mixed infections), quinine acts neither so rapidly nor so strikingly, or even not at all. Such cases in which quinine was without effect formed about one seventh of Erb's series.

The best time at which to initiate the administration of quinine is about the eleventh or twelfth day of the disease.

The abstractor for the *Medical Chronicle* points out that it is unfortunate that Erb has not stated the precise preparation of quinine he employs, as this, owing to the very different solubilities of such salts as the sulphate and hydrochloride, is a point of great importance.

Juvenal on City Life in Relation to Insomnia.

In *Satire III*, vv. 232-238, Juvenal shadows the relation between indigestion, toxæmia, and insomnia:

Here many a patient dies from wakefulness.
But this exhaustion is induced by food
That, undigested, loads the heated paunch.
What lodging-houses, pray, admit of sleep?
For, in the city, sleep is only theirs
Who pay huge rents; that is the head and front
Of the disease. The passing of the carts
Along the windings of the narrow streets.
The obstructed teamsters' mutual bickerings,
Would banish sleep from Drusus or from seals.

K. H. M.

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Original Communications.

IMPLANTATION OF A GOLD BALL FOR THE BETTER SUPPORT OF AN ARTIFICIAL EYE.

By L. WEBSTER FOX, A. M., M. D.,

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PROFESSOR OF OPHTHALMOLOGY, MEDICO-CHIRURGICAL COLLEGE.

It is now five years since I devised the method of implanting a glass ball into the orbital cavity in cases where the eyeball had previously been removed. The method followed at that time was as follows: An incision was made through the conjunctiva and tissues of the orbit in the horizontal direction, fourteen millimetres long, corresponding to scant the diameter of the glass ball to be inserted. For instance, if the glass ball is sixteen millimetres, the incision would be fourteen millimetres. The upper lip of the conjunctiva is raised and, with sharp-pointed curved scissors, the conjunctiva and such connective tissue as lie close to it are dissected off in all directions around the incision, making a pouch into which the glass ball will fit. The edges of the conjunctiva are brought together over the ball by five or six stitches and the after-dressing is the same as is followed in evisceration cases.

This is the description of my first operation. The defect in this operation was that, in healing, the contraction of the tissues caused a rupture of the two central stitches, exposing the ball, which in a short time came out; in thirty-three per cent. of my first cases the glass balls were expelled. My second improvement was then to give support at this point by inserting, above and below, supporting stitches. These silk threads were placed four lines above the middle stitch, the needle was passed through tissue, conjunctiva, and muscle, parallel with the central opening, another needle and thread was passed through the same tissue a little beyond, and also parallel with, the closed wound, and two stitches were also passed through conjunctiva and tissue just over the inferior muscle. Then the threads opposite each other were drawn together and tied. These supporting stitches removed the tension of the middle stitches in the primal incision. At the end of the fourth day, all of the stitches were re-

moved, as I found that, by allowing them to remain six or seven days, stitch abscesses would occasionally form and the ball would be expelled. This advance in closing the wound and retaining the ball *in situ* was a great advance, but the operation was not so successful as was demanded; there were fifteen per cent. of expulsions. I also found that the glass ball was pushed to one side or the other of the centre of the orbital cavity—in some few cases the balls

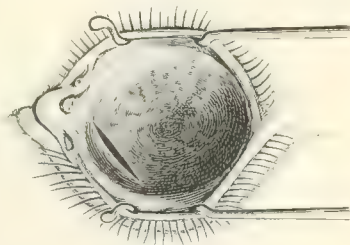


FIG. 1.

were pushed down and out—consequently, the adjustment of an artificial eye could not be made, and the glass balls had to be taken out. I was compelled to enucleate the glass ball and repeat the operation three times in one case. This, as can be readily understood, was another defect in the operation. In the present day of successful ophthalmic surgery I felt that the percentage of failures, thirty-three per cent. primarily, and by modification fifteen per cent., was too large to make this operation a popular one.

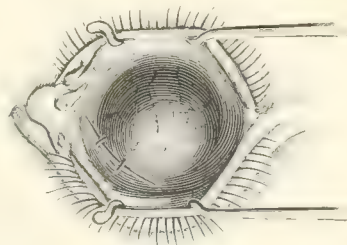


FIG. 2.

The satisfactory wearing of an artificial eye over this stump is vouched for by many patients. The filling up of a deep socket, the prevention of incrustation in, and also over, the artificial eye, the absence of retained secretions, as well as the sunken and immobile eye giving a sinister stare to the patient, led me on to perfect this operation, until now no failures need be recorded, and all the defects described above, avoided.

It is now six years since I implanted the first glass ball in a patient where the eye had been removed twelve years before. Eighteen months ago I devised the present method, which I can now safely recommend.

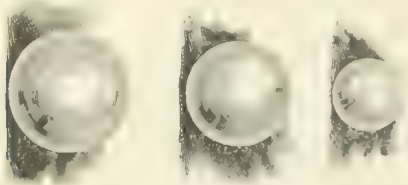


FIG. 3.

If the operation is to be performed in the right orbit I carry out the details as follows: The eyelids are kept apart by a speculum, the conjunctiva is then grasped up and in above the inner canthus,

(Fig. 2), then place the conformer over the buried ball, and by gentle manipulation on this metal rotate the ball into place. The circular opening in the conformer allows the gold ball to fit the space which will be covered by the cornea of the artificial eye.

The eyelids are then closed over the conformer, which is left in place twenty-four hours. The eyelids also help to keep the ball in place. I have these conformers made of metal, gold plated. The results obtained by this method are perfect; no secondary trouble follows, all healing up by first intention, and the two stitches are taken out on the third day.

It can be readily understood now that the gold ball cannot break through the centre of the conjunctiva, and, as the opening is out of line of pressure, it soon closes up. If the operation is to be performed on the left orbit, the incision is made up



FIG. 5.

and the tissues are well pulled out. I then pass a Beer's knife or a curved keratome through the tissues, somewhat obliquely and well down into the orbit; this opening must be made large enough to push the globe in the opening behind the tissues, conjunctiva, etc. (Fig. 1). This starts the opening, which I enlarge with curved scissors, separating the tissues from the cellular tissues around the orbit, thus giving me a large pouch into which the globe can be inserted. I have discarded glass and silver balls and only use gold balls of 11, 12, 13, and 14 millimetres in diameter (Fig. 3).

The gold ball is inserted through the opening and retained in place by a shell which I have modelled after an artificial eye, and which I call a "conformer" (Fig. 4). I have three sizes for various sized orbits. I close up the incision with two stitches

and out above the external rectus muscle, and the dissection carried out as described above.

Fig. 5 shows the result of the operation with the artificial eye adjusted. The patient was brought to the Medico-surgical Hospital in the hope that something might be done to improve the appearance

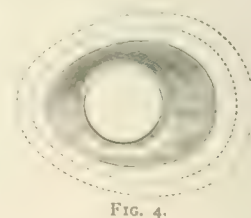


FIG. 4.

of the artificial eye. After the operation of implantation, the objectionable features of incrustation, retained secretions, immobility, and the sunken condition of the artificial eye were removed.

THE INFLUENCE OF ELECTRIC OZONATION UPON DISEASE.*

By G. LENOX CURTIS, M. D.,

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MEDICAL ASSOCIATION, ETC.

Polarity, if not the primary phase of atomic energy, is certainly clearly related to the manifestation of that higher form of energy upon which organic forms depend for what is termed life. This higher form of energy shall constitute the subject of my effort this evening.

Physiological life coexists with this form of energy; in fact, we cannot conceive of one without the other, while it is equally well understood that this force or form of energy must be correlated with light, and that all these depend, in some way, upon the solar influence, both chemically and thermally. Upon the sun's rays, directly or indirectly, all life depends; and without their beneficent vitalizing influence life cannot exist.

Decleaux says that "sunlight is one of the most potent agents for the destruction of pathogenic bacteria." Dr. William Duffield Robinson, after an exhaustive investigation into the causes of disease in the Eastern Penitentiary, at Philadelphia, said: "The power of sunlight in reducing mortality was definitely shown." According to Ward, the blue and violet rays of light exert a germicidal influence.

Finsen's experiments have proved the value of solar and electric light in the treatment of lupus, while other investigators have reported equally satisfactory results in the treatment of pulmonary tuberculosis. Compare with these facts the long-established custom of recommending our phthisical patients to seek the sunny clime of California or the elevated regions of the Rocky Mountains.

It is evident that the science of medicine has reached "a parting of the ways" in the march of progress. On one side we have uncertainty and guesswork; on the other, certainty, guided or directed by facts ascertained through scientific investigation and from experience. I believe that present efforts in the line of electrical research and the growth of knowledge in the great field of bacteriology will eventually open up the way to the long-sought goal—that *ultima Thule* where life shall not cease, except as the result of natural causes or by fortuitous circumstance. As this is a vast field, it would be useless to attempt profoundly to discuss the subject at this time; hence I must content myself

with the presentation of certain conclusions, the result entirely of my own personal observations.

The machine by which the high-tension current is produced is essentially a system of coils which multiply the voltage, the current being taken directly from the street main, to which the machine is connected by an ordinary plug. The capacity of the apparatus is from 500,000 to 1,000,000 volts, at from one sixth of an ampère to one ampère, according to the intensity desired. To the machine is attached a single wire, which leads to a Geissler vacuum-tube and an ozone generator. This generator consists of a single loop of wire or of a brush made of many fine wires. Off its points and through the tube the electric fluid forms a fine spray, producing ozone, colored light, and heat. The higher the voltage and the lower the ampèreage, the less is the degree of shock experienced by the patient, while the physical effect is sufficient to stimulate nervous functional activity and tissue repair.

Owing to the low ampèreage, there is no shock or unpleasant sensation in the use of this apparatus, such as is common in the comparatively low-voltage machines. This machine seemingly has but a single pole, the current passing to the body and apparently off into the atmosphere, which may be said to be used as the negative pole. Among the advantages afforded by this machine are its portability and the fact that it can be used wherever there is an incandescent current. It is simple in operation, and, as it consumes, when running at its highest tension, somewhat less than an ampère of current, or slightly more than is required to supply an ordinary sixteen-candle-power lamp, the cost of current is trifling, even if it is operated continuously. It also can be used at the bedside for the purpose of supplying ozone, instead of the ordinary chemical apparatus for furnishing oxygen which is commonly employed.

To facilitate the use of this apparatus in the treatment of the sick, a cabinet has been constructed somewhat according to the plans of Dr. Kellogg. The cabinet is high enough to permit a man to stand comfortably and long enough to allow him to lie down, its area being kept purposely small in order that it can be heated with a small expenditure of electric current and that its atmosphere can be quickly and readily permeated with ozone. It is fitted with a glass slab on a suitable table and with four clusters of eight sixteen-candle-power lamps, two of which clusters are placed above and two below the slab, each fitted with a reflector and shade, which can be moved up and down so as to secure varying degrees of heat in accordance with the requirements of the treatment; also with attachments for electrodes, a push button connected to a buzzer on the outside, and the ozone generator. Reflectors

*Read before the Academy of Medicine, October 15, 1901. Copyright, 1901, by G. Lenox Curtis. While this copyright has been effected to prevent improper uses, medical journals are at liberty to make such abstracts as they desire, due credit being given.

are placed around the sides of the cabinet, made of glass, which, together with the clusters of lamps mentioned, insure every portion of the exposed body being subjected to the effects of light rays.

During the course of the treatment the atmosphere of the cabinet is permeated with nascent ozone, as before stated, which the patient inhales, while exposed to the heat and to the light rays, these rays resembling very closely in therapeutical value those from the sun. At the same time he grasps the electrode through which the current is passing, and, in a few moments, is thrown into a profuse perspiration. It has been found necessary for the patient to remain in the cabinet from twenty to thirty minutes to obtain the best results. After treatment, he is subjected to a shower-bath for its cleansing effect upon the skin; then he is massaged with the electrode over the region where the disease is seated, for from five to thirty minutes. The object of the electric massage is to stimulate the muscular, cutaneous, or visceral circulation, and thus favorably to influence the nutrition of the parts operated upon.

This is essentially a process of oxygenating the blood, destroying pathogenic organisms in the body, and eliminating the products of retrograde metabolism through the combined influence of electricity, light, heat, and ozone. When the current from this apparatus is applied, the state of unstable equilibrium into which the vasomotor system is thrown during any inflammatory morbid process, is changed. The reestablishment of the normal circulation results in the relief of the congested parts, and in a greater supply of blood to other organs in which a deficiency had previously existed. The electric current is conducted to the patient through a vacuum glass electrode, which modifies it so that no shock is produced, the patient being unconscious of the electrical effect, save from the generally increased sense of warmth throughout the body. In one respect I believe this method of electrical treatment differs from all other, viz., ozone in great abundance is produced and inhaled during the treatment.

As a general result of my experience in the treatment of morbid processes by this method, I may state that resolution is hastened very markedly. Its beneficial effect upon the blood is most convincing, and is shown by an increase in the number of red discs, with a corresponding increase in the percentage of hæmoglobin and a diminution in number of the white corpuscles and destruction of pathogenic bacteria. The treatments are usually given daily until satisfactory results have been obtained, which, in a large percentage of cases, will ensue in a month. I have many times noted complete restoration after one or two treatments, and in this statement I do not refer merely to acute diseases, but to such

chronic ailments as gout, rheumatism, neuralgia, and allied conditions.

Granting that the maintenance of the circulation in its normal quantity and quality is a prime requisite for the preservation of health, the question that confronts us is how to maintain this vasomotor equilibrium. Knowing, as we do, that the sun's rays are all important to life, and that the sun is an electric dynamo, does it not seem reasonable to conclude that electricity is in some way most intimately leagued with life itself, and that, without it, these bodies of ours, harrassed by inherited or acquired disease, are unable to make a normal show of resistance?

The duty of the medical man is to reestablish the circulation in the diseased part. My old friend, Dr. Garretson, used to say: "If a man is ill, he has 'disease.'" If the human body is a perfect piece of mechanism, all parts of it are equally necessary to its successful operation and each is dependent upon the other. The circulatory system depends upon the perfection of the nervous system, or, as one writer calls it, "the electric system." It is also our duty as physicians to see that the nervous system is kept at its best. How this can be done most advantageously is the question that will occupy us this evening.

The more I investigate the effect of this form of electricity upon disease, the more thoroughly am I convinced of its great value. With me, its position in medicine has advanced beyond the experimental stage, and I now recognize its use as the best means of accomplishing certain results, especially in disorders of the nervous system.

Step by step, the various devices for generating electricity have been improved, mechanically as well as in therapeutic efficiency. So also has our knowledge developed as to the best means of applying them. We have passed from the two-pole to the one-pole system of applying the current to the body.

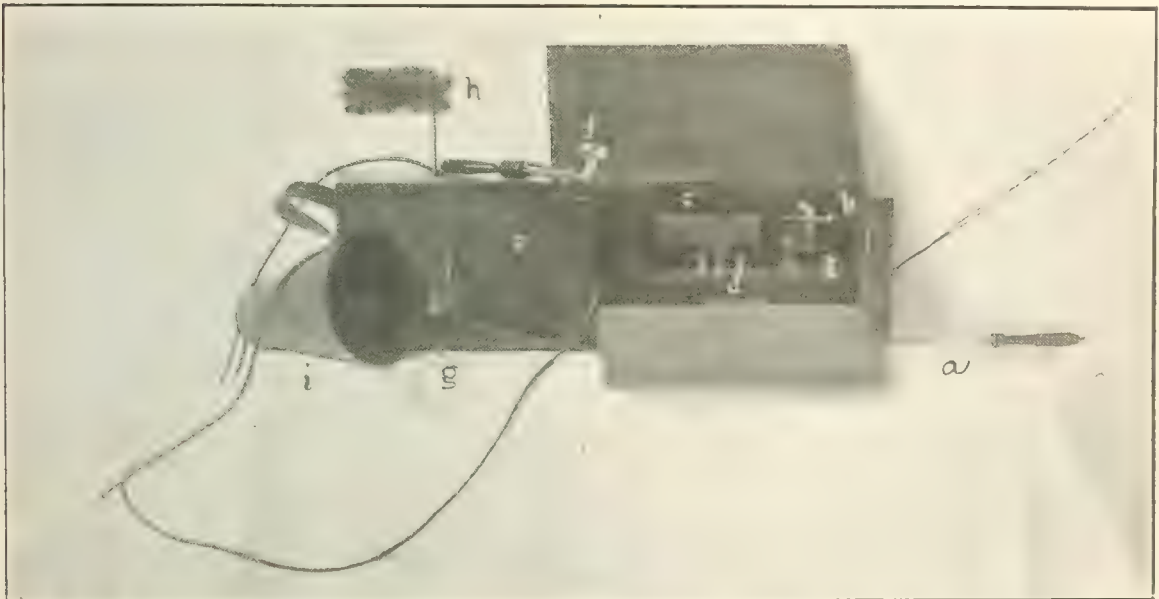
The instrument which is to be presented to-night is one by which the highest voltage and the most delicate impressions may be obtained, and by its aid the nervous system may be recharged and life revived. So much for the device; the therapeutic value of the instrument is what I have especially come here to talk about, and what will interest you the most.

I have observed the effect of this system of treatment in some two hundred and fifty cases, from which I am led to believe that it is equally effective in both acute and chronic diseases. The beneficial results of this treatment in those conditions occurring after grippe and other diseases followed by depression are very marked and gratifying. *Nutritive restoration* is especially marked.

Tuberculosis.—My experience with electric ozonation in the treatment of tuberculosis covers fifty cases of phthisis, in which all the principal physical signs were present, including several cases of complete or partial consolidation of the lung and twelve cases of tuberculous ulcer. Excellent results were obtained in the latter cases within a few weeks; likewise in all those phthisical cases that had not passed beyond the first stage, and in some of those in the second stage. In one advanced case the patient was apparently restored to health, but there was an evident tendency to recrudescence. Eventually what seems to be a permanent cure was effected by a systematic and persistent use of the method of treatment under consideration. In several cases of well-defined tuberculous infiltration resolution was complete, and the normal lung capacity was regained.

Two treatments daily were administered and in each case the sputum became more limpid and was temporarily increased in quantity; the night sweats became less profuse and food was retained, although prior to treatment it had been repeatedly rejected; and the skin became less clammy. At the expiration of one week the pulse rate varied from 90 to 108, the temperature from 99° to 103° F. and the respiration from 20 to 27. Dull areas were now clearing up, indicating the restoration of function of the air vesicles that had been "out of commission."

After a fortnight's treatment, in two of the cases, large quantities of purulent material were expectorated, containing shreds of broken-down connective tissue and bacilli in great abundance. This was followed by a season of apparently great relief to the patients. The rate of respirations continued to decline to nearly the normal, the pulse rate and temperature showing a similar tendency. In fact these cases actually improved in every way except



a, Hand electrode; b, tension screw; c, induction coil; d, double throw switch; e, oscillator; f, general electrode; g, brush electrode; h, ozone brush; i, bedside inhaler.

Three advanced cases presented the following symptoms:

Large areas of dulness indicating unmistakable infiltration of pulmonary tissue; one or more cavities, varying in size; sputum profuse, purulent, and loaded with the *Bacilli tuberculosis*; streptococci and staphylococci both present; temperature reaching 105° F. in the afternoon; respiration from 24 to 32; pulse from 100 to 130; extreme lassitude; hectic; extreme emaciation; exhaustion; profuse night sweats and other most discouraging features. These cases were placed under treatment by electric ozonation, with the following results:

After the first treatment there was a notable improvement in the nervous condition of each patient. The temperature, pulse-rate, and number of respirations each minute, were reduced; better sleep was obtained and the muscular strength was increased.

in their ability to assimilate food. In each case death occurred and, I believe, wholly from this cause.

These were hopeless cases, and I treated them only to ascertain what might be the effect of electric ozonation upon them. Medicinal treatment was synchronously continued as indicated, and included such remedial agents as strychnine, ammonium carbonate, and digitalis. I will state that in the treatment of all cases, tonics, cardiac stimulants, laxatives, etc., are given when required, while the closest attention is paid to the hygienic condition of the patient and his surroundings.

It must be admitted that the study of ozone and sunlight and their effects have not been productive of definite results. Downer and Blunt have observed the fatal effect of the blue and violet rays

of the spectrum upon bacteria, and conclude that the presence of ozone in atmospheric air is responsible for that effect, and that the ozone is formed in some way by the actinic rays of light.

"The question has been taken up anew by Ransome and Fullerton, who have experimented on the bacteria of diphtheria, typhus, tuberculosis, pneumonia, etc. They conclude that ozone exercises no appreciable influence upon these bacteria. The virulence of the bacillus of tuberculosis notably is not enfeebled by ozone, they say. They also say that the effect of the ozone in purifying the air is the result of its energetic oxidization of the organic matter in the air upon which the bacteria feed, not in any direct action upon the bacteria themselves. According to this statement ozone is then no more than an active rival of the bacteria, in which, as is well known, all the vital actions may be summarized as oxidization, whose effect is to decompose the organic molecules into substances that are less complex and non-putrescible."

I do not pretend to assert that electric ozonation acts directly upon the *Bacillus tuberculosis* and kills it; or that it so changes the medium upon which the bacillus thrives that it can no longer sustain germ-life. But I do know, from my own observation, that the *Bacilli tuberculosis* generated in patients under this treatment die, for I have made daily observations upon the sputum of the patients under my care, and have more than once noted the gradual diminution in the number of bacilli under electric ozonation.

The effect of this form of treatment upon the skin is very striking. One of the earliest signs of return to health is the reappearance of a normal tone. The complexion becomes clear; even the great brown patches, known as chloasma phthisicorum, disappear entirely, as though under some magic influence.

(To be continued.)

The Causes of Death among Physicians.—According to the statistics accumulated by the actuaries of the American insurance companies, physicians die, upon an average, just a little faster than their patients. Only three causes of death show a lower proportion in this occupation than is the case in the average occupation: Phthisis, diseases of the respiratory system, and accident. On the other hand, mortality from diseases of the liver, of the circulatory and urinary systems, as well as from suicide, appears to be greatly in excess. From gout and diabetes, physicians suffer about three times as heavily as the average in men of other occupations. Among doctors and members of the legal and clerical professions diseases of the heart are the most frequent of all causes of death.

CLINICAL NOTES ON GLEET.*

By A. RAVOGLI, M. D.,

CINCINNATI.

(Concluded from page 7.)

Prognosis.—When gleet has lasted for a long time, and it is complicated with chronic prostaticitis, with well-directed treatment we can do a great deal of good, but a complete recovery in some cases is difficult to obtain. In certain cases merely a simple examination produces so much irritation that the patients are compelled to remain in bed, but even under these unfavorable conditions we are able to benefit them. It is a question of patience on both sides in order to obtain the best result. A few treatments may be of great advantage in one case, but in obstinate and neglected cases it is necessary to persevere. The patient must observe a strict regimen in association with the treatment. He must abstain from alcoholic liquors. The patients know by experi-

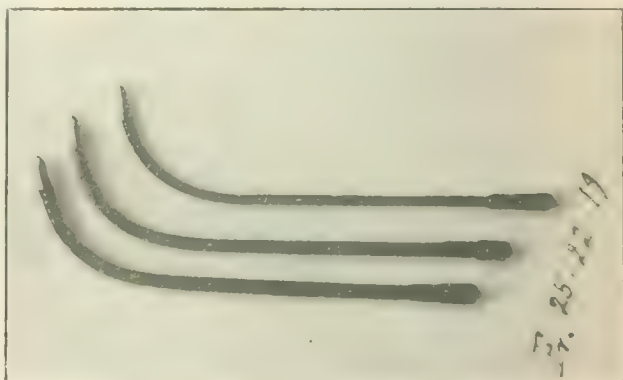


Fig. 1. Ravogli's Smears for Electrolysis

ence that after their partaking freely of beer or liquors, on the following day the drop is increased and the urine is much more cloudy. In the same way, so as to insure the result of the treatment, it is better to recommend to our patients not to expose themselves to unnecessary exercise. We should forbid dancing, as well as horseback riding and the use of the bicycle. In regard to the sexual act, it is better to suppress it as long as possible. With these rules of regimen we can begin our treatment confident of being able to attain, in most of the cases, a complete success and in a few cases a marked improvement. In general, we can say that the prognosis is more favorable in recent cases than in old and inveterate cases, and the chances of recovery are better in cases not complicated with stricture and with nervous symptoms.

Treatment.—The treatment of gleet cannot be carried on with only one method, but requires a great deal of judgment in the selection of methods

demanded in the different cases. In an old case of gleet we cannot expect much benefit from internal remedies, yet, in association with local applications, we find them useful adjuvants. The balsams have a tendency to diminish suppuration, and when the urine is cloudy their use clears it somewhat. We use copaiba, cubeb, oil of turpentine, and santal oil, either alone or in conjunction with others, in emulsions or in capsules. They are rather hard on the stomach, and the patients cannot continue their use for a long time. The best tolerated of all is the santal oil, but its benefit is only temporary and rather questionable.

It is not so of the so-called urinary antiseptics, which we find of good service in the treatment of gleet. They are usually the salicylates, which, giving off carbolic acid, render the urine antiseptic and less irritating to the inflamed surface of the bladder and of the urethra. Furthermore, they maintain the acidity of the urine and so prevent ammoniacal decomposition. In my experience salol has given good results as a urinary antiseptic and I have never noticed the troubles which have been attributed to its use. Urotropine, introduced

The treatment on which we mostly rely is the local treatment. The time of the clap syringe, whether of tin, glass, or hard rubber, is over; we know that the injections made by these means do not reach the posterior urethra, and in consequence they are of no benefit. In the first place, we need to wash the posterior urethra with some force, in order to clean the surface and reach the glands. This object we attain by means of lavage, which can be done with or without a catheter. Lavage without a catheter consists in the method brought into favor by Janet in 1896. The fluid is in a percolator at a height of from four to five feet above the level of the canal. The tube of the irrigator is applied to the meatus, and on opening the clamp the fluid flows into the urethra. The anterior urethra is readily filled and distended by the fluid, which, forcing the cut-off muscle, penetrates the posterior urethra and enters the bladder. When a certain quantity of fluid has entered the bladder, the patient urinates and the medicated fluid passes the second time through the urethra. This method, which was at first accepted with enthusiasm, has been found to

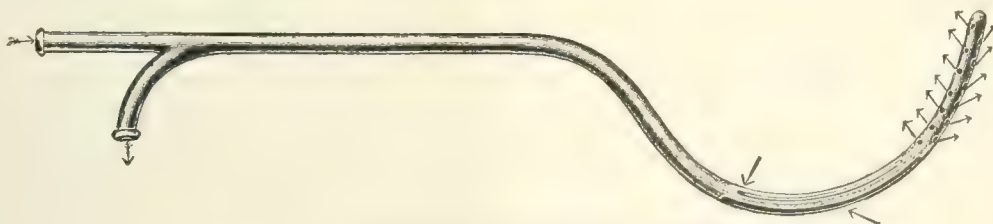


FIG. 2. Dr. Ravogli's Silver Catheter for Irrigation.

by Nicolaier, has a more powerful germicidal and antiseptic action, maintains the acidity of the urine, and retards its decomposition. Its action is due to formaldehyde, which is set free by the presence of uric acid. It is administered in doses of from 5 to 10 grains three times a day. It is useful when given before using instruments, as a preventive of urethral fever. It diminishes suppuration, and by arresting ammoniacal decomposition relieves painful urinary tenesmus (De Keersmaecker and Verhooogen⁶).

In many cases we need to use sedatives in order to calm painful and nervous symptoms. Bromides and opiates are of great service in relieving sexual excitability, insomnia, and neurasthenic conditions, and we often find their employment necessary during treatment. We likewise find that many patients have lost a great deal in flesh; they are weak and neurasthenic, and tonics are required. In these cases the compound syrup of hypophosphites I have found to answer the purpose.

be not entirely free from inconveniences. For this reason Behaegel⁷ has already advised the use of a soft catheter, to be introduced to the required depth, and through it the fluid to be injected without exposing the whole urethra to unnecessary painful distention. I can repeat to-day the same statement which I made in 1899, that from my experience I am convinced that, for a recent acute anterior urethritis, the lavages by the method of Janet are very beneficial, but for a chronic posterior urethritis irrigation through a recurrent catheter is much more desirable. We may employ for this purpose the different forms of catheters, like Ultzmann's, Oberländer's, or my own silver catheter, made by Max Woche & Co., which I had the honor to present to this association in 1899 (Fig. 2). With my catheter the fluid washes the posterior urethra thoroughly, without distending the bladder. The fluid is readily taken out by the recurrent branch of the catheter at the place where the compressor urethræ forms the boundary between the anterior and posterior ure-

⁶Chronic Urethritis of Gonococcic Origin, 1901.

⁷Ueber die Ausspülungen in den Behandlungen der Urethritis. Monatshefte für praktische Dermatologie, February, 1898.

thra. The irrigation is so maintained for five or ten minutes. The fluid which I use is a solution of permanganate of potassium, as it has been used by Ultzmann and Keyes with good results. It is a good disinfectant and coagulates mucous and purulent discharges, which are removed as brown shreds. The solution to be used preferably is a mild solution, 1 to 5,000. It can also be used in remedies are required, which, however, cannot be the strength of 1 to 2,000. An irrigation with a solution of permanganate in the posterior urethra does not produce pain or discomfort, it rather causes a mild anæsthesia and a sense of well-being. The efficacy of the irrigations with the solution of permanganate of potassium has also been highly praised by Ivan Block,⁸ who uses it exclusively in the treatment of posterior urethritis, and lately by Alexander Renault. In a chronic case, where infiltrations of the submucous layers have already begun, lavage, although useful, will not bring about recovery. In these cases stronger injected in quantity into the whole urethra, but must be limited to the affected place. Instillations are used to introduce caustic solutions into the posterior urethra. In order to reach the part, a small catheter adjusted to a graduated syringe is necessary. The catheters are made of various materials and in various forms, such as the Guyon instillation syringe, the Ultzmann drop-catheter, and the Keyes deep urethral syringe. A solution of silver nitrate, from two to five per cent., is instilled in the dose of from two to three drops by means of turning the plunger of the syringe. In removing the catheter, it is a good precaution to aspirate with the syringe the excess of the instilled fluid, so as to prevent cauterizing the anterior urethra. It is a good practice to make instillations of silver nitrate with the bladder full, to have the patient urinate after the application, and to neutralize the excess of the solution.

For a long time I have abandoned the instillations of silver nitrate, and I have substituted for them a two to three per cent. solution of silver-protein, which I find safer than the former. In consequence of instillations of nitrate of silver I have seen patients suffer excruciating pains. I find that an application of silver nitrate on a determined region of the urethra is better made by means of the urethroscope, with which we can limit the cauterization.

The Urethroscope.—I am using the Steurer and Klotz endoscopes, but of all I prefer the old Steurer endoscope. It is introduced as far as the prostatic region, and when the affected surface is in the field of vision, it is touched with a small

tampon of cotton on a rod tampon-carrier, saturated with a 3-, 5-, or 8-per cent. solution of nitrate of silver, according to the condition of the mucous membrane. With a dry tampon the surplus of the solution of nitrate is dried, preventing the spreading of the cauterization. In some cases I have used solutions of from 3 to 5 per cent. of sulphate of copper and of trichloroacetic acid, but the results have been no better than those obtained with the nitrate of silver. Auspitz, Gschirhagl, Gruenfeld, and I adopted endoscopic treatment as the only rational treatment for gleet. But later I have been compelled to change my mind and, as I said in the beginning, to use the urethroscope as a useful adjuvant. In many cases where the lesions are superficial, like erosions and granulations, a few applications of a solution of nitrate of silver through the endoscope may be sufficient to bring the patient to recovery. Indeed, in nearly every case of gleet I begin to treat, after a few lavages, I examine the urethra with the endoscope, and in nearly all cases I find in the posterior urethra limited patches of chronic inflammation, bleeding easily, which, when touched with 5-per-cent. silver-protein or with nitrate of silver, heal up in a short time, with relief to the patient. But, as in the treatment of trachoma, the brushing with copper sulphate cures the granulations of the eyelid, but does not prevent the formation of a scar, so in the urethra, when deep infiltrations are present, although by means of the endoscope we heal the erosions and the granulations, yet the infiltrations remain and in their progressive course will end with a stricture.

Mechanical Treatment.—In order to produce the reabsorption of the infiltrated patches, we must resort to pressure, which is practised by means of sounds. B. Bell recognized that the beneficial action of bougies was chiefly due to the pressure effects. Sounds, however, have only one diameter, and we know that the canal of the urethra varies in size in its different portions. We are indebted to Otis for the appreciation of the various diameters of the urethra and for the urethrometer, with which we can measure the calibre and find out points of a beginning stenosis. In a large number of cases the meatus is the narrowest point of the urethra, and in consequence it is necessary to slit the meatus in order to be able to introduce a sound capable of producing pressure in the deep portions of the urethra. The introduction of sounds into the bladder has formed the base of the mechanical treatment for over twenty years, with satisfactory results. The sounds are introduced once a week, their calibre being gradually increased, and they are left in for five minutes. Auspitz and Ultzmann used metallic sounds in

⁸Zur Behandlung der blennorrhöischen Harnröhrenentzündungen. Monatshefte für praktische Dermatologie, 1898.

cases of infiltration, so as to produce reabsorption, and obtained good results. Remedies have also been added to the sound, and Unna, Casper, Flemmer, and others have anointed the sound with a salve containing nitrate of silver. But the salve remained in the meatus, and a very small quantity went into the posterior urethra. Casper tried to obviate this by means of his grooved sounds. I am still using these sounds with a salve consisting of 25 per cent. of ichthyol in vaseline. I can state that in some cases they have given satisfactory results. Tommasoli bases all the importance of the treatment of gleet on the application of salves in the posterior urethra. He has applied catheters which are filled up with salve and with a kind of plunger; the salve which is contained in the catheter is squeezed out in the interior of the urethra at the required place. To this method of treatment have been raised the same objections which have been made to the use of the antrophores. Although it seems very rational, yet in practice it does not give the expected results.

The application of electrolysis is also done with a view of producing the absorption of the infiltration. For several years I have been using some special sounds of different diameters, from 18 to 24, covered with rubber, leaving a metallic tip. (Fig. 1.) I place the sound in the infiltrated point and I send a current of from 12 to 20 milliampères, moving gently the tip of the sound up and down. The patient holds in his hand the sponge attached to the positive pole. The electrolytic action of the current on the tissues is rather remarkable. When I remove the sound a quantity of white, milky fluid oozes out from the meatus, which has come out of the infiltrated tissues. In this way I obtain the combination of pressure together with the electrolytic action. This application is not painful; in the posterior urethra there remains a little irritation, which lasts for two or three days. The gleety discharge at first is increased and then subsides for some days. During the treatment I make two or three electrolytic applications, obtaining in many cases satisfactory results.

Dilators are to be applied in cases of deep lesions, the dilatation being accomplished gradually and gently. Otis, of New York, and Oberländer, of Dresden, have both, nearly contemporaneously, constructed a form of dilator which, covered with rubber, produces the desired dilatation without the disagreeable accidents which were caused by the old dilators. Oberländer, and recently Kollmann, have since greatly improved these instruments, which have really reached perfection. The dilatation is made without using the least violence and after rendering the urethra non-sensi-

tive by injecting a 2-per-cent. solution of cocaine or eucaine. The instrument is introduced into the urethra in the same way as an ordinary sound, and when it is brought into position, by turning the screw gently, the branches are opened and dilatation begins. When the patient notices a slight sensation of tension and pricking, then dilatation must be stopped. When the disagreeable sensation is over, then dilatation is begun again and kept up until the patient notices the pricking, reaching thus the required degree of dilatation. The instrument is left for a few minutes, and the degree of dilatation is noted in order to have it as a rule for successive sittings.

In order to determine the mode of action of the dilators, the urethroscope has been introduced immediately after the dilatation. This has revealed small longitudinal fissures a few millimetres in length all around the infiltrated surface, which are tears produced on the mucosa, especially in the vicinity of the excretory ducts of the glands. These tears occur only in the infiltrated surface of the urethra, and after a few days are completely healed up without leaving any trace. From these cicatricial points the process of reabsorption takes place which will restore the mucous membrane of the urethra to the normal condition.

The dilatation is repeated at intervals of one or two weeks, in order to give time to these fissures to heal. In the mean time the patient may continue his injections with a mild solution of permanganate or boric acid, and we can treat the urethra with a solution of silver-protein or nitrate of silver until every vestige of discharge has completely disappeared.

The old sound must not be left out of consideration, with all the inconveniences which have been attributed to it, for, with all the faults which have been found in it, it still remains as an important factor for finishing the treatment. Indeed, without the application of the sounds I am sure that nobody will bring to recovery a case of gleet. As a rule, steel sounds are used having numbers from 11 and 12 English, or 20 and 21 French, to 18 English and 30 French. It is necessary to see that the sounds are clean, smooth, and perfectly nickel-plated. Thompson's short-curve sounds are very desirable instruments, as are those with Beniqué's curve. These last I am using mostly in my practice. They have the same shape that a flexible bougie assumes when introduced into the bladder and left to itself. The sound is left in the urethra for five minutes and is then withdrawn. It is at first applied once a week, then gradually once in two weeks, and finally once a month. The patients themselves

know when it is necessary to have the sound passed, on account of some little discomfort which they experience.

The pressure on the tissues made by the steel sound causes the absorption of the remnant of the infiltrated elements in the mucosa, maintains unaltered the calibre of the urethra, and prevents the little drop of urine from remaining in the affected places. In so doing the steel sound finishes the treatment of gleet, restoring the mucous membrane of the urethra to its normal condition.

THE CONSERVATIVE TREATMENT OF APPENDICITIS AND THE FALLACY OF THE STARVATION CURE.*

By J. H. CARSTENS, M. D.,

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CASE I.—On a warm August morning in the year 1900, Dr. Bonning asked me to see a patient with him. Arriving at the house, I found a young woman, twenty-one years of age, strong and robust, the very picture of health, who had never been sick before this attack. Thirty hours previous to my seeing her, she was taken with pain in the abdomen, vomiting, temperature 101° F., and a pulse of 90. The pain was relieved by one eighth of a grain of morphine hypodermically.

The vomiting lessened and the pain gradually settled in the region of the appendix. It was not severe and was readily controlled by one eighth of a grain of morphine. She had had two or three doses before I saw her.

The doctor made the diagnosis of appendicitis, to which I agreed. When I asked him how he was treating her, he replied, "Why, I am starving her. I have given her a few small doses of morphine, but very little; the ice coil has been kept more or less on the abdomen, and that is all." Her temperature at that time was 99.2° F. and her pulse 84. I said, "Doctor, the disease is evidently subsiding; it is one of those mild attacks. If she should have another, she must be operated upon. Keep on, give her no nourishment by the mouth, keep her quiet, and she will probably be all right in a few days."

Forty-eight hours afterward, when I was operating at St. Mary's Hospital, the doctor came in and asked me to go with him and see the patient again, as she had suddenly been taken very much worse during the night. I told him, "There is no need of seeing her. If she is worse, she must be operated upon promptly and no delay. Call the ambulance and take her immediately to Harper Hospital, and I will come up as soon as I get through."

When I arrived at the hospital she had just been brought in, but what a change had taken place! She was collapsed and almost pulseless; in fact, she was dying, and in fifteen minutes was dead. The father was an educated, most sensible man, and allowed a post-mortem. This revealed a gangrenous appendix, green from one end to the other with gangrene of the cæcum around the seat of the ap-

pendix for about half an inch, and with perforation. It had been well walled in, but had ruptured, with resulting acute sepsis.

There was the poor dead girl, who had been but lately as bright as a day in spring. There was her poor old father, whose only light in life she had been, whose only solace in his old age was gone from him forever, and there I stood like a sinner who had practised the so-called conservative treatment of appendicitis.

CASE II.—On the last Saturday in August of this year, when I had made all preparations to go to New York and Buffalo with my family, while making my last rounds at Harper Hospital, I met Dr. Bonning, who asked me to see the son of an intimate friend of mine, who had a slight attack of appendicitis. He was a young man, eighteen years old, who had always been healthy. While staying at his father's summer home, twelve miles from the city, he had been seized with a pain in the abdomen, vomiting, and diarrhoea. The doctor was called and found him with a temperature of 101° F. and a pulse of 100. He suggested that he be taken to the hospital for safety's sake, so that, if an operation was required, it could be promptly performed. The patient had just arrived at the hospital a few hours before I saw him, but his symptoms had subsided. His temperature was 99° F., pulse 84, and he had absolutely no pain, although he had had no anodyne for twelve hours. The abdomen was perfectly flat, he was lean, and the hardest pressure over the abdomen, and especially in the region of the appendix, caused no pain whatever.

I asked the doctor how he had treated him, and he said, "I starved him. I gave him three hypodermics of morphine, of one eighth of a grain each; just as little as possible. I simply watched for developments." I told the doctor that the patient seemed all right. It was evidently a very mild attack, but if he ever had another, he must be operated upon immediately. With that I left. In twenty-four hours a change suddenly took place: there was considerable pain, the temperature kept on increasing, the pulse ran up, and twelve hours later his pulse was 130 and his temperature 103.5° F. Dr. H. O. Walker promptly operated on him, and found the appendix absolutely gangrenous from one end to the other, and his life was only saved by his being in a hospital where he could be promptly operated upon. That ends that case.

CASE III.—On October 17th I received a telegram from Dr. McHench to go to Brighton and operate for appendicitis. I found a young married man, thirty-three years old, who had always been delicate, but had never had any abdominal troubles. He had been sick for two weeks with appendicitis, but as the family objected to operation, and as the diseased parts were well walled in, no real dangerous symptoms had developed. But he was gradually getting weaker; the septic process was uninterrupted, the temperature varying from 99° F. to 102° F., and the pulse from 100 to 140.

I asked the doctor how he had treated him and he replied that he had starved him and had given him occasional doses of morphine to ease the pain,

*Read before the Chicago Medical Society, December 11, 1901.

and some quinine and nutritive enemata, until he got the consent for an operation.

It was a plain case of appendicular abscess. Although the man was weak, the simple opening of the abscess and the giving of a chance to Nature would be but a slight shock to his system. He was only partially, in fact, put under anæsthetics, a quick opening made, and about a pint of pus removed. The shreds of the sloughed-off appendix were found in the discharges. The cavity was carefully mopped out with sponges without irrigation, a drainage tube was inserted, and the usual dressing applied. But it was of no avail, the septic process continued, and in forty-eight hours he died, another victim to the so-called conservative treatment of appendicitis and the starvation cure.

These three cases are but specimens, and I will not bore you by reporting any more, as I could many such, for they would only be repetitions of virtually the same symptoms, treatment, and results.

In another paper I called attention to the death record of the city of Detroit last year, where I found thirty-seven cases put down with death as having occurred from appendicitis. Fifty-four were put down as peritonitis; these were probably also mostly cases of appendicitis.

"The death records of these 37 patients were signed by 19 different physicians, and I thought that, by inquiring from them, I might be able to arrive at some kind of conclusion. I received answers from 12 physicians, who reported on 25 deaths. In fourteen of these cases operation had been resorted to, and in eleven others, death occurred without any operative intervention. As the members of the medical profession who had signed these certificates had been able properly to diagnosticate the cases and were first-class men in good standing, I thought I might also get further information from them, and asked them to give me the number of cases they had had during the year, and to state how many had died with or without an operation. I received reports of 213 cases of appendicitis. Of these, 160 patients were operated on during the acute attack or during the interval; in fact, at any time when the surgeon thought it was proper. Of these 160 cases, death occurred in 14. This list of surgical cases includes naturally the reports of the principal surgeons, and gives a death rate of about 8 per cent., counting everything—easy interval cases, purulent peritonitis, and those actually moribund. The number of cases not operated on, that is, medically treated, was 57, with 11 deaths, giving a mortality of over 20 per cent. From the reports of the physicians in nearly every case, the operation had been urged, but had been refused by the parents of the patient, or by the patient himself."

These statistics, of course, are limited, but are still of a sufficient number, it seems to me, to draw some conclusion from, and to prove definitely that

patients *die as the result of appendicitis if treated conservatively*, or medically if you like. Nor were these cases of the so-called acute fulminating variety, in which death occurs within twelve or twenty-four hours, and in which, as a rule, neither medication nor surgery will be of any avail. In these cases death occurs after three days or more of sickness, in most of them after a week or ten days. The onset of the disease was slow and gradual, and the power of resistance of the patient was sufficient to keep the microbic infection in check, but finally the latter got the upper hand. The power of resistance became feebler, the onslaught was overpowering, and the patient finally succumbed.

I have always held that the notion that there are cases which are too late for early operation and too early for late operation is false and wrong. It is against all ordinary common sense, and I never could subscribe to it. No case can be too early and hardly any case too late. Cases have been recorded that were *in articulo mortis*, and, by a simple incision, letting out pus and giving Nature a chance, the patients have recovered.

If it is too late for an operation, how do you know it? Who knows that it is too late? Any of us who have had considerable experience pretend not to know, and we see cases on the second, third, and fourth day, where we suspect a rupture has taken place, and still by cutting down we find adhesions. We can peel out the appendix and remove it with ease when its wall is so thin that we know that in six hours it would have ruptured and we should have had a serious infection, and our patient's chance for recovery would have been far less. We find these cases on the third, fourth, and sixth day.

It is said to be dangerous to operate in the acute stage. What produces acuteness? Why is it acute? Why have you got an inflammation? It is microbic infection that causes it. The longer you allow the microbes to be there, the longer you allow them to accumulate and increase in virulence, the more the vital force of your patient will be exhausted. The sooner you get at this infected spot, the quicker you remove the source of infection, the more you lessen the number of microbes and toxic material by removing all you can, so much the more you husband the strength of your patient and improve chances for recovery.

Does any one with ordinary common sense actually believe that allowing the septic process to continue for days and weeks is good for the patient? That to worry and fret, and have the anxiety and dread of an operation for days before, is good? That the patient's strength and power of resistance increase, and that he is more capable of withstanding the shock of an operation, or the depressing ef-

fect of an anæsthetic better than he can during the first twenty-four or forty-eight hours? It seems to me too absurd for anybody to believe.

There is, in some cases, an intense shock from the severe pain at the onset of the disease, say for the first six to twelve hours, just like the shock following an accident, and in these cases it is probably better to wait a few hours until that first *shock of onset*, as you might call it, has passed away. But after that, it seems to me, the sooner the operation is performed, the better.

In being called upon to operate in different parts of the State, in Canada, down in Ohio, and in Indiana, I continually hear about the starvation treatment and what wonderful results are alleged to be obtained by it. Now I, myself, think that that is good treatment in all kinds of bowel troubles, typhoid fever, etc., and even in appendicitis where an operation cannot be performed. I think it is better than feeding a patient. Keeping the bowels empty and preventing peristaltic action certainly helps agglutination and walling in of the diseased appendix. But I must emphatically protest against the starvation plan of treatment when advocated with the idea of the patient getting over the attack and then operating during the quiet interval.

It may be said that the so-called starvation plan of treatment was not properly carried out, but I know in some of my cases that it was. The lavage of the stomach is certainly not necessary when the patient has vomited for twelve or twenty-four hours, nor is the use of a simple enema harmful, when given at the very onset of the disease, if there is constipation; but in most of the cases there is diarrhœa and hence the bowels are absolutely empty. In fact, I might go further. It is very doubtful if giving liquids by the mouth will cause any peristalsis, or at least sufficient peristalsis to give rise to irritation of the peritonæum.

The gas, which is generally found in the intestinal tract, in moving around from one place to the other probably causes more irritation of the peritonæum than a little liquid given by the mouth.

Nature kindly seems to provide for all this. The stomach is thoroughly emptied by vomiting and most frequently the bowels are emptied by an attack of diarrhœa. I admit that it is good treatment simply to let these patients alone; trying to do too much, often does harm. But people are ignorant and sometimes give the patient all kind of food and drink, often even with the consent of the physician.

What I wish to object to most emphatically, is the idea that has gone abroad among the profession, that by absolutely starving the patient and preventing peristalsis an attack of appendicitis will be checked and be made to subside, and that the pa-

tient will recover and can be operated upon when the danger is very little. This is a most pernicious and false doctrine, and has been the cause of more deaths than anything that I know of since the real pathology of diseases in the right iliac region has been so thoroughly explained.

Every timid physician, and every dishonest one who wants to hold on as long as he can for the sake of the fees he will get from the few visits, falls back on the statement as an excuse for not calling a surgeon sooner. "Why, that was not necessary. I put the patient on the starvation treatment, and then after he has recovered from the acute attack, I shall send him to a surgeon for operation." The same old excuse, only with variations.

There may be rare cases where such a line of treatment is justified and proper, that is to say, where the environment of the patient is such that an operation would be more dangerous than the disease, or where Nature can be more trusted than the operating surgeon. But, with the facilities of transportation at hand and the charitable institutions dotting the land at short distances, everybody, even without means, can be transported and, within a few hours, placed in the hands of a surgeon where the likelihood of a fatal result would be minimized to the greatest possible extent.

I admit that cases vary, that the power of resistance in one individual is far greater than that of another, and I admit that there is a variation in the bacteriological infection. It depends a great deal upon what kind of microbes are at work, whether you have mixed infection or not. Still, we know that the same microbes will be more virulent at one time than another, and we must look even upon all mild ones with great suspicion.

When I think of the many promising lives, especially of young men and young women, annually sacrificed, it makes my heart ache. When I see the only son, around whom all the hopes of the parents are centred, who has just entered the university, stricken down and carried to the cemetery; and when I see the handsome young girl, who has just graduated from high school, and who is idolized by her parents, suddenly carried away to a premature grave as the result of the so-called conservative treatment of appendicitis, then I think that I am justified in talking and writing about it year in and year out, even though I be called a crank, until finally the medical profession is aroused and possessed of the knowledge that the only *true conservative* treatment of appendicitis is immediate operation and the removal of the offending organ.

Having swung with the pendulum from one side to the other, having wavered, not knowing which way to turn in many cases, I have finally, from mature experience, come to the conclusion that the

only conservative method of treatment is a prompt operation.

I know there are rare cases where patients will refuse, but they are very rare indeed. If the attending physician wants it, and if the surgeon insists on it, people will always submit. There are very rare cases where an immediate operation will not be consented to. The parents, child, or some intimate friend, must be telegraphed for from a distance, and the operation may have to be postponed for twelve or twenty-four hours for sentimental or business reasons; and in some cases the surroundings of the patient are vicious, or an operator is not at hand. But all these rare exceptions do not invalidate the rule, and the difficulties must be overcome as quickly as possible and the operation promptly performed.

In concluding this rambling paper, I will sum up as follows:

First, that the conservative treatment of appendicitis consists in prompt operation.

Secondly, that the starvation method of procrastination is vicious and has cost many lives, because it is used as an excuse to dally with patients that should be promptly subjected to removal of the organ.

CONCERNING HEPATIC SYPHILIS.*

By SIMON FLEXNER, M. D.,

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The liver has played an important part in the history of our knowledge of syphilis. The oldest views upon the disease held that syphilitic ulcers were the result of the corruption of the humors, the origin of which was to be looked for in the liver. At about the same time with the prevalence of this conception, there arose another, according to which the liver became affected consecutively to the disease of the genital organs. Some writers, indeed, denied all syphilitic affection of the liver, and among them was Morgagni, who states (*De Sedi-bus et Causis Morborum*) that he does not remember to have found the liver diseased in the bodies of persons who had suffered from syphilis.¹

The first conclusive observations upon luetic lesions of the liver were made by Dittrich,² whose papers contain the first comprehensive description of the appearances of the disease. He described yellow, dry, firm, solid, and almost round masses which, while previously seen in the liver, had, according to his view of their nature, been misinterpreted. Thus, for example, Budd had regarded them as encapsulated nodular tumors, the outcome

of accumulations of caseous material in the dilated bile ducts, and Oppolzer and Bochdalek looked upon them as healed cancerous nodules. Dittrich insisted on their luetic nature, and thus prepared the way for rapid advances in our knowledge of the visceral lesions of syphilis. On the other hand, his views of the composition of the tumors were erroneous, for he regarded them, not as new growths, but as encapsulated unorganized exudates. He believed that there occurred in the course of syphilis "bacony" exudates, which, after going through certain transformations, remained behind, imbedded in the tissues in the form of crude masses.

The first accurate account of the nature, development, and varieties of syphilitic lesions of the liver we owe to Virchow. He not only brought the yellow hepatic nodules into relation with the general lesions of constitutional syphilis, but showed them to be new formations, taking origin either from normal connective tissue or from a new connective tissue, the result of a preceding chronic interstitial hepatitis. Virchow also recognized lesions of different nature or slighter grade. Thus, he described a condition of simple hyperplasia of the interstitial tissue, an interstitial hepatitis, and the formation of bands of connective tissue, which eventuated in depressed scars or produced a multi-lobulation, now regarded as one of the chief types of syphilitic disease. Within the fibrous bands, gummata may be present. The gummata are found on the superior surface of the organ most frequently, in which case a diffuse perihepatitis may exist; or they occur in the depth of the organ or near the porta of the liver in connection with the capsule of Glisson. It is only very rarely, and then in the case of small nodules, that they are found scattered free in the liver parenchyma, for wherever they occur they tend to be imbedded in dense fibrous tissue. The size and general appearances of the nodules do not call for description in this place. You are all familiar with their characters and with the manner of their production. Virchow's views of the proliferative nature of the nodules have received such general confirmation that the matter is no longer one of doubt. Even the central, yellow, amorphous mass, is now known to be the product of retrogressive changes and not the remains of an exudate which had failed to be converted into organized tissue—the view previously presented by Dittrich. From the several forms of hepatic lesions of syphilis Virchow removed amyloid degeneration, which he believed to be an essentially passive, and no longer syphilitic, affection, the origin of which was to be sought in some cachectic state.

The knowledge and views of syphilitic disease of the liver held at the present time do not differ from those here laid down. Dittrich brought the first

*Contributed to the Symposium on Diseases of the Liver, held by the New York State Medical Society, October 15, 1901.

¹Quoted from Frerich's *Diseases of the Liver*.

²*Prager Vierteljahrschrift*, 1849, p. 1; 1850, p. 33.

indubitable proof of the existence of such disease; and Virchow defined it, described all its varieties, their mode of formation, and the ultimate fate they underwent, to which facts there has been made in the course of nearly half a century no important addition.

Syphilitic affection of the liver is expressed in a variety of ways. The occurrence of icterus in the course of lues indicates the involvement of this organ. Now generally admitted as one of the coincident manifestations of the disease, no adequate explanation of it has been produced. Alterations in the bile vessels, in the liver cells, the mucosa of the duodenum, and the gastrohepatic lymph glands have all been assumed, but not proved. That the condition is of specific nature is not probable; but upon what transitory changes, the effects of the action of the syphilitic virus, it depends, is wholly conjectural.

In a similar manner, the passive hyperæmia of the liver is not a specific affection; but doubtless it arises in consequence of diseases of the heart and arteries, in which organs the poison commonly produces alterations leading to disturbances of the mechanics of the circulation.

There is not entire unanimity of opinion regarding the occurrence of ascites. Bamberger found it only once in the absence of concomitant kidney affection; Jullien found it with gumma, sclerosis, and the hypertrophic form of interstitial hepatitis; Thierfelder regards it as common, whereas Mauriac holds its association to be limited to the contracted liver. The weight of opinion is in favor of ascites being present in syphilitic disease of the liver, but under certain conditions only. It may be expected in general cirrhosis, and if the portal vessels are pressed upon by gummata, constricted by scars, or obliterated by endophlebitis. In gummatous hepatitis ascites does not appear unless there is concomitant disease of the kidneys or heart, or chronic indurative peritonitis.

The syphilitic inflammations, using this term in the older and generally accepted sense, are referable directly, perhaps, to the action of the specific virus or poison. Should we use analogies derived from the manner of action of known pathogenic organisms we would doubtless say that the specific lesion of syphilis as it has been observed in the liver is the gumma; and that the circumscribed and diffuse growths of connective tissue that characterize the interstitial change are probably the result of the action of some diffusible, soluble poison—perhaps a toxine—derived from the growth of a specific organism—the parasite of syphilis. A comparison with the manner of action of the tubercle bacillus which, at one time, gives rise to tubercles, and at an-

other to diffuse fibrous tissue overgrowth, would support such a view.

I shall consider the disease according to the main types as defined by Virchow. The contribution which I may make to the subject has grown out of a statistical compilation of the cases of hepatic syphilis contained in the autopsy protocols of the Philadelphia Hospital for the year 1867 to 1901. The cases were selected and abstracted by Mr. Skilern, of the Medical School, to whom I wish to express my indebtedness. The entire number of autopsy records examined was 5,088, and among these the records of 88 cases of hepatic syphilis were encountered. The types of disease were the interstitial hepatic, gummatous, perihepatic, and amyloid. The first made up about half of the cases, next to which in frequency came the gummatous form (23 cases); perihepatitis was observed 16 times; amyloid disease 7 times.

Of considerable importance in such a classification are the instances showing the so-called syphilitic scars. These were encountered 38 times. They were located superficially, generally upon the superior and anterior surfaces of the organ, were commonly multiple, and at times penetrated to some depth. In some instances gummata were found in the same organ. Whether all such scars are properly to be regarded as healed gummata is perhaps a question that is open to debate. No one will, I think, doubt that the usual methods of sectioning the liver do not suffice for entirely eliminating the presence of gummata any more than of other nodular formations. Frequently the reward of discovering such a growth comes with prolonged search, during which the liver is virtually hacked to bits.

There can be no doubt that many gummata disappear from the liver, either as a result of treatment or spontaneously. The analogy with similar lesions on parts of the body more exposed to exact observation renders such a result probable, and I consider the scars referred to as adding to the proof of such an issue. When the scars are accompanied by fibrous bands penetrating the tissues and containing remains of gummata, then their nature may be taken as demonstrated.

Virchow left the question of the disappearance of hepatic gummata in doubt, though inclining to the view that absorption does take place. On the other hand, he pointed out that the rich growth of scar-like tissue about the nodules might interfere with complete removal. Later writers speak positively upon their disappearance, and the favorable prognosis of gummatous hepatitis depends largely upon the tendency to undergo healing.

Indeed, this form of syphilitic lesion is often accidentally encountered when partially or completely healed, at the autopsy table, no disturbance of the

functions of the liver having been observed during life. And what is more conclusive still, are the statements of Mauriac (quoted from Neumann, *Syphilis*, p. 429), who observed in instances of profound emaciation and loss of strength from supposed carcinosis, that iodide therapy brought about cure. The prognosis, according to Neumann, is the more favorable the younger the individual, the less advanced the lesion, and the fewer the complications. That even severe ascites, the effect of the pressure exerted by gummata, may gradually lessen and disappear, is indicated by the following case which came under my observation. The case is not less instructive because of the associated syphilitic ulcer of the stomach, perforation of which into the peritoneal cavity was the immediate cause of death. As the case has already been reported in detail,³ only the history and such portions of the autopsy protocol as refer to the hepatic lesions will be given:

The case was that of a man, fifty-two years of age, whose illness extended over a period of three years. The man was a patient of Dr. Irving Miller, of Baltimore. He was in the Johns Hopkins Hospital on two occasions, but only remained to be examined; he was not treated there.

Dr. Miller writes: "I first saw the patient in August, 1892. At that time he was a large, fairly well-nourished man, about six feet in height and weighing 170 pounds. His average weight was 200 pounds. His occupation was that of a showman. The first appearance of his illness was at the preceding Christmas, while filling an engagement in Boston, and followed a drinking-bout and exposure. It was ushered in by a severe spell of vomiting, which persisted for several days, and was followed by irregular chills. This condition of affairs continued off and on until the summer, when I first saw him. At this time the temperature ranged around 101° F.; there was a tumor in the splenic region, extending nine centimetres below the costal margin, and forward nearly to the umbilicus. Exquisite tenderness was present all over the area of dullness. I regarded the tumor as being the enlarged spleen. The urine contained bile pigment, and there was some pigmentation of the skin. Neither sugar nor albumin was found in the urine. There was little change in the conditions noted for several months, when the splenic tumor was found to have diminished markedly and ascites to have appeared. The dropsy increased, involving the legs and scrotum. The patient was tapped for the first time on April 20, 1893; three and one half gallons of fluid were withdrawn. The tapping was repeated at intervals of from six days to two weeks, the amount of fluid withdrawn varying from two to six gallons. The relief afforded by the paracentesis was so great that the operation was resorted to to enable the patient to go fishing the next day. The accumulation of fluid continued for two years, and

then began to diminish, until very little fluid could be detected in the abdomen. Purges were occasionally administered. The morphine habit was acquired. The night before his death the patient dined abundantly on fried crabs and ice cream. When I saw him a few hours before his death, there was intense abdominal pain and tympanites. Pulse thready, weak, 130 to the minute, profuse sweating. He died in the early morning."

The patient had been in the hospital on two occasions—in February, 1893, and March, 1894—for examination. On his first entrance Dr. Hewetson found a full abdomen, no increase of liver dullness, the spleen enlarged and palpable three fourths of a hand's breath below the costal margin. When he returned in 1894 he reported having been tapped at intervals of about ten days, in all sixty-five times. After the removal of 9,700 centimetres of fluid the liver could be felt below the ensiform cartilage; it was hard and apparently bound down by adhesions. A probable diagnosis of hepatic cirrhosis was made.

The autopsy was performed eight hours after death on a warm day in June. The anatomical diagnosis was: Old adhesions between liver, stomach, spleen, and pancreas. Large hepatic gumma. Syphilitic ulcer of the stomach with perforation. Acute diffuse, sero-fibrinous, and gaseous peritonitis. The peritonitis, it may be remarked, was caused by a mixture of the *Bacillus aerogenes capsulatus*, the *Bacillus coli communis*, and the streptococcus, the first organism predominating.

The omentum was greatly shortened, the small intestine contracted, and the general serous surface was thickened. The loops of the jejunum and ileum were particularly firm and rigid. The spleen was much enlarged, measuring 12 x 17 x 6 centimetres, capsule opaque and cartilaginous. No gummata. It was bound firmly to the fundus of the stomach and covered by the very closely adherent omentum. The latter structure contained little fat, appeared as a mass of tatters, and was gathered together at the left border of the stomach, with which organ and the spleen it was firmly united. In gently separating the adhesions in this region the stomach contents were seen to issue from a small opening in this organ. They agreed with the material found in the peritoneal cavity when it was first opened. The wall of the stomach in this situation was firm and board-like, and on being dissected away from the spleen was found thickened out of all proportion to the rest of the organ. The perforation had taken place below the splenic adhesion and at a point uncovered by complete omentum.

On opening the much contracted stomach the general mucous membrane presented a mamillated appearance; but in the fundus, four centimetres from the œsophageal opening and occupying the greater curvature, a large ulcer measuring 5 x 5 centimetres was found. The base of this over most of the central part was the muscularis; the edges were thick, polypoid, and firm, and the perforation was 15 x 3 millimetres in size. Just above the perforation the tissues presented a greenish and necrotic appearance.

The liver was bound to the diaphragm; its capsule was thick and cartilaginous. The left lobe was reduced to a mere appendage, but it was firm and

³Transactions of the Association of American Physicians, 1898, Vol. xiii, p. 102.

nodular. The right lobe was not especially reduced in size. On section of the organ, the remnant of the left lobe was occupied by a mass formed by the confluence of several gummatous nodules, and the mass extended well into the right lobe along its lower border. The tumor thus formed lay over the portal vein, which was thick and white in color as it entered the porta of the liver, and passed upward to the summit of the liver between the lobes and impinged on the vena cava. The dimensions of the tumor were 11 x 4 x 5 centimetres. The gummata were of perfectly characteristic appearance and, on histological examination, presented the usual structure. Gummata were not found in other organs.

The comment made in the original report seems suitable at this time. It was as follows:⁴ "The clinical cause of the disease is made clear by the autopsy findings. The splenic tumor and ascites were the results of the portal obstruction; the obstructing agent was the syphilitic gumma. It seems reasonable to suppose that the gumma was larger at one time than it was at the autopsy, and that the reduction of ascites was due to this change. The evidence for this might be found in the size of the left lobe of the liver, and is strengthened by the absence of a marked collateral circulation."

The outlook for syphilitic interstitial hepatitis is less favorable than the preceding, although if the condition is not advanced, it is more favorable than non-syphilitic cirrhosis (Neumann). When the cirrhosis is advanced, the liver considerably diminished in size, and stomach and intestinal complications are marked, the prognosis is grave. Similarly, the existence of amyloid disease is, of course, to be considered of serious import, and yet instances have been recorded in which both advanced sclerosis and moderate (?) amyloid disease have yielded to treatment. If by this is meant return of the diseased organ to a state approaching the normal, and not merely the relief of certain symptoms along with the arrest of the pathological condition, the pathologist who has learned to regard fibrous tissue as a permanent structure and amyloid as absorbable with great difficulty, may be pardoned his astonishment and, perhaps, incredulity. Instances of recovery under these conditions have been mentioned by Grainger Stewart, Chovstek and Hérard.

The question of relative frequency of types of the disease seems not to have been considered by most writers. The statistics obtained from the Philadelphia Hospital indicate that the interstitial disease makes up one half of the cases. Just here we meet with a great difficulty in that the pathological anatomy of this form of supposed hepatic syphilis does not differ essentially from that of ordinary cirrhosis, and the criteria for the determination of the nature of a diffuse cirrhosis in adults are not always easy to obtain or reliable when secured. The character of persons who seek a large public hospital

and almshouse always suggests the probability of exposure to other poisons—alcohol in particular—in addition to the luetic virus. But that a part of the cases of generalized cirrhosis were certainly syphilitic is proved by the association of gummata in nine instances. The next lesion of greatest frequency is the gumma without marked cirrhosis, while amyloid degeneration was encountered least often.

The stage of infection to which the hepatic lesions belong has been discussed widely. Certain transient disturbances of the liver—*e. g.*, jaundice—belong to the secondary period, and Dittrich and Gubler believe they have shown that cicatrices may also appear during this stage. Frerichs, in his work on the *Diseases of the Liver*, states that he has never observed such lesions which could with perfect certainty be referred to the secondary period. The profound lesions of hepatic syphilis will be found in association with symptoms of the tertiary stage; and while it is highly probable that the general cirrhosis appears at that time, the gummatous nodules and amyloid must belong to that period.

We are uninformed of the factors that determine the situation of the focal lesions. Virchow, basing his views upon the position of the cicatrices, is inclined to regard mechanical injuries, such as contusions, traction of ligaments, etc., as cooperating in causing localization. This view is hypothetical, but not without the bounds of possibility.

ELECTRICITY IN RENAL DISEASE.*

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The consensus of opinion undoubtedly is, if indeed physicians for the most part give it any thought at all, that electricity has little if any place in the treatment of renal disease. I hope to show in this paper that theoretically it ought to, and that practically it does, do good. The five cases that I have to relate, to be followed by a general description of the special method and forms of current used, may seem a very small number as conclusive evidence of the value of the method employed. Small as it is, however, it has taken me six years to get them. The great difficulty is that there is no probability of markedly improving the condition of these patients without long and persistent, and, if possible, daily treatment. Not a few other cases of this character have come under my observation during this time, but through lack of confidence or other causes have fallen by the wayside after submitting to treatment through a period varying from a week to a month. In some of these cases there were undoubted signs

*Read before the American Electro-therapeutic Association, September 24, 1901.

⁴*Loc. Cit.*

of benefit, but none of them were of sufficient statistical value to be included among those about to be given.

It may, I think, be assumed that between functional and organic disease of the kidney, between simple hyperæmia and the beginnings of those structural changes that we term Bright's disease, there is no definite boundary line that reveals itself to any of our known methods of interrogation. It may be that most, if not all, the cases I have seen, in which great and permanent improvement was noted, were simply conditions of renal hyperæmia, active or passive. It is reasonably certain, however, that if any of them could be classed as Bright's disease, they must be put in the category of inflammatory affections affecting the tubules or stroma rather than of those more serious structural changes originating in waxy and cirrhotic kidney. I am not sufficiently optimistic to assert that the course of progressive structural changes in the nerve tissue, as in true ataxia, or the degeneration characteristic of the more serious forms of Bright's disease, can be permanently arrested and cured by this or any other known method of treatment, but I do believe that, by arresting inflammatory action and congestive pressure through heightened circulatory drainage and increased filtration, by removing the inflammatory products which block up the uriniferous tubules, we can do much toward the prevention of more serious and chronic complications, and hasten the recovery of those cases which have not yet crossed the border line of incurable organic changes.

CASE I.—Mrs. S., aged forty-five years, was referred to me, February 23, 1894, by Dr. M. Allen Starr, for such form of electrical treatment as I might judge best adapted to her condition. The general health of the patient was not greatly impaired, nor did her appearance suggest severe constitutional disturbance, but, since a hysterectomy some two years previously, her health had been by no means up to the normal standard and for the past year she had suffered frequent attacks of severe and uncontrollable cephalalgia. It was for this nervous condition that she had consulted Dr. Starr, who soon detected the renal source of her distress.

Urinary examination, by Dr. J. C. Smith, revealed the following conditions: Specific gravity, 1010; albumin, two per cent.; urea, $\frac{1}{2}$ per cent.; numerous large hyaline and many granular casts. Aside from a proper regulation of her diet and the occasional administration of some simple remedy for digestive disturbance, little treatment was given other than the electrical, which consisted almost entirely of local applications of the high-tension Faradaic current. Fifty applications were given, extending over a period of three months, the average length of each *séance* being about forty-five minutes. The urine was examined from time to time, with indications of progressive improvement, and the last examination in June, shortly before the patient's departure for the country, showed a specific gravity of

1018, no albumin, no granular, and only a very few hyaline, casts; urea, 1.5 per cent. The headache had quite disappeared and in every way she had greatly improved. In 1899, five years later, the patient was again examined and found to be in excellent health.

CASE II.—Mr. P., aged forty-eight years, was referred to me by Dr. A. R. Carman, May 8, 1896. The symptoms that first attracted attention, some eighteen months previously, were diminution in the quantity and alteration in the quality of the urine, with general debility and pain in the loins. The patient complained later of dyspeptic symptoms, which were thought to be due to slight gastric catarrh.

Through treatment, careful attention to diet, and judicious exercise on his wheel, he improved more or less in all his symptoms, but latterly his urine had again decreased in quantity, and was of a deeper color. He spoke of considerable pain in the back and loins and of increasing debility. Examination by Dr. Smith showed a specific gravity of 1015; albumin, five per cent.; urea, 0.9, with many hyaline and granular casts. No medicine was given, neither did the patient restrict his diet as rigidly as he should have done. The treatment was about equally divided between local applications of the high-tension Faradaic current and both local and general static treatment.

From May 8th to November 30th, a period of seven months, with an interval of rest between August 1st and September 21st, some seventy applications were made, each from thirty to fifty minutes in duration.

From time to time analyses were made with varying results, but, as in the previous case, with indications of progressive improvement. The last analysis of which I have record, made October 27th, showed a specific gravity of 1020; urea, $1 \frac{8}{10}$; albumin, a trace; and no granular, and but a few isolated hyaline, casts.

CASE III.—Mr. E., aged thirty-seven years, was sent to me by Dr. J. S. Bird, of Hyde Park, December 7, 1897. The health of Mr. E. had always been good until an attack of scarlet fever nine months before. From the renal symptoms following this attack, he had not recovered, and, for the last two months, had grown distinctly worse. The leading symptoms were pronounced albuminuria and an unusual tendency to fatigue after slight exertion. Ever since resuming his usual occupation he had been unable to work more than half time, and for more than a month had ceased to work at all. The specific gravity was 1020, with very little if any diminution in the quantity passed; urea, 2.00; albumin, about two per cent.; there were a very few hyaline casts.

As there was no cardiac or pulmonary disease or any discoverable venous obstruction, the condition was diagnosticated as one of passive renal congestion consecutive to scarlatina. The patient was under treatment two months, and received twenty-eight applications, mostly with the static wave current. An analysis made shortly before the cessation of treatment detected neither albumin nor casts, but the same specific gravity and relative amount of urea as at the first examination. His strength had so increased that, for several weeks before

stopping treatment, he had been working without discomfort the usual number of hours daily.

CASE IV.—Mr. D., aged forty-four years, suffering from what was subsequently believed to be a chronic nephritis consecutive to calculous pyelitis, was referred to me June 29, 1899, by the late Dr. Abbott Hodgman. This patient not only failed to recover permanently, but finally developed maniacal symptoms and was sent to an asylum. Nevertheless, I regard the case as an interesting one, well illustrating the very positive value of electricity in alleviating the symptoms of chronic kidney disease, and in this case after a multitude of other remedies, external and internal, had been tried and failed. The condition here seemed to be due to a too free use of alcohol and perhaps, also, to frequent and continued exposure to cold. The patient's business required him to be up and out in the early hours, and his use of stimulants was confined mostly to these early hours, and on an empty stomach.

Symptoms of kidney difficulty developed a year or more before I saw him, and during this time he had been able to attend only irregularly to business. Latterly, he had suffered pains, of the most severe and persistent type, in the back thigh, and groins, which Dr. Hodgman had found difficult to relieve, because of the profound and dangerous depression following the use of morphine. An examination by Dr. H. T. Brooks revealed strong albumin reaction with Heller's and Esbach's tests; numerous small hyaline, fine, and coarsely granular casts, together with epithelial pus, blood, and mixed casts; urea, 2.4, 11.52 grains to the ounce. Indican excessive, with innumerable large and small calcium oxalate crystals. Under the daily use of local applications of the high tension, supplemented further on by the static, current of alternating potential (wave current), the patient improved in all his symptoms. The excessive pain, from which he had so long suffered yielded rapidly, and was soon followed by increased weight and strength. Within six weeks fifteen pounds had been gained, and the patient having the ability and will to walk long distances, it was sometimes difficult to keep him within bounds.

Several subsequent examinations by Dr. Brooks showed varying results, but no great apparent improvement in the character of the urine, until December 6th, when the sample submitted was found to be greatly improved. The albumin, though showing a distinct reaction, was small in amount as compared with former specimens. Urea, 1.2; chlorides normal; indican, normal; rarely a small hyaline, faintly granular cast. Few blood or pus casts. Few fatty or blood-stained renal elements. Of this specimen Dr. Brooks wrote as follows: "But one half dozen casts were seen in all, one of them composed of leucocytes (pus) entirely. The blood corpuscles were all isolated, well preserved and clear, and are very probably responsible for much of the albumin noted. As compared with former specimens the anatomical elements are greatly reduced in number." This patient subsequently had a relapse following on certain indiscretions, and the urine again began to show an increase in the number of casts, amount of albumin, etc. Delusions supervened, with homicidal tendencies leading finally to the commitment of the patient.

Incomplete or imperfect metabolism resulting in self-intoxication is now believed to be a frequent cause of renal disease. The partially transformed products resulting from defective metabolism fail to penetrate the renal epithelium, and, instead of being excreted by the tubules in a normal manner, become a direct source of irritation and produce a condition of renal inadequacy that may lead to serious organic changes. The following case I believe to be of this character:

CASE V.—Mrs. L., aged forty-three years, consulted me, June 18, 1900, suffering from almost constant cephalalgia, frequent attacks of dizziness, scanty urine, with much pricking, itching, and tingling of the extremities.

These symptoms began about six months previously, although for some years she had been the victim of periodical attacks of extreme mental depression and hysteria. Several urinary examination were made, revealing always a very small amount of albumin with a deficiency of urea, but no casts. Three days subsequently I was hastily summoned to her residence, and found her partially unconscious with incomplete paralysis of her right arm and both legs. The following day, her mind was as clear as ever, and she had, in a great degree, recovered muscular power in all the affected limbs. This quick recovery was in itself sufficient to exclude hæmorrhage or embolism. Under static vibratory treatment there was an almost immediate increase in the urinary flow to nearly, if not quite, double the ordinary amount. The cephalalgia, vertigo together with all the annoying sensory symptoms, gradually disappeared, and, at the end of two months, after thirty-eight treatments, she was discharged quite well in every respect and with no trace of albumin.

You will, I think, agree with me that these cases are more than simply suggestive. Taken in connection with what we find to be a common every-day result of electrization, viz: the regulation of the eliminating processes of the body with nutritional improvement, they demonstrate clearly enough to my mind the therapeutic value of electricity in some of these cases.

In their treatment my efforts were restricted to the following two methods of administration:

First: *The high-tension Faradaic current.* Flexible electrodes, of blocked tin, three inches in diameter, and covered either with sponge or with layers of absorbent cotton, are placed over the region of each kidney and firmly bound.

Beginning with *séances*, not more than ten minutes in duration, they may be very gradually or quickly increased according to the susceptibility of the patient, to three quarters of an hour.

The strength of the current should be gauged by the sensation of the patient—*i. e.*, it should be given almost, but not quite, to the point of actual discomfort.

Mild currents are, I am convinced, of little value, and fortunately, with suitable, and properly placed, electrodes, the current strength that can be easily borne is very great. It is the skin which offers the chief resistance. It is the only seat of pain in the passage of the current, and, therefore, the epidermis alone need be considered, so far as the sensibility of the patient is concerned. When once the current penetrates the skin, its threads, if we may so speak, diffuse rapidly, and the stronger the initial force, the greater the density of these threads, and the more potent their action at any given distance from the surface.

The question, then, is not how weak, but how strong, a current can be administered without actual pain, in order to get the requisite local effect on the internal tissues and organs of the body.

Second: *The static wave current.* This was used in connection and alternation with the high-tension Faradaic current. It has the advantage over the last named of exceeding it greatly in frequency and tension; of enabling one to administer a current, not indeed of greater magnitude, but of far greater force and rapidity of oscillation, with the minimum of sensory and motor disturbance. Indeed, currents of the highest tension and frequency seem to have neither motor nor sensory effect at all appreciable, yet we find, as a result of these infinitely rapid vibratory disturbances, a marked influence on the circulation and combustion.

On the circulation they have been found to lower the blood pressure at the moment of application, followed by increased pressure and vascularization. As a result, we get an active circulatory drainage of inestimable benefit in conditions of passive congestion. Now, in the treatment of hyperæmia of the kidney, our aim is to relieve the hyperæmia and albuminuria by quickening its circulation. With less blood passing through the renal capillaries in a given time, less fluid is withdrawn from them, and anything which heightens blood pressure and increases renal filtration, relieves the burdened organ of much stress and strain. Diuretics are valuable therapeutic agents, because they increase blood pressure and augment the quantity of water excreted.

It is on the principle of a diuretic, partly at least, that electricity acts. The increased blood pressure within the glomeruli that follow its use results almost invariably in an increased flow of urine. More important still must be its influence over metabolism, its stimulation and regulation of disordered nutritive exchanges. I have referred to certain advantages of the static wave current over the high tension, its greater frequency and power to overcome resistance without motor or sensory effect, and the general nutritional influence that necessarily accompanies even local applications. When we consider

that its voltage and alternations reach into the hundreds of thousands, it is not difficult to understand that quickened metabolism of tissue must be a necessary accompaniment of its painless passage. The simple local application of what we have been accustomed to term the dynamic forms of electricity does not hasten these general nutritive exchanges as does local static treatment.

In order to obtain this influence over general nutrition, we are obliged to combine with the local treatment by the high-tension Faradaic, the older method of general Faradaization. This method is equally efficacious, according to my experience, in the condition under consideration, now that we have at command the high-tension coil, but is decidedly more tedious to both physician and patient.

As an offset to this, however, it has the no slight advantage of being available always at the bedside of the patient, and, if it does not possess the high potential of the other, its magnitude is far greater.

25 EAST FORTY-FOURTH STREET.

Therapeutical Notes.

Eggs in Therapeutics.—L. Normand (*Union Pharmaceutique*, November, 1901) gives a series of formulæ in which eggs may be employed therapeutically:

The most common preparation, known domestically as "chicken's milk" (*lait de poule*) is made as follows:

℞ Yolk of. 1 egg;
Hot water. 6 ounces;
Sugar. 5 drachms.

M.

Mix and flavor with orange flower water, 2 drachms.

Restorative Preparations:

The "restorative mixture" of Lewis:

℞ Cream. 6 ounces;
Yolk of. 2 eggs;
Sugar. 7 drachms.
Cinnamon water. 11 "

M.

Guibort's formula for "syrup of eggs":

℞ Eggs. 10
Water. 1¼ ounces.

Beat up and add

Sea salt. ½ an ounce;
Orange flower water. 6 drachms;
Sugar. 9 ounces.

A restorative tea:

℞ Yolks of. 14 drachms.
Cloves. 2 eggs;
Sugar. 30 grains;
Water. 8 drachms;
Brandy. 23 ounces;

M.

For Offensive Breath.—The *Dental Cosmos* for January gives the following:

- R Solution of chlorinated soda.... 1 drachm;
Peppermint water. 6 ounces.

M. To be used as a gargle.

For Inflammation of the Nasal Sinuses.—Castex (*Journal des praticiens*, November 16, 1901) says that if the inflammation is not purulent, a few inhalations of menthol suffice for treatment. He recommends the following formula:

- R Crystallized menthol. 15 grains;
Alcohol. 1 ounce;
Distilled water. 9 ounces.

M.

Treatment of Lupus by Blue Light.—Colquhoun (*New Zealand Medical Journal*, March, 1901; *Treatment*, December, 1901) describes a simple form of Finsen's treatment for lupus. The patient sits with his back to the window, and sunlight is reflected from a mirror and focussed through a biconvex lens. Between the patient and the lens is a bottle containing an aqueous solution of ammonio-sulphate of copper, which absorbs the heat rays. The result is a concentrated beam of blue light. Good results were obtained by daily sittings of an hour's duration.

Electrical Treatment of Aural Vertigo.—Libotte (*Journal de Neurologie*, 1901, No. 10; *Archives de Neurologie*, December, 1901) speaks highly of the use of static electricity in aural vertigo, by means of a special electrode, the patient being on the insulated stool. This electrode consists of a wooden rod terminating in an ebonite button and enclosing a graphite thread. The patient, being connected with the positive pole of the machine, receives through the auricular electrode the negative discharge directly upon the tympanum, the ossicles, and the muscles.

For Insomnia.—Dr. von Gellhorn, says the *Dietetic and Hygienic Gazette* for January, has recently reported a cure for sleeplessness. A piece of muslin, about eighteen inches wide and two yards and three quarters long, is rolled up like a bandage and a third of it is wrung out of cold water. The leg is then bandaged with this, the wet portions being carefully covered by several layers of the dry part, as well as by a layer of gutta-percha tissue, and a stocking drawn on over the whole. This causes dilatation of the vessels of the leg, thus diminishing the blood in the head and producing sleep. It has been found by Winternitz that the temperature in the ear passage begins to fall in a quarter of an hour after the application of the bandage; the decrease amounting to .4° C., and the normal not being again reached for from one and a half to two hours afterward. The author has employed this means of procuring sleep for a couple of years, and finds it especially useful in cases where there is congestion of the brain. Sometimes he has found it necessary to reapply the bandage every three or four hours, as it dried.

This is very much the same in its effects as the cold wet compress over the abdomen or at the nape of the neck, which is much used in health institutions and home treatment.

For a Mouth Wash.—The *Dental Cosmos* for January gives the following:

- R Tincture of calendula..... 1½ ounce;
Carbolic acid. 40 grains;
Water, enough to make..... 8 ounces.

M.

Sodium Sulphate as a Hæmostatic in Typhoid.—Mossé (*Giornale Internazionale delle Scienze Mediche; Treatment*, November, 1901) extols the use of sodium sulphate in doses of one grain and a half every hour in a little water, in the intestinal hæmorrhages of typhoid. A case is recorded in which a man was compelled to go to bed owing to fever and severe abdominal pain, followed by a large loss of blood. Sodium sulphate was at once given in small doses in a little water, and after the second day's treatment no more blood was passed. The diagnosis of typhoid was subsequently confirmed by the Widal test.

Guaiaicol Inunctions in Tuberculosis of Childhood.—Dr. Rachford (*Archives of Pædiatrics*, December, 1901) calls attention to the following formula published by him (*Ohio Medical Journal*, May, 1894) eight years ago for use as an inunction in the tuberculosis of childhood. He has since used it repeatedly during the past eight years in many hundreds of cases, and is more than ever convinced of its value:

- R Guaiaicol. 1 drachm;
Lanolin. 2 drachms;
Lard. 5 "

M.

One level teaspoonful to be rubbed into the chest at bedtime each day.

Mercury Bichloride in Scarlet Fever.—Dr. F. J. Rucavado (*Gaceta medica de Costa Rica*, September 15, 1901) relates that during an epidemic of scarlet fever which lasted in Costa Rica for eight months he has made use of the following method for limiting its spread. He causes the entire body of the patient to be subjected to frictions with a 1 in 1,000 solution of corrosive sublimate from the time that the disease is first diagnosticated to a fortnight or more after the inception of convalescence. These may be warm or cold, and, as a general rule, it is found that desquamation either does not appear, or is very slight. The desquamating particles are removed little by little and disinfected by the frictions. These frictions also produce in the invalid that sense of well being that the bath induces in those who have high temperatures. In addition to the frictions, the author has given the bichloride internally in relatively large doses, with the result of shortening the course of the disease and producing favorable modification and an appreciable diminution of complications.

The author asserts that scarlatina patients tolerate mercury bichloride admirably, and that although he has administered it in such large doses as an eighth of a grain every three hours, and even every hour in grave cases, he has never seen salivation ensue.

[While this treatment certainly seems to have some rational foundation, it clearly should not be tried without the greatest caution and most carefully feeling one's way.]

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THE NEW YORK MEDICAL JOURNAL.

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NEW YORK, SATURDAY, JANUARY 18, 1902.

THE INVESTIGATION OF MALARIA IN AFRICA.

We have before had occasion to commend the work of the Liverpool School of Tropical Medicine and Medical Parasitology. Its continued usefulness is shown in Part i of Memoir III of the school's *Report of the Malaria Expedition to Nigeria*, which has recently been issued. While we find in it no striking additions to our knowledge, we do meet with abundant evidence of the practical utility of the work performed by the members of the expedition, H. E. Annett, M. B., D. P. H., J. Everett Dutton, M. B., Ch., and J. H. Elliott, M. D. Besides the value of their investigations to the advance of scientific knowledge, their direct service to the British government is deserving of notice, even as shown in so simple a matter as advice concerning the situation of a consulate or of engineers' quarters.

The report says that considerable evidence has now been accumulated to prove that the distance traversed by a mosquito is never very great, rarely so much as half a mile, and within that distance of a dwelling are the insect's breeding-places almost invariably found. Blood is not necessary to its sustenance, but a meal of blood is required by the female to enable her to lay her eggs, and the instinct to take such a meal leads to the invariable propinquity of the breeding-places to human habitations. But mosquitoes take up their quarters on a ship, and are to be found living on the vessel for many days after it has left port. It is this fact, says the report, that accounts for attacks of malarial disease on ships whose crews have never gone ashore in malarious regions—outbreaks of apparently so prolonged a period of incubation as would otherwise tend to impair our belief in the mosquito theory of the transmission of the disease.

To exterminate the disease, the wholesale administration of quinine to Europeans and natives, as recommended by Koch, seems to the commission impracticable, and there is nothing else to be done but to kill the mosquitoes or prevent their biting. While kerosene is admitted to be the most trustworthy of culicidal agents thus far proposed, it is added that "the cheap ideal substance which will have the effect of rendering pools permanently uninhabitable for the larvæ is still undiscovered." Applications of odorous substances to exposed parts of the person are declared to be "absolutely useless." The common mismanagement of bed nets is thus depicted: "The mosquito curtain is astonishingly misused by Europeans on the West Coast of Africa. We very rarely met with one who used the curtains in a careful and proper manner. Almost all are so placed as to hang outside the bedposts and reach on to the ground, being either free or weighted. This is an improper way of hanging the curtains, which thus act as a trap for those mosquitoes which have taken shelter during the daytime under the bed."

The separation of Europeans from the natives is regarded as the only means to be relied upon for preventing malarial disease—separation for a distance greater than the mosquito's flight—for the native children in particular are almost invariably infected, and it is they, we presume, who are most given to loitering about the white men's quarters, exposing themselves to mosquitoes that have no difficulty in subsequently attacking the whites.

SURGICAL SHOCK.

Familiar as the condition termed shock is to every surgeon, we hold it to be of vast importance to the student and the inexperienced practitioner to acquire a clear conception of its nature, its manifestations, its distinction from certain other states that resemble it, and its treatment. The first step in the acquisition of such knowledge, apart from personal observation, is to be taken by studying a faithful description of shock. Such a description—so clear-cut and graphic, it seems to us, as to entitle it to be looked upon as the standard—has lately been given by Dr. Lewis S. McMurtry, of Louisville, in a paper read by invitation before the Philadelphia County Medical Society on December 18th

and published, together with a report of the discussion, in the society's *Proceedings* issued in January.

Dr. McMurtry's description is as follows: "Shock is an inhibition of the vital functions marked by vasomotor paralysis. Its manifestations are through the nervous system, and these relate especially to depressed and impaired action of the circulatory organs. It is evidently a neurosis in which there is altered function of the nerve centres, with profound disturbance in the sympathetic nervous system. It varies in intensity from an evanescent and slight disturbance of nervous equilibrium to profound general depression and rapid dissolution. It is characterized by muscular relaxation, diminished cardiac force, lessened arterial tension, feeble respiration, arrest of glandular activity, and mental lethargy often verging into delirium. The symptoms of shock, when pronounced, present a striking clinical picture. The advent may be sudden, and the symptoms are those of most profound general depression. The pulse becomes rapid and feeble, the surface of the body is pallid and bathed in cold perspiration, the lips bloodless, the features pinched, and eyelids drooping. The respiration is feeble and irregular, and the temperature subnormal. The special senses are blunted, the mind lethargic and verging into unconsciousness. The secretory and excretory functions are in abeyance. These symptoms in the aggregate are usually of short duration. If they become more intense, they speedily end in death; if the recuperative powers of the system triumph, the puls and respiration improve, the heart acts with improved force and rhythm, the color returns to the skin, normal temperature is restored, the features regain normal appearance, and the mind resumes its sway."

It was particularly with the shock of intra-abdominal operations that Dr. McMurtry was dealing, but his paper practically covered the whole field of surgical shock. He is no believer in "secondary," or "delayed," shock, terms which, he thinks, have only served to befog the study of the subject; in abdominal and pelvic surgery the shock occurs during or immediately after an operation, and cases of supposed "secondary" shock are due to hæmorrhage, to fat embolism, or to

acute sepsis. The shock of an abdominal operation is to be distinguished from chloroform asphyxia by the less rapid accession of alarming symptoms and the lack of response to resuscitative treatment, from sudden collapse due to hæmorrhage by its more gradual onset, from the acute anæmia of concealed and persistent bleeding (with much greater difficulty) by the absence of a preceding partial rally, from acute septic infection by lack of a source of sepsis and by the vaginal or rectal temperature bearing a normal relation to that of the surface, and from pulmonary embolism by the gradual onset.

Dr. McMurtry recognizes the great value of the experimental researches of Dr. George W. Crile, of Cleveland, as to the ætiology of shock, showing particularly the powerful contribution of impressions conveyed by afferent nerves, the extent and duration of peritoneal exposure, and the amount of rough handling to which important structures, notably large veins, are subjected. However, loss of blood is, after all, the most potent cause of shock, and its reduction to the minimum should be the surgeon's constant object. Technical skill, especially in substituting delicate and rapid procedures for forcible and prolonged manipulation, is the one great protective resource against the shock of abdominal operations.

As to the prevention of shock from an operation, in exhausted and debilitated persons the usual preliminary purgation should be omitted, and bland concentrated liquid food should be systematically given up to within a few hours of the operation. The old routine practice of administering morphine or alcohol or the two combined has little to recommend it, but an enema of normal salt solution is of positive value. Strychnine is a valuable sustainer of the heart's action, and whenever shock is apprehended it should be given in doses of a fortieth of a grain every six or eight hours for several days prior to the operation, and a thirtieth of a grain subcutaneously just before the anæsthetic is administered. The temperature of the operating-room should be 80° F., and every precaution should be taken to preserve the patient's warmth. As little of the anæsthetic as will answer the purpose should be given, and its administration must be stopped as

soon as is practicable. Hæmostatic forceps should be used freely as the operation proceeds, and oozing surfaces should be packed with gauze pads wrung out of hot water. We believe, with Dr. McMurtry, that the routine practice of giving morphine and whiskey is bad, but the statement that "opium is a depressor of vital power, and its physiological effects upon the nervous system are in the direction of promoting and increasing shock," seems to use too absolute. Everything depends on the size of the dose; small doses (not more than ten drops of laudanum, and generally much less), given at regular intervals of a few hours, we believe to be of great value in sustaining the nervous system.

When shock has actually set in, says Dr. McMurtry, the cerebral circulation must be facilitated by the Trendelenburg posture, and the heart must be strengthened by the subcutaneous administration of strychnine. Atropine, too, is of undoubted value, and so are artificial respiration and oxygen if the breathing is shallow. The heat of the body should be maintained, and an enema of brandy or whiskey with warm water administered. We particularly commend this closing statement of Dr. McMurtry's: "In the effort to meet the issues presented, there is a constant temptation to repeat medicines in large doses too frequently."

We have here presented only the salient points of Dr. McMurtry's essay. It should be read as a whole by every practitioner whose opportunities of observing and treating shock have not been great or who doubts his own ability to oppose to it all the resources known to our art.

THE COST OF AN EPIDEMIC.

In Philadelphia there is some dispute as to the payment of certain extraordinary expenses incurred by the Bureau of Health in combating the spread of small-pox. In commenting on the bills the *Philadelphia Times* says: "An epidemic of any kind is among the most costly calamities that can befall a city. The public outlay is trifling compared with the direct cost to individuals and the indirect cost to the community. But the point that is most to be emphasized is that an epidemic is usually preventable. A very small outlay for prevention will avoid a vast expense for cure." This view of the question is, of course, the only correct one; but it seems, most

unfortunately, that almost every city must occasionally undergo some such loss. Either the public or the officials, or both, become negligent until the result of that negligence presents itself as a reminder of the fact that in a great city eternal vigilance is the price of health.

MEDICAL SCHOOLS IN MICHIGAN.

The Michigan superintendent of public instruction, in a recent report, makes some very judicious recommendations with regard to State supervision of medical schools. A preliminary examination, he says, should be required to insure that none but persons of a fair general education are admitted to the schools; the standard for graduation should be uniform; the financial stability of each school should be insisted upon, its capital being large enough to warrant the employment of learned men as teachers and an adequate equipment in the matter of teaching appliances; and no schools should be established in small towns, where the necessary clinical facilities are lacking. In all this the superintendent is quite right, and we hope his views will prevail.

THE AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL.

It is with much regret that we have read the announcement by the editor and proprietor, Dr. John Duncan Emmet, that with the December number the *American Gynecological and Obstetrical Journal* was discontinued. The number completes the nineteenth volume, and the volumes have been in every way creditable to Dr. Emmet and the other gentlemen who have taken part in their production. They will be treasured in many a library and frequently referred to in the literature of coming years, and the writers who have contributed to their pages have therefore not worked in vain.

CONGENITAL REDUNDANCY OF THE SIGMOID FLEXURE.

Congenital anomalies are perhaps too seldom considered in ætiology. One of them, redundancy of the sigmoid flexure, has recently been made the subject of investigation by Dr. E. Neter, of Berlin (*Archiv für Kinderheilkunde*, xxxii; *Münchener medicinische Wochenschrift*, November 26th), who finds that such a congenital malformation is one of the causes of Hirschsprung's disease (excessive chronic obstipation with dilatation and hypertrophy of the colon) and of volvulus of the sigmoid flexure in the adult.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 20th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, January 21st.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y. (annual); Baltimore Academy of Medicine.

WEDNESDAY, January 22d.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, January 23d.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, January 24th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 25th.—New York Medical and Surgical Society (private) (annual).

Gouverneur Hospital.—Dr. Seymour Oppenheimer has been appointed laryngologist and otologist to Gouverneur Hospital.

Presentation to Dr. Wende.—On retiring from office as health commissioner of the city of Buffalo, Dr. Ernest Wende was presented with a handsome chest of silver, containing 100 pieces, by the attachés of the health department.

St. Joseph's Hospital.—Dr. M. D. Lederman, of New York, has been appointed a member of the advisory board of the St. Joseph's Hospital, Silver City, New Mexico, an institution established for the treatment of laryngeal and pulmonary tuberculosis.

The Exclusion of Consumptives from the Town of Liberty by the health authorities of that village, which has already been referred to, does not affect the Loomis Sanitarium or its charity annex, both institutions being situated over two miles outside the village limits.

Medical Society of the State of New York.—The ninety-sixth annual meeting of the society will convene in the City Hall, Albany, at 9.15 on the morning of Tuesday, January 28th. The preliminary programme, which has recently been issued, embraces a list of fifty-one papers, the titles of which will be given in our next issue.

The Philadelphia Academy of Surgeons has elected the following officers: President, Dr. Richard H. Harte; vice-presidents, Dr. Henry R. Wharton and Dr. John B. Deaver; secretary, Dr. William J. Taylor; treasurer, Dr. William G. Porter; recorder, Dr. John H. Gibbon; members of the council, Dr. Robert G. Le Conte and Dr. W. Joseph Hearn; business committee, Dr. J. H. Jobson and Dr. G. G. Davis.

Prosecutions for Illegal Practice in Detroit.—Thirty-three men engaged in the practice of medicine in Detroit have been called upon to show that they are graduates of reputable colleges, and it is expected that the majority will be prosecuted legally.

The Nursery and Child's Hospital.—Every effort is being made by the managers of the Nursery and Child's Hospital to make the Charity Ball for that deserving institution, on January 30th in the Waldorf-Astoria, superior to any of its predecessors. Several national, State, and city officials are expected to take part in the grand march.

The Georgia Medical Society.—At the annual meeting of the Georgia Medical Society, held on January 7th, the officers chosen were not elected without opposition, and the balloting was lively in some cases. The following officers were elected: President, Dr. John A. Crowther; vice-president, Dr. A. A. Morrison; treasurer, Dr. Charles B. Lanneau; recording secretary, Dr. J. O. Cook; corresponding secretary, Dr. H. H. Martin; librarian, Dr. J. G. Van Marter.

A Special Course of Lectures on Inebriety will be delivered by Dr. T. D. Crothers, of Hartford, Conn., in the hall of the New York School of Clinical Medicine, 328 West Forty-second Street, New York City. The subjects of the lectures are: January 21st, Inebriety and its Pathology; January 22d, Treatment and Cure of Inebriety; January 23d, Questions of Responsibility in Inebriety. These lectures will be given in the evening at 8.15 o'clock. All physicians are cordially invited to attend.

The College of Physicians of Philadelphia.—Officers and committees of the College of Physicians were elected on January 1st as follows: President, Dr. Horatio C. Wood; vice-president, Dr. Arthur V. Meigs; censors, Dr. Richard A. Cleemann, Dr. Arthur V. Meigs, Dr. S. Weir Mitchell, Dr. Horace Y. Evans; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councillors, Dr. John Chalmers Da Costa, Dr. J. P. Crozer Griffith.

The Ohio State Board of Medical Registration and Examination reelected the following officers on January 7th: President, Dr. N. R. Coleman, of Columbus; vice-president, Dr. H. E. Beebe, of Sidney; treasurer, Dr. David Williams; secretary, Dr. Frank Winders. The following committee of examiners of candidates for fitness to enter medical colleges was appointed: E. W. Coy, principal of the Hughes High School, Cincinnati; E. L. Harris, principal of the Central High School, Cleveland; H. J. Eberth, principal of the Central High School, Toledo; C. E. Albright, principal of the Central High School, Columbus.

The board disposed of the case of G. A. Purpura, of Cleveland, an Italian, charged with practising medicine under another man's certificate, by revoking the certificate.

The St. Louis Medical Society, at its annual meeting, elected Dr. N. B. Carson president to succeed Dr. L. E. Newman. Dr. Spencer Graves was chosen vice-president; Dr. Louis Pim, recording secretary; Dr. J. C. Morfit, corresponding secretary, and Dr. A. R. Kieffer, treasurer.

The Manhattan State Hospital: Resignation of the Treasurer.—William H. Kimball, of New York, has resigned the treasurership of the Manhattan State Hospital, the resignation to take effect January 10th. E. J. Hungerford, assistant treasurer, has been appointed to perform temporarily the duties of the office.

An American Physician Tried for Treason in South Africa.—Dr. Richard S. Anthony, an American citizen and a graduate in medicine of Cooper Medical College, San Francisco, was recently tried by the British government on a charge of lending aid and comfort to the enemy and with intriguing against Great Britain while in South Africa. He was acquitted.

Medical Appointment on General Roe's Staff.—Dr. George B. Fowler, of Brooklyn, who has served for several years as surgeon on the staff of General James McLeer, of the Second Brigade, has been appointed surgeon on the staff of Major-General Charles F. Roe. His rank will now be colonel instead of lieutenant-colonel, and he practically will become the surgeon-general of the National Guard of the State of New York. Colonel Fowler was chief surgeon on the staff of General Fitzhugh Lee during the Spanish-American War.

The American Society of Naturalists and the Council of the American Association for the Advancement of Science, Chicago, Illinois, at meetings held during the last week in December, 1901, passed the following resolution:

Resolved, That the council of the American Association for the Advancement of Science approves of the efforts to strengthen the administration and work of the Marine-Hospital Service by its establishment as a National Health Service, in the direction of promotion of the public health, the furtherance of scientific investigation relating thereto, and the securing of the cooperation of experts in hygiene and related subjects.

A Bill to Restrict Leprosy in the United States.—There is talk of a bill being introduced into Congress providing for a commissioner of leprosy and a home for lepers. The intention of the bill is to have this nation in harmony with the suggestions for international action of the Berlin Leper Conference. The bill provides for a commissioner of leprosy, who shall be a physician of ten years' practice and who shall receive a salary of \$5,000 a year. He is to reside in New York or San Francisco. For the erection of buildings for the lepers \$50,000 is to be appropriated. In addition, a square mile of the public domain is to be set aside for the colony of unfortunates. No lepers are to be admitted as immigrants, and persons coming from leprous families are to be under the strict supervision of the authorities for at least seven years.

The Doctors of Beverly, Mass., Hold Out for Increased Pay.—The Beverly (Mass.) common council has voted to concur with the aldermen in increasing the salary of the city physician to \$600. The local physicians have agreed not to take the place for less than \$800, and the outcome is awaited with interest. Last year the city physicians averaged twelve cents a call!

The Memorial Institute for Infectious Diseases.—The incorporation is reported, at Springfield, Ill., of the Memorial Institute for Infectious Diseases, founded by Mr. and Mrs. Harold McCormick in memory of their son, John Rockefeller McCormick, who died just a year ago of scarlet fever. The institution has been endowed generously by Mr. and Mrs. McCormick, but for the present it will have no building of its own. At first its researches will be devoted solely to scarlet fever and the work will be carried on at some medical institution. It is the intention, however, to house the institution later in a building of its own and to broaden the scope of its inquiry so that it shall include all that its name indicates.

A Woman's Medical College Closed.—Princess Bamba Dhuleep Singh and seventy other young women who are trying to become physicians under the auspices of the Northwestern University, at Chicago, will have to seek a new school. After thirty-two years' trial the trustees of the university say women are not a success as doctors, that there is no demand for women physicians, and that medical coeducation is a failure. The school is to be abolished and the property sold.

"We have run the women's medical school at a loss of \$25,000 a year," said Trustee Raymond. "Women cannot grasp chemical laboratory work or the intricacies of surgery. Fifteen years ago the graduating class of men and women gave us a memorial saying that coeducation was a failure. Then we conducted the college exclusively for women, and it has been a worse failure."

Health Conditions in Michigan.—The report of the Michigan State Board of Health for the past month shows that for the month of December, 1901, compared with the average for December in the ten years (1891-1900), scarlet fever, small-pox, measles, and cerebro-spinal meningitis were more than usually prevalent; and consumption, intermittent fever, erysipelas, remittent fever, and diphtheria were less than usually prevalent. Including reports by regular observers and others, cerebro-spinal meningitis was reported present in Michigan during the month of December, 1901, at 6 places; whooping-cough at 32 places; measles at 39 places; diphtheria at 85 places; typhoid fever at 109 places; small-pox at 141 places; scarlet fever at 184 places, and consumption at 204 places.

Reports from all sources show cerebro-spinal meningitis reported at 5 places more; whooping-cough at 1 place less; measles at 12 places more; diphtheria at 11 places less; typhoid fever at 57 places less; small-pox at 49 places more; scarlet fever at 2 places more, and consumption at 6 places more, in the month of December, 1901, than in the preceding month.

Dr. Dawbarn Wins the Gross Prize.—The Samuel D. Gross prize of \$1,000, which is awarded once every five years by the Philadelphia Academy of Surgeons, has been awarded to Dr. Robert H. M. Dawbarn, of New York, for a thesis on The Treatment of Certain Malignant Growths by Excision of both External Carotids. Upon this topic Dr. Dawbarn has worked, as opportunity served, for seven years past. The essay when published will contain the histories with pathologists' report in each instance confirming diagnosis of malignancy and specifying its variety, of forty carotid extirpations by the author himself; and as many additional by about a dozen other surgeons. At least two of these are members of the Philadelphia Academy of Surgery.

By the terms of Dr. Gross's bequest, the prize essay must be published in book form, and a copy thereof deposited in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

A Brooklyn Physician Held for Failing to Report a Small-pox Case.—A Brooklyn physician was held on January 3d by Magistrate Dooley for the Court of Special Sessions, on a charge preferred by the board of health of failing to report a case of small-pox. A woman died on December 6th from a disease which the doctor had called ptomaine poisoning, but which the physicians of the board diagnosed as small-pox. The physician testified that the woman showed symptoms of ptomaine poisoning. He admitted that on the day of her death he thought he detected signs of small-pox and confided his suspicions to the undertaker, who immediately informed the board of health. An investigation followed, and the body was removed to North Brother Island. The physician said that he intended bringing the case to the attention of the health authorities, but when he learned that the undertaker had done so he thought that was sufficient.

Secret-society Medical Men in Convention.—Physicians and medical students from all over the country assembled at the Colonnade Hotel, Philadelphia, on January 2d, for the seventh convention of the Alpha Kappa Kappa Fraternity. The delegates were guests of the University of Pennsylvania and Jefferson Medical College chapters. They came from Dartmouth, Tufts, the College of Physicians and Surgeons, of San Francisco; the Long Island College Hospital Medical School, of Brooklyn; the College of Physicians and Surgeons, of Chicago; Bowdoin, Syracuse University, the Milwaukee Medical College, Cornell University, the Rush Medical School, Chicago; the Northwestern University, the University of California, and the University of Minnesota. There was a regular business session and a service in memory of members who had died during the year just closed. In the evening a joint meeting was held in Odd Fellows' Hall. Officers were elected and the meeting closed with a banquet.

A Bacteriological Laboratory is Wanted for Brooklyn.—Believing that there should be a bacteriological laboratory in the borough of Brooklyn, the Medical Society of the County of Kings has turned its attention toward securing such an im-

provement from the incoming administration. Resolutions expressing the need of such an institution and urging its establishment have been passed and a committee appointed to present them to Mayor Low and Health Commission Lederle. The society contends that the present methods of diagnosing diphtheria, typhoid fever, and similar diseases are out of date. The matter was first mooted at a meeting of the Pædiatric Section of the medical society. There, it was generally agreed, that many lives had been sacrificed by delay in getting reports on cultures sent to the laboratory of the department in Manhattan borough. It was shown that, particularly in cases of diphtheria, the injection of antitoxine, to be effective, must be made during the earlier stages of the disease. Cultures under the plan of the present administration were sent to Manhattan and reports were delayed from twenty-four to forty-eight hours.

The College of Physicians of Philadelphia, on January 1st, elected the following officers and committees: President, Dr. Horatio C. Wood; vice-president, Dr. Arthur V. Meigs; censors, Dr. Richard A. Cleemann, Dr. Arthur V. Meigs, Dr. S. Weir Mitchell, Dr. Horace Y. Evans; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councillors, Dr. John Chalmers Da Costa, Dr. J. P. Crozer Griffith; committee of publication, Dr. G. G. Davis, Dr. Thompson S. Westcott, Dr. William Zentmayer; library committee, Dr. George C. Harlan, Dr. Francis X. Dercum, Dr. Charles A. Oliver, Dr. William J. Taylor, Dr. S. Weir Mitchell; committee on Mutter Museum, Dr. John H. Brinton, Dr. George McClellan, Dr. Frederick A. Packard; hall committee, Dr. William Barton Hopkins, Dr. John K. Mitchell, Dr. Caspar Morris, Dr. Thomas H. Fenton, Dr. B. Alex. Randall; committee on directory for nurses, Dr. Wharton Sinkler, Dr. James C. Wilson, and Dr. James V. Ingham.

Unconstitutional Commitments of Lunatics.—If the opinion of the Supreme Court of California is sustained, 90 per cent. of the insane in custody in the State of New York are, according to *Charities*, unconstitutionally committed to the hospitals and private asylums. In the case of Lambert vs. the Napa State Insane Asylum, the appellant, being a patient in the latter asylum, petitions for his liberty, on the ground of an unconstitutional commitment. The Supreme Court upholds all of Lambert's contentions, and makes a dead letter of the lunacy laws. The California law of 1897 is almost identical with the New York codification of 1896, and was modelled from it. In the New York law is a provision for the serving of a notice upon the alleged person that his commitment is intended, which was omitted in the California law, and the Supreme Justices base their opinion upon this defect. In the practice of the court in this State, this provision is quite universally violated, and the notice is not served upon the patient, on the alleged belief that such notice would not be for the welfare of the patient.

The State Charities Aid Association and the Overcrowding of State Hospitals.—At the annual meeting of the State Charities Aid Association, held in New York on December 19th, it was stated that dependents, defectives, and delinquents in this State were increasing at a rate greater than the rate of increase in the general population. The overcrowding of the State hospitals was referred to in the extracts read from the association's report to the State Commission in Lunacy. Every State hospital for the reception of the insane was said to be accommodating from 100 to 500 more patients than it properly had room for. Buildings now being erected, it was expected, would relieve the present overcrowding. As most of the State hospitals had already reached, and some had passed, the limit of growth that is desirable, it would be necessary to establish additional hospitals. It was urged that some of these should be comparatively small reception or psychopathic hospitals in the larger cities, the argument being that such hospitals would furnish the most advantageous method of caring for the acute insane, and as the State must provide for these cases in some way, it would be better to ascertain and follow the course which promises the increase of cure and prevention of insanity, and so would tend to decrease the number of persons permanently cared for and maintained by the State.

Chicago Claims the Distinction of being America's Healthiest City.—Chicago's death rate for the year just closing will be the lowest ever recorded for this or any other city of more than 1,000,000 population, according to the *Weekly Bulletin* of the health department. "With ten days remaining to round out the year," says the *Bulletin*, "a total of 23,625 deaths had been recorded up to the close of last week by the Bureau of Vital Statistics of the city health department. At this rate the total mortality of 1901 will not exceed 24,300, and, figured on the minimum mid-year population of the United States census office, 1,758,000, the annual rate per 1,000 will be about 13.8—the lowest ever recorded for this or any other city of more than a million population. The lowest previous rate—based on the United States census figures of population—was 14.36 per 1,000 in 1897. For the previous ten years, 1890-1900, the average mortality rate was 17.67, or nearly 21.8 per cent. higher than this probable rate for 1901." * * * Statement of mortality for the week ended December 21, 1901, compared with the preceding week and with the corresponding week of 1900 (death rates computed on United States census figures of population—viz.: 1,698,575 for 1900, 1,758,025 for 1901):

	Dec. 21, 1901.	Dec. 14, 1901.	Dec. 22, 1900.
Total deaths, all causes...	463	452	480
Death rate per annum per 1,000.....	13.71	13.39	14.73

A New Treatment for Deafness.—Mr. Marage has lately communicated to the Paris Academy of Sciences a treatment for deafness which is substantially as follows: (1) Measure accurately the auditive sensitiveness by causing the patient to listen, at a constant distance, to the sounds of a

siren reproducing the fundamental vibration of the vowel sounds. The intensity of sound being proportional to the pressure of the air, the auditive acuity is *n* when the pressure must be *n* millimetres in order that the sound may be heard. The normal acuity, unity, is that of an ear which hears the sound under a pressure of one millimetre. (2) Make the patient listen to the sounds of the same siren through a tube provided with a membrane which transmits all vibrations without introducing or suppressing any of the harmonics. This is a kind of massage of the ear made by vibrations which it is destined normally to perceive. This treatment is never painful and never produces buzzings or increases the deafness, and has frequently produced excellent results.

Deaths in Brooklyn Borough during 1901.—Dr. S. J. Byrne, of the Brooklyn Department of Health, has completed the annual report, showing the deaths in Brooklyn during the year 1901 in comparison with those of 1900. There were nine deaths due to small-pox during the year which are attributed to the neglect of such cases being reported by physicians or friends of the sick person.

Of the contagious diseases, scarlet fever caused the most deaths in that borough. In explaining this, Dr. Byrne said that this was largely due to Ellis Island, as all such cases arriving on steamers were sent to the Brooklyn hospitals.

The different causes of deaths in 1900 and 1901, from all sources, are as follows:

	1900.	1901.
Influenza.....	202	294
Small-pox.....	...	9
Measles.....	311	160
Scarlet fever.....	129	496
Diphtheria and croup.....	865	733
Whooping-cough.....	235	111
Typhoid fever.....	299	274
Typhus fever.....	...	...
Malarial fever.....	58	66
Cerebrospinal fever.....	92	55
Diarrhoeal diseases.....	2,688	2,699
Diarrhoeal diseases, under 2 years...	2,241	2,247
Organic heart diseases.....	1,451	1,434
Bronchitis.....	776	672
Pneumonia and bronchopneumonia.	3,204	2,893
Phthisis.....	2,450	2,474
Bright's disease and nephritis.....	1,723	1,896
Suicide.....	187	169
Homicide.....	36	21
Sunstroke.....	103	331
Other accidents.....	676	693
All other causes.....	7,990	7,833
Total.....	23,475	23,313
Deaths under 1 year of age.....	5,692	5,201
Deaths under 5 years of age.....	8,774	8,151
Deaths over 65 years of age.....	3,344	8,585
Deaths in institutions.....	3,946	3,970
Deaths in tenements.....	12,361	12,326
Births.....	22,572	22,182
Marriages.....	8,124	8,303
Still births.....	1,813	1,776

A Hungarian Physician Ennobled.—Dr. Coloman Müller, professor of medicine in the University of Hungary and physician in chief to the Rochus Hospital, has been raised to the dignity of a seat in the Hungarian House of Magnates. Dr. Müller was organizing secretary of the Eighth Congress of Hygiene and Demography, which was held at Buda-Pesth in 1894.

The Anatomical Board of the District of Columbia.—At the request of the Dean of the Columbian University, Representative Jenkins has introduced a bill for the promotion of anatomical science and to prevent the desecration of graves in the District. The bill authorizes the appointment of a board of control of the dead human bodies and the distribution of such among and to the schools in the District of Columbia conferring the degree of doctor of medicine or doctor of dental surgery or both. The board is to be known as the Anatomical Board of the District of Columbia and is to be composed of the health officer of the District and his representatives, to be selected by the faculties of each school except the Medical School of the United States Army, and the representatives of that school shall be designated by the Surgeon General of the Army. The bill provides that the bodies of all persons who die in the Alms House, Insane Asylum, Workhouse Jail, Poorhouse or other public institutions, which are not claimed by relatives or friends and would otherwise be buried at public expense, shall be distributed *pro rata* among the schools or colleges for the promotion and benefit of science.

A Medical Advisory Board for the City Health Board.—Under the revised charter, which went into effect on January 1st, the Health Board of the City of New York now consists of the health commissioner, the police commissioner, and the commissioner of street cleaning. At the first meeting of the new board, which was held on January 1st, the board selected Dr. Herman M. Biggs as medical adviser and also established a medical advisory board of twelve prominent physicians, with Professor Charles F. Chandler at the head of this board as consulting sanitarian. The members of the board serve without pay. The names of the members follow, accompanied by the explanatory notes of positions occupied by the members, which were published by the health board, evidently to indicate to the public the professional standing of each of the members: Dr. Edward G. Janeway, dean of the faculty of the University of Medicine and Bellevue Hospital Medical College and former commissioner of health; Dr. Joseph D. Bryant, professor of surgery University and Bellevue Hospital Medical College and former commissioner of health; Dr. T. Mitchell Prudden, director of the Department of Pathology, College of Physicians and Surgeons, vice-president of the Rockefeller Institute for Medical Research; Dr. William M. Polk, dean of the Faculty of Medicine, Cornell Medical College; Dr. A. Jacobi, former president of the Academy of Medicine, professor of the diseases of children, College of Physicians and Surgeons; Dr.

John Winters Brannan, president of the board of governors of the Minturn Hospital, president of the medical board of the hospitals of the department of health; Dr. Richard H. Derby, surgeon New York Eye and Ear Infirmary; Dr. L. Emmet Holt, president of the medical board Babies' Hospital, secretary of the board of trustees Rockefeller Institute for Medical Research; Dr. Alexander Smith, professor of the principles and practice of medicine, University and Bellevue Hospital Medical College; Dr. Francis P. Kinnicutt, clinical professor of medicine, College of Physicians and Surgeons; Dr. Henry P. Loomis, professor of materia medica and therapeutics, Cornell University Medical College.

New Buildings for the Temple College Medical Department, Philadelphia.—The medical department of Temple College will soon have a building set apart exclusively for the instruction of its students. Plans have been approved for a new building at the Samaritan Hospital. This is the latest step taken in the interest of higher popular education. In a thorough course of six years young men who are compelled to work during the day will be given an opportunity to become physicians. The college will not issue diplomas to its students until they have passed the examination of the State Board of Medical Examiners. Work upon the new building will be begun as soon as the weather permits. It will be completed next July, ready for the opening of the fall term of 1902. The building will be the central one of the Samaritan Hospital group. According to the plans approved it is to be fifty feet square, and will be connected to the present hospital building by a corridor. A similar corridor will connect it with a new wing, to be constructed at the same time. The wing will be forty-two by eighty-five feet and three stories high. It will contain rooms for private patients. In the central room will be a lecture hall and clinical amphitheatre, operating rooms, offices and reception rooms, and surgeons' rooms. In time the present hospital buildings will be torn down and a new wing constructed in their place to match the north wing, which is to be built at once.

The Riverside Association's Hydriatic Department.—The Riverside Association is organized to "help the poor to help themselves." It maintains a gymnasium, kindergarten, clubs for boys and girls, a penny provident fund, sewing and cooking schools, and public baths. The officers are: President, Frank H. Dodd; secretary, J. Hegeman Foster; treasurer, Harvey E. Fisk. The Hydriatic Department is designed for the water treatment of indigent patients sent by physicians or dispensaries, under the medical direction of Dr. Simon Baruch.

During the past six years, 1,848 male and 1,780 female patients have been received for water treatment from 128 physicians and from the following institutions: Vanderbilt Clinic, Beth Israel Dispensary, Cornell University Dispensary, New York Polyclinic Dispensary, German Poliklinik, Roosevelt Hospital Outdoor Department, Presbyterian Hospital Outdoor Department, Mount Sinai Hospital Outdoor Department.

ment, New York Hospital Outdoor Department, New York Post-graduate Hospital Outdoor Department.

Among the diseases treated are: Anæmia, adiposity, asthma, Basedow's disease, bronchial catarrh, chorea, constipation, nervous dyspepsia, dilatation of the stomach, diabetes, enuresis nocturna, epilepsy, gastric and gastro-intestinal catarrh, hysteria, impotence, intermittent fever, catarrhal jaundice, leucæmia, lumbago, locomotor ataxia, melancholia, traumatic neuroses, neurasthenia, neuralgia, obstinate headache, nervous palpitation of heart, paralysis agitans, phthisis, pleurisy, rheumatism (chronic articular, and muscular), sciatica.

There are only three other similar institutions in the world; they are connected respectively with the universities of Berlin, Heidelberg, and Vienna.

A Plan for Defense against Suits for Malpractice has been laid before the members of the New York State Medical Association for consideration, with a view to its formal presentation at the next meeting of the organization. The plan is as follows:

First—The council shall, upon request and compliance with the conditions hereinafter provided, assume the defense of suits for alleged malpractice brought against members of this association.

Second—The council shall not undertake the defense of any suit based upon acts prior to the qualification of the accused as a member of the association.

Third—A member desiring to avail himself of the provisions of this article shall make application to the council through the secretary, shall sign a contract renouncing his own and vesting in the council sole authority to conduct the defense of said suit or to settle by compromise, and shall make such other agreements as the council may require.

Fourth—The council shall thereupon contract with said applicant to take full charge of said suit to furnish all necessary legal services, to pay all necessary expenses, and not to compromise said suit without consent of the accused, but the council shall not obligate the association to the payment of any damages awarded by decree of court or upon compromise.

Small-pox.—To stamp out small-pox, which has been epidemic in Boston for several months, the board of health has issued an order making vaccination compulsory, which will affect about one hundred and seventy thousand persons. The order requires that all inhabitants of Boston who have not been vaccinated since January 1, 1897, "shall be vaccinated or revaccinated forthwith." The small-pox scare seriously affected Boston's Christmas trade, and merchants protested against the publication of "small-pox news."—There has been a falling off in the number of small-pox cases in Philadelphia, yet the authorities are determined to relax none of their efforts to wipe out all traces of the disease as early as possible. An auxiliary corps of disinfectors has been organized and is working day and night on dwellings, school-houses, and other

buildings. Several days ago 150 formaldehyde generators were purchased, and all are in constant use. Seventy-nine new cases of small-pox and nineteen deaths were reported during the week ending December 29, 1901, against seventy-six cases and ten deaths in the previous week. There have been 1,200 cases and 156 deaths from the disease in Philadelphia this year, and 377 patients are now under treatment.—An approximate summary of the small-pox cases in the Province of Ontario at the present time places the number of victims at over 450.—At Quebec the Provincial Board of Health has issued instructions to the municipalities and towns in the Province to enforce vaccination.—It was not until one daughter had died and the mother and four other children were ill that the presence of small-pox in the family of Walter L. Hopkins, of Collard Street, Jersey City Heights, became known to the health authorities. The family are Faith Curists and do not believe in employing physicians. The father and two daughters, young women, have not shown symptoms of the disease. Active measures have been taken to prevent further spread of the disease.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 11, 1902:

DISEASES.	Week end'g Jan. 4		Week end'g Jan. 11	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	45	10	27	16
Scarlet fever.....	265	17	277	26
Cerebro-spinal meningitis.....	0	5	0	3
Measles.....	702	25	872	28
Diphtheria and croup.....	286	41	310	49
Small-pox.....	8	■	30	3
Tuberculosis.....	235	139	239	140

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the seven days ending January 9, 1902:

- CARTER, H. R., Surgeon. The leave of absence for ten days granted Surgeon CARTER by the Bureau letter of December 26, 1901, is revoked.
- IRWIN, FAIRFAX, Surgeon. The Bureau telegram of December 27, 1901, granting Surgeon IRWIN leave of absence for seven days is amended so that said leave shall be for five days.
- KALLOCH, P. C., Surgeon. To proceed to Portland, Maine, and assume charge of the quarantine service at that port.
- KINYOUN, J. J., Surgeon. Granted leave of absence for six days from January 6, 1902, under paragraph 179 of the Regulations.
- McCONNELL, E. F., Acting Assistant Surgeon. Granted leave of absence for thirty days from December 24, 1901.
- MACEO, J. N., Acting Assistant Surgeon. Granted leave of absence for thirty days from December 17, 1901.
- RIDEOUT, C. F., Acting Assistant Surgeon. Granted leave of absence for ten days from January 2d.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 11, 1902:

Smallpox—United States.

California....	San Francisco....	Dec. 22-26	2 cases.	
Indiana....	Evansville....	Dec. 22-Jan. 4	3 cases.	
Iowa....	Clinton....	Dec. 27-Jan. 4	1 case.	
Louisiana....	New Orleans....	Dec. 27-Jan. 4	1 case.	
Massachusetts....	Blackstone....	Jan. 1-8	2 cases.	
"	Boston....	Dec. 27-Jan. 4	4 cases.	6 deaths.
"	Brookline....	Dec. 27-Jan. 4	1 case.	
"	Cambridge....	Dec. 27-Jan. 4	1 case.	
"	Chelsea....	Dec. 27-Jan. 4	1 case.	
"	Lowell....	Dec. 27-Jan. 4	1 case.	
"	Medford....	Dec. 27-Jan. 4	1 case.	
"	Newton....	Dec. 27-Jan. 4	1 case.	
"	Quincy....	Dec. 27-Jan. 4	1 case.	
"	Somerville....	Dec. 27-Jan. 4	1 case.	
Nebraska....	Omaha....	Dec. 27-Jan. 4	9 cases.	
N. Hampshire....	Nashua....	Dec. 27-Jan. 4	1 case.	
New Jersey....	Camden....	Dec. 27-Jan. 4	10 cases.	
"	Jersey City....	Dec. 22-29		1 death.
"	Newark....	Dec. 27-Jan. 4	31 cases.	1 death.
New York....	New York....	Dec. 27-Jan. 4	8 cases.	2 deaths.
Ohio....	Cincinnati....	Dec. 28-Jan. 3	9 cases.	
"	Cleveland....	Dec. 27-Jan. 4	1 case.	
"	Youngstown....	Dec. 21-28	1 case.	
Pennsylvania....	Allentown....	Dec. 27-Jan. 4	2 cases.	
"	Norristown....	Dec. 27-Jan. 4	1 case.	1 death.
"	Philadelphia....	Dec. 27-Jan. 4	90 cases.	16 deaths.
South Carolina....	Greenville....	Dec. 27-Jan. 4	1 case.	
Tennessee....	Memphis....	Dec. 27-Jan. 4	2 cases.	
Vermont....	Burlington....	Dec. 21-28	30 cases.	
Virginia....	Roanoke....	Dec. 24-31	41 cases.	
Washington....	Tacoma....	Dec. 22-29	2 cases.	
Wisconsin....	Green Bay....	Dec. 29-Jan. 5	5 cases.	1 death.
"	Milwaukee....	Dec. 29-Jan. 4	1 case.	

Smallpox—Foreign.

Argentina....	Buenos Ayres....	Oct. 1-31	61 deaths.	
Austria....	Prague....	Dec. 7-14	16 cases.	
Belgium....	Antwerp....	Dec. 7-21	4 cases.	1 death.
"	Ghent....	Dec. 14-21	4 cases.	
Brazil....	Rio de Janeiro....	Nov. 26-Dec. 8	83 deaths.	
Canada....	Halifax....	Nov. 22-Jan. 4	15 cases.	
"	Quebec....	Dec. 28-Jan. 4	21 cases.	
Colombia....	Cartagena....	Dec. 16-22	3 deaths.	
France....	Paris....	Dec. 14-21	6 deaths.	
Gt. Britain....	Liverpool....	Dec. 7-21	3 cases.	
"	London....	Dec. 14-21	538 cases.	32 deaths.
India....	Calcutta....	Nov. 23-Dec. 7	2 deaths.	
"	Madras....	Nov. 23-Dec. 6	3 deaths.	
Italy....	Naples....	Dec. 7-14	16 cases.	1 death.
Russia....	Odessa....	Dec. 7-14	3 cases.	1 death.
"	St. Petersburg....	Dec. 7-14	5 cases.	1 death.
Spain....	Corunna....	Dec. 14-21	2 deaths.	
Uruguay....	Montevideo....	Oct. 25-Dec. 9	108 cases.	5 deaths.

Yellow Fever.

Brazil....	Bahia....	Nov. 30-Dec. 7	1 case.	1 death.
"	Rio de Janeiro....	Nov. 25-Dec. 8	4 deaths.	
Mexico....	Vera Cruz....	Dec. 21-28	6 cases.	2 deaths.
West Indies....	St. Lucia....	Dec. 0	Prevalent	

Cholera.

India....	Bombay....	Nov. 26-Dec. 3	5 deaths.	
"	Calcutta....	Nov. 23-Dec. 7	79 cases.	
Java....	Batavia....	Nov. 8-30	40 cases.	28 deaths.

Plague—Foreign.

Brazil....	Rio de Janeiro....	Nov. 23-Dec. 5	11 deaths.	
India....	Bombay....	Nov. 23-Dec. 10	238 deaths.	
"	Calcutta....	Nov. 23-Dec. 7	50 deaths.	
"	Karachi....	Nov. 23-Dec. 8	155 deaths.	
Mauritius....		Dec. 5-12	42 cases.	25 deaths.
Russia....	Batoum....	Dec. 12	1 case.	
South Africa....	Port Elizabeth....	Nov. 30-Dec. 7	1 case.	

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 11, 1902:

BENTON, F. L., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the *Columbia*.

BRAISTED, W. C., Passed Assistant Surgeon. Detached from the *Topoka* and ordered to the Naval Hospital, New York.

FURLONG, F. M., Assistant Surgeon. Ordered to Vicksburg, Mississippi, for duty at the naval rendezvous, and to the *Topoka* upon completion of recruiting duty.

GROVE, W. B., Passed Assistant Surgeon. Ordered to the *San Francisco*.

HESLER, F. A., Surgeon. Ordered to remain on duty at the Asiatic Station.

HUNTINGTON, E. C., Assistant Surgeon. Detached from the *Columbia* and ordered to the Naval Hospital, New York.

McCLURG, W. A., Medical Inspector. Detached from the *Constellation* and ordered home to hold himself in readiness for sea duty.

STOKES, C. F., Surgeon. Detached from the *Solace* and ordered to duty at Guam, Philippine Islands.

WAGGENER, J. R., Medical Inspector. Ordered to the *Constellation*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending January 11, 1902:

BARTLETT, C. J., First Lieutenant and Assistant Surgeon, is relieved from further duty at the United States General Hospital, Presidio of San Francisco, and will proceed to Fort Liscum, Alaska, to relieve JAMES T. ARWINE, Contract Surgeon, who will proceed to San Francisco for duty.

DE MEY, CHARLES F., Assistant Surgeon, United States Volunteers, is granted leave of absence for one month.

FIELD, PETER C., First Lieutenant and Assistant Surgeon, is relieved from further duty at Fort Slocum, N. Y., and will proceed to Fort Robinson, Nebraska, for duty, to relieve ALBERT H. SIMONTON, Contract Surgeon, who, upon being thus relieved, will proceed to Birmingham, Alabama, for annulment of contract.

HART, JAMES W., Contract Surgeon, will proceed to Fort Hancock, N. J., and report for temporary duty.

POMEROY, WILLIAM H., Contract Surgeon, will report in person to the commanding officer of the Springfield Armory, Massachusetts, for duty at that armory.

ROBERTS, DAVID S., Contract Surgeon, is detailed as a member of the examining board convened at San Antonio, Texas, during the illness of PETER J. A. CLEARY, Colonel and Assistant Surgeon General.

Births, Marriages, and Deaths.

Married.

HOWARD—BERRYMAN.—In Denver, on Wednesday, January 1st, Dr. Edward Howard and Miss Eliza E. Berryman.

HUNTER—GREENWOOD.—In St. Joseph, Michigan, on Tuesday, December 31, 1901, Dr. Warren H. Hunter, of Chicago, and Miss Louise V. Greenwood.

BELKNAP—MURPHY.—In New York, on Wednesday, January 15th, Dr. Deas Murphy and Miss Mary Remsen Belknap.

O'CONNOR—NEWCOMBE.—In New York, on Thursday, January 9th, Dr. John H. O'Connor and Miss Mae Harcourt Newcombe.

Died.

BARNUM.—In Boston, on Thursday, January 2d, Dr. Charles J. Barnum, in the twenty-third year of his age.

BUCHANAN.—In Newport, Rhode Island, on Sunday, January 12th, Dr. J. B. Buchanan, United States Navy, in the twenty-fifth year of his age.

CARREAU.—In New York, on Tuesday, January 7th, Dr. Joseph S. Carreau, in the fifty-fourth year of his age.

DIXON.—In Philadelphia, on Friday, January 10th, Dr. William C. Dixon, in the sixty-second year of his age.

DOTY.—In Brooklyn, on Tuesday, January 7th, Dr. George H. Doty.

DOWNEY.—In Chicago, on Sunday, January 5th, Dr. F. E. Downey, in the forty-fourth year of his age.

MAHON.—In Pittston, Pennsylvania, on Saturday, January 11th, Dr. Alfred N. Mahon, in the twenty-ninth year of his age.

PIERREPONT.—In Brooklyn, on Monday, January 6th, Dr. William Augustus Pierrepont, in the forty-sixth year of his age.

PRESCOTT.—In Nashua, New Hampshire, on Thursday, January 2d, Dr. Royal B. Prescott, formerly of the United States Army.

WILLIAMS.—In Brooklyn, on Saturday, January 4th, Dr. William H. Williams, in the eightieth year of his age.

WALLIS.—In Philadelphia, on Saturday, December 28, 1901, Dr. James M. Wallis, in the seventy-seventh year of his age.

Pith of Current Literature.

Journal of the American Medical Association,
January 11, 1902.

Treatment of Chronic Myocarditis. By Dr. John H. Musser.

The Influence of some of the Commoner Drugs upon the Gastric Functions. By Dr. Boardman Reed.—Perfectly normal stomachs are probably in the minority in large cities, especially among persons employed indoors. In stomachs which are normal, or approximately so, the digestion may be injured by a simple bitter tonic, taken even for a short time. Quite moderate doses of hydrochloric acid, administered as a medicine, may prove effective in hypochlorhydria, but are likely to do harm to normal stomachs, and certain to aggravate hyperchlorhydria. Pepsin rarely produces any good result when given alone, even to persons with weak digestive power, and often then retards the digestion of albuminoids. Pepsin and hydrochloric acid administered together much more frequently do good than either given singly.

Treatment of Chronic Round Ulcer of the Stomach. By Dr. G. Fuetterer.—According to the author, a lack of volume of blood does not necessarily promote the formation of an ulcer; he believes that an ulcer of the stomach can form only when there is a certain amount of hæmoglobin lacking, and that it must heal when the hæmoglobin percentage is increased to a certain amount. In the author's practice, when an ulcer of the stomach is diagnosed or suspected, the patient is advised to go to bed, either in a hospital, or at home employing the services of a trained nurse. The juice of five pounds of beef is given daily, as the case may require, to bring the percentage of hæmoglobin up to the normal as soon as possible. Prepared beef extract does not give the desired result. Peptonized beef solutions are not tolerated in sufficient quantity. After the percentage of hæmoglobin has become normal the patient should have nothing to eat or drink for from two to five or six days. Rectal nourishing enemata may be given twice a day, preceded by a cleansing enema. After the period of total abstinence, milk should be given for from four to six weeks, after which solid food according to the dietary of Leube, or of Pentzold, may be taken.

Gastric Hyperæsthesia and Its Management. By Dr. Charles G. Stockton.—The author insists upon the importance of regular examinations of the stomach contents, in order that one may govern the diet intelligently. The diet may be too restricted and the stomach may lose power for want of use. And yet, if the stomach is overtaxed in these cases, there is produced in the patient real suffering, loss of courage and a disinclination to take sufficient food. The author regards this as one of the most practical questions relating to the so-called dyspeptic. It is a mistake to regard it as a disease of the stomach; it really is a derangement of the organism, of which the stomach condition may be taken as an index.

State Supervision of Marriage. By Dr. W. B. Heath.—To demonstrate the feasibility and bene-

ficial results of State supervision, and to create public sentiment, some inducement should be made, and the author suggests that certain civic advantages might be offered for those contemplating marriage to comply with the conditions and to inaugurate such a system.

Injuries of the Chorioid, with Report of a Case. By Dr. Ellet Orin Sisson.

Lichen Planus Hypertrophicus. By Dr. David Lieberthal.—The absence of typical elementary lesions does not justify the exclusion of hypertrophic lesions from the class, lichen planus. The elementary lesions will be found at one time or another during the course of the affection. This verrucous manifestation of the process may be due to circulatory derangements. For cases in which elementary lesions are also present, and especially more extensive in distribution, the prospect of treatment seems better than for those which present the verrucous growths only. In some cases only repeated surgical procedures will remove the affection, and arsenic is more likely to prove serviceable at the periods when typical elementary lesions are also present.

Notes on Recent Cases of Extragenital Syphilitic Infection. By Dr. L. Duncan Bulkley.

Traumatic Arterio-venous Aneurysms of the Subclavian Vessels, with an Analytical Study of Fifteen Reported Cases, Including One Operated upon. By Dr. Rudolph Matas.

Case of Acute Pancreatitis with Fat Necrosis; Operation; Recovery. By Dr. William J. Mayo.

Medical News, January 11, 1902.

Chronic Myocarditis. I. Morbid Anatomy and Physical Signs. By Dr. J. H. Musser.—The author believes, with Sewell, that the papillary muscles are the source of the auscultatory phenomena of myocardial inflammation whereby leaflets do not coapt synchronously, or areas of the muscles synchronously contract. He points out that myocardial inflammation may exist (1) without definite physical signs—a rare occurrence; (2) with signs of moderate cardiac hypertrophy, marked reduplication being the only physical sign and of significance only when coupled with signs of endarteritis; (3) with physical signs of dilatation; (4) with physical signs of fatty degeneration; (5) with other signs, in themselves unimportant, but, in the aggregate, of great significance.

Prolonged Medication, with Special Reference to Digitalis. By Dr. Abraham Jacobi.—The indications for the use of digitalis, according to the author, are the insufficiency of the heart muscle and the incompetency of the mitral valve. Chronic myocardial inflammation is no contraindication. Large doses may overexert the inflamed muscle; that is why large doses are very badly borne in acute inflammation of the muscle; small ones are often serviceable when the first onset is passed. Aortic insufficiency, when incipient or moderate, is easily compensated for, and small doses of digitalis continued for a long time prove of permanent service. Only those, however, can be thus benefited, whose cases are recognized early, either accidentally or through careful self-observation by the patient.

Heart Strain: Its Result and Treatment. By Dr. J. M. G. Carter.—In a series of examinations of some seven hundred ex-soldiers, the author observed a large number suffering from some form of heart disease; especially was this so in the case of those who were in the Spanish-American war. Most of these cases can be explained with reference to heart strain. Treatment requires proper clothing, well-regulated life, and avoidance of overexertion. Well-regulated exercise, fresh air, systematic bathing, regular meals, and sufficient sleep are necessary. Food that produces digestive disturbances of any kind, or that has a tendency to produce gas in the stomach or intestines should be avoided; liquids should be limited. In cases where asthenia is present, digitalis and strychnine are the most important remedies; the addition of tonics will restore the tone of the heart and reduce its rhythmic activity. The duration of treatment must be determined by the condition of the individual case. It will depend somewhat upon how the organ responds to the treatment, but so long as dilatation exists they cannot be safely stopped.

On the Action of Digitalis. By Dr. Arthur R. Cushny.

Bacteriological Diagnosis of Typhoid Fever. By Dr. Henry A. Higley.

American Medicine, January 11, 1902.

The Operative Cure of Prolapsed Uteri. By Dr. Charles P. Noble.—The author's experience in one hundred and thirty cases seems to indicate that the same operations are applicable to the cure of every case, slight modifications in detail being necessary to meet special indications. In typical cases of average severity the method followed is to curette the uterus, to amputate the cervix, to resect the anterior vaginal wall, to restore the integrity of the pelvic floor, and to suspend the uterus from the anterior abdominal wall. By this series of operations the following objects are accomplished: The weight of the uterus is lessened; further involution of the uterus is promoted; the redundant overstretched anterior vaginal wall is resected; the supporting function of the sacral section of the pelvic floor is restored; and the prolapsed uterus is restored to approximately its normal position of ante flexion, so that the force of intra-abdominal pressure falls upon its posterior wall instead of upon the fundus or its anterior wall.

Gonorrhœal Vulvovaginitis in Young Children.

By Dr. Reuben Peterson.—This condition is more common than is generally supposed. It is more frequently met with in unhygienic surroundings in large cities, but is by no means rare in less thickly settled districts. The gonorrhœal variety is more frequently met with than the simple below the age of six. Specific vulvovaginitis, in the large majority of cases, comes from actual contact of the patient with some infected person. The common bath, towels, bed-linen, etc., contribute. Treatment must be energetic to be of any avail. Under certain conditions the vaginal orifice should be widely dilated and the vaginal pus cavity properly drained.

Removal from Bladder, through the Cystoscope, of a Needle which had been Swallowed Nine Years Before. By Dr. Hugh H. Young.

The Impropriety of Cæsarean Section in Placenta Prævia, with Remarks on a Rational Method of Treatment. By Dr. Hugo Ehrenfest.—The author believes that the results of Cæsarean section at large are worse than are usually stated, and that the results obtained by the usual treatment of placenta prævia are better than is generally believed. There is every reason, he asserts, to expect that the results of Cæsarean section performed in cases of placenta prævia will be much worse than those of the classic operation. If Cæsarean section as a means of treating placenta prævia is contemplated, Porro's radical operation, with extirpation of the uterus, according to the indications for this operation, may have to be performed in the majority of cases.

The Effects of Ventrofixation and of Ventral Suspension on Subsequent Pregnancy and Labor, with Report of a Case. By Dr. Arthur C. Jacobsen.—The author finds that, as a rule, subsequent pregnancy and labor are uncomplicated. Between eighty-five and ninety per cent. of reported cases have been absolutely normal; in about two per cent. delivery has been impossible by way of the natural passages; in the remaining cases the difficulties met with have been overcome by the ordinary resources of obstetrics. We have still, however, some good obstetric reasons for distrusting the operation of ventrofixation in child-bearing women.

The True Value of Local Treatment in Gynecic Practice. By Dr. Frank C. Hammond.

Congenital Malformation of the Vagina, with Report of Cases. By Dr. William Edgar Darnall.

Dystocia following Ventrofixation. By Dr. Fred. H. Bloomhardt.

Philadelphia Medical Journal, January 11, 1902.

Florida in February—Notes and Impressions of a Brief Midwinter Tour. By Dr. James K. Crook.

The Treatment of Inoperable Tumors. By Dr. Conrad George.—The author considers the results which have followed the use of pyocyanine and "Coley's mixture" in inoperable cases at the University Hospital, at Ann Arbor. In two cases, as a result of the pyocyanine treatment, a marked diminution in the size of the tumor was observed, with some relief from pressure symptoms, but there was an excessive stimulation to the growth of tumor cells in the neighborhood. It is extremely doubtful whether a cure could have been effected if the cases had been placed under this treatment earlier in the course of the disease. Two other cases were also treated with "Coley's mixture," and the results were unfavorable to its use in inoperable tumors. It undoubtedly adds increased stimulation to the growth of sarcoma cells by the direct irritant action of the toxins. The absorption of the toxins and the products of the narcotic changes produced in the tumor causes marked general weakness and depression, which, when continued to a certain stage, results in the death of the patient. The one case in which improvement by this treatment occurred was an ordinary granulation tissue tumor with no evidence of sarcomatous tissue in it. The reports of English surgeons are likewise very unfavorable to the use of "Coley's mixture."

Duration of Immunity by Diphtheria Antitoxine. By Dr. Henry D. Jump.—The author concludes that, as diphtheria antitoxine is practically harmless, all exposed persons should receive an immunizing dose in proportion to age. Two hundred and fifty units should be given to children under two years of age and five hundred to all others. The immunity will last for at least three weeks, provided a reliable antitoxine is used. All exposed persons should be removed from infected surroundings, either by thorough disinfection of their own quarters, or by removal to other places. If this is impossible, the immunizing doses should be repeated every third week.

Note on the Treatment of Follicular Tonsillitis. By Dr. Charles W. Dulles.—The author's plan is to act upon the bowels with small doses of calomel and soda (one tenth and one grain respectively) every half hour; beginning at once if the patient is seen in the morning, but the next morning if seen in the evening. A gargle of boric acid is used, but for very little children instead, lime water is given every hour through the day, a little while before the calomel is given so as not to form black wash. This treatment hinders the development of micro-organisms and their products in the fauces and obviates the need of measures very trying to children. In older persons, where there is a good deal of pain connected with amygdalitis, the author has found it of great use to administer salol and phenacetine in sufficient doses. This lessens pain and acts upon the systemic condition.

Some Aural Complications of Influenza. By Dr. S. MacCuen Smith.—Aural complications, to be treated successfully, must be dealt with in a bold, but not necessarily non-conservative, manner, from the very inception of the attack. Absolute rest in bed, with free diuresis and properly conducted diaphoresis, are of the first importance. The bowels should be freely opened, and the diet restricted to milk and broth. Two or three days of absolute fasting and enforced rest in bed will frequently accomplish more in prophylaxis than any other combined therapeutic measures.

Acquired Pulmonary Lues. By Dr. Otto Lerch.

Some Experiments on the Formation of Bile Pigment and Bile Acids; a Contribution to Our Knowledge of Icterus. By Dr. Alfred C. Croftan.

Medical Record, January 11, 1902.

On the Progress of Public Health Organizations in the United States. By Dr. Stephen Smith.—The author gives a readable article on the subject in question. He refers to the fact that, for a period of upward of thirty years, the Marine-Hospital Service has steadily advanced in the direction of becoming the department of public health in the general government until it requires little more than an adjustment of its organization to the new career upon which it would enter to fulfil every requirement of that position.

Official and Private Phthisiophobia. The Medical, Social, International, and Humanitarian Aspects of the Government Policy to Exclude Non-pauper Tuberculous Immigrants or Con-

sumptive Visitors to this Country. A Plea for a Superior Board of Health or Commission on Tuberculosis and a National Sanatorium Association. By Dr. S. A. Knopf.—The author refers to the fact, conclusively proved by the statistics of fifty years, that since the establishment of sanatoria for consumptives, the mortality from tuberculosis among the villagers of Goerbersdorf and Falkenstein—the two places where five of the most flourishing German sanatoria are now existing—has actually been decreased by one third of that which it was before the establishment of the institutions. He explains this on the hypothesis that the villagers imitated voluntarily the cleanly habits which were obligatory for the sanatorium inmates. Neither official nor private phthisiophobia will help us in the antituberculosis crusade; education of the masses will be a more judicious procedure, and will prove more effective than any Draconian measure.

A Contribution to the Pathogenesis of Narcolepsy and other Forms of Morbid Sleepiness. By Dr. Heinrich Stern.—The author presents an interesting case. His observations indicate that neither undersupply nor oversupply of blood, as such, appears to exert any influence upon the production of sleep seizures. These seem to be due, in the first instance, to diminished ionization of the chlorides in the blood—at least it was so in the author's case. Other instances of pathologic sleep may primarily depend upon the non-dissociation of other salts. The chlorides, however, appear to play the most important rôle in the osmotic tension of the body fluids, and their diminution or non-ionization calls forth various abnormal conditions.

Are the Tonsils to be Regarded as Normal Physiological Organs of the Body? By Dr. Francke H. Bosworth.

Boston Medical and Surgical Journal, January 9, 1902.

Remarks on the Diagnosis between Acute Appendicitis and some Atypical Cases of Typhoid Fever. By Dr. Maurice H. Richardson.—The chief deductions to be drawn from the author's remarks are, that one should proceed in doubtful cases with extreme caution, and that every means of investigation should be exhausted before subjecting the patient to an operation. In those cases in particular in which the suspicion of typhoid fever is present, the abdomen should not be opened unless the indications are strong. When, in spite of repeated examinations and the greatest care, the surgeon is convinced that typhoid fever is not present, exploration, even if it proves him wrong and shows that typhoid does really exist, loses the sting of carelessness and haste. The blunders that mortify are those that would be unnecessary were the examinations painstaking.

Unnoticed Fractures in Children. By Dr. F. J. Cotton and Dr. R. H. Vose.—The authors submit some cases which indicate that we are inclined to underestimate the tolerance of children to fractures. In adults there are not infrequent exceptions to the rule that fractures entail immediate and notable pain and disability; in children it would seem that the exceptions are so numerous as to require modification of the rule. In children the only safe way seems to

be to assume a fracture as probable, till every inch of bone has been gone over carefully.

Notes on X-light. By William Rollins.

Case of Attempted Criminal Abortion in Extra-uterine Foetation. By Dr. W. D. Swan.

Report of Cases from the Second Surgical Service of the Children's Hospital, Boston.—I. A Case of Noma; II. Elongation of the Tendo Achillis after Operation; III. A Case of Probable Dislocation of the Cervical Vertebra with Spontaneous Replacement and Recovery. By Dr. H. L. Burrell, Dr. R. W. Lovett, and Dr. J. E. Goldthwait.

Lancet, December 28, 1901.

Hemiplegia. By Dr. J. Taylor.—After discussing the character of the paralysis, the relative weakness or disability produced in different parts of the body depending upon the position of the lesion in the brain, the author goes on to speak of the nature of the lesion producing the paralysis as determined by the clinical history of the case.

1. *Hæmorrhage.*—The onset of the paralysis is sudden and may take place during exertion; *e. g.*, straining at stool. There is loss of consciousness, and coma with stertorous breathing. If the hæmorrhage is cortical, the onset is usually signalized by a convulsion, beginning on the opposite side and becoming general. The pulse may be full and tense and the arteries hard and atheromatous. Absence of albuminuria does not exclude kidney change; albuminuric retinitis is frequently present in the entire absence of albuminuria.

2. *Thrombosis.*—The onset, as a rule, occurs during rest; the commonest time is at night, and the paralysis may only be realized when an attempt is made to rise. As a rule, there is no loss of consciousness, the pulse is slow, and the symptoms are not urgent. When the hemiplegia is on the right side and aphasia is present, the cause is more likely to be thrombosis than hæmorrhage. In young adults in whom no heart or kidney disease is present, hemiplegia is almost invariably due to thrombosis occurring in diseased vessels. The nature of such disease is the thickening resulting from syphilis.

3. *Embolism.*—The onset is sudden, consciousness may or may not be lost, and if the right side is affected, aphasia is usually present. Sudden onset and the presence of obvious heart disease usually indicate the nature of the lesion.

4. *Tumor.*—Here the clinical history is of the greatest importance. The onset of the hemiplegia is usually slow, and is associated with headache, vomiting, and optic neuritis.

5. *Abscess.*—Here there is usually a history of traumatism, ear disease, empyema, or suppuration, in some other part.

Hemiplegia occurring in childhood may be of two kinds: 1. A birth palsy, hemiplegic in type, occurring during birth and due to meningeal hæmorrhage. 2. Ordinary infantile hemiplegia, occurring during the early years of life, and commencing usually with a unilateral fit or convulsions. The cause is uncertain; it is ascribed by some to inflammation of the gray matter, by others to arterial thrombosis.

Maldevelopment of the hemiplegic side nearly always results.

The treatment of hemiplegia divides itself into the treatment at the onset, and the late treatment for the purpose of restoring function. Treatment at the onset depends on the cause of the paralysis. If it is hæmorrhage, free purgation, light easily digested food, and absolute rest are indicated. If embolism or thrombosis in the old, all violent measures are to be carefully avoided. If thrombosis in the young, then mercury and potassium iodide are to be energetically administered. Treatment in the later stages is directed to improvement in the condition. Gentle rubbing and Faradaization to the extensors are beneficial, together with fresh air, gentle exercise, and light, easily digested food.

The Early Diagnosis of Pulmonary Consumption, with Especial Reference to the Value of Tuberculin. By A. Latham, M. B.—A positive diagnosis of pulmonary tuberculosis is justified under the following circumstances: 1. When we find diminished resonance and increased resistance to the finger associated with the presence of *persistant* crepitations or fine râles in those situations in which tuberculosis usually starts in the lungs. 2. When the symptoms are suggestive of tuberculosis and tubercle bacilli are present in the sputum, although the lungs are apparently sound. 3. When hæmoptysis occurs in cases where there is no evidence that the bleeding comes from the upper air passages or is dependent upon some morbid condition of the heart or other disease within the chest. 4. When there are suspicious signs in the lungs, with tuberculous disease elsewhere in the body. When the disease is so slight that a diagnosis cannot be made on physical signs or any tubercle bacilli demonstrated in the sputum, the author recommends the use of Koch's *old* tuberculin as a diagnostic agent. Its use is entirely harmless, and while the presence of a reaction is not absolutely and invariably indicative of the existence of tuberculosis, yet in this respect it compares very favorably with what is known as Widal's reaction.

A rise of temperature of 1° F. may be considered a positive reaction; this may be delayed for thirty-six hours. If no reaction occurs in three days, a second injection of tuberculin, five times the amount of the first, is given. Should this prove negative, after three days a third injection of ten times the first is given. If there is now no reaction, tuberculosis may be excluded. The beginning dose, used for the first injection, is from 0.001 to 0.0005 cubic centimetre. The old tuberculin of Koch, free from tubercle bacilli, is diluted with a 0.5-per-cent. solution of carbolic acid, so that a one-per-cent. solution of tuberculin is obtained. Injections should be given into the loin every four hours, and the patient's rectal temperature should be taken for three days before the first injection, and every four hours thereafter.

The author cites two cases in which a diagnosis of tuberculosis was made by the aid of tuberculin, long before any definite signs or symptoms appeared, and also a case, presenting all the signs of pulmonary tuberculosis, the absence of a tuberculin reaction in which showed it to be non-tuberculous.

The Differential Diagnosis of Small-pox. By Dr. J. MacCombie.—In the pre-eruptive stage of

small-pox difficulties often occur in connection with prodromal rashes which may simulate scarlet fever and measles. The faucial symptoms are unlike those of scarlet fever, the eruption is usually absent on the extensor surfaces, the face, the neck, and the temples, and there is no submaxillary glandular enlargement. These facts should prevent a diagnosis of scarlet fever. The prodromal rash of small-pox that resembles measles, counterfeits very closely the eruption of that disease, but catarrhal symptoms are usually absent. The presence or absence of Filatow's (*Koplik's*) spots is a most valuable aid to the diagnosis of small-pox in the initial stage and measles.

The disease most frequently misdiagnosed for small-pox in the eruptive stage is chicken-pox. The absence of initial symptoms in chicken-pox is in striking contrast to their presence in small-pox. The eruption in chicken-pox is usually the first thing noticed, and first appears on the trunk; the vesicles are elongated or elliptical, attain their growth in a few hours and are then dome-shaped, transparent, and distended with fluid; they are unilocular, collapsing on transfixion with a needle. The unruptured vesicles are not depressed in the centre, but the ruptured ones may be. On the hands and feet the vesicles are not typical and may feel shotty. In small-pox the initial malaise and lumbar pain is very constant; the eruption appears first on the extremities and face; the vesicles are circular, do not attain their full size on the first day of the eruption, are multilocular (not collapsing on transfixion), and their centres are depressed. Confluent small-pox on the first or second day of eruption is not infrequently diagnosed as measles. Close observation will show that the papules are more raised than are the papules of measles, and the eruption is hard and shotty, while in measles, though slightly resistant, it is soft and velvety. That is the diagnostic point. In syphilitic eruptions the coexistence of a papular, scaling, and pustular eruption, its symmetrical appearance, and the history of the case, should negative small-pox. Other conditions which may simulate the eruptive stage of small-pox are herpes, eczema and impetigo, pemphigus, urticaria papulosa, acne, rheumatic sudamina, glanders, and pyæmic skin eruptions. The difficulties in the diagnosis of small-pox in the eruptive stage are most marked in cases where the eruption is modified by vaccination. Many of the mistakes in diagnosis are due to disregard of the significance of the initial symptoms of small-pox.

Three Cases of Early Infantile Tabes Due to Congenital Syphilis and Hereditary Neurosis. By G. T. B. James, F. R. C. S.

Some Points in the Prognosis of Mental Disturbance. By W. J. H. Haslett, M. R. C. S.

Tuberculosis of the Heart. By Dr. H. N. Heineman.—In this article the author considers tuberculosis of the endocardium, of the myocardium, and of the pericardium. Tuberculous endocarditis has been almost exclusively observed in cases of acute, general, miliary tuberculosis. Usually it gives no physical signs during life, because the rapid progress of the disease gives no time for their development. The forms in which tubercles appear in the myocardium are most commonly the

fine, transparent miliary nodules, at times grayish or yellowish, discrete or aggregated, as found in acute, general, miliary tuberculosis; again in the larger yellowish nodules; rarely in large cheesy masses; least commonly of all as diffuse cheesy degeneration. Miliary tubercles occur most commonly in the ventricles. The usual characteristics of tuberculous pericarditis are too well known to need description.

In conclusion the author describes two excellent staining methods used in the laboratories of Weigert and Ehrlich.

The Detention of Lunatics in Workhouses. By S. Davey, LL. B.

The Prevention and Cure of Phthisis. By G. W. Hambleton, L. K. Q. C. P.—The author holds that phthisis is due to a toxine, that this toxine is not produced by the tubercle bacillus, but is a natural product, normally present in and eliminated from, the body, and that its accumulation in the system is produced by an inadequate respiratory surface of the lungs not compensated for by the vicarious action of other organs. The objects to be attained in the treatment of phthisis are to eliminate the toxine and prevent its further accumulation, and to develop the lungs to an adequate extent. A great step in the right direction has been taken by the open-air system of treatment. We must increase the functional activity of the skin, kidneys, and alimentary canal by baths or by sponging the whole body, and by the use of diaphoretics, diuretics, and saline aperients. In the early stages of the disease the author has found the prescription of two baths daily and three doses of an alkaline mixture containing diaphoretics and diuretics, with a saline aperient in the morning and, later, tonics, amply sufficient. No attempt should be made to develop the lungs until the disease has been some time arrested; then active measures may be gradually adopted.

The author has applied the treatment in over fifty cases and in all stages of the disease. Of these, 10 patients have died, 9 are reported well, and 16 have completely recovered, their average chest girth showing an increase of $2\frac{3}{4}$ inches, expansion $2\frac{1}{2}$ inches.

January 4, 1902.

The Causes and Significance of Phantom Tumors. By Sir W. H. Bennett.—Phantom tumors are the result of muscular contraction; the condition is not in itself a disease, but it is a sign pointing to the existence of abnormal conditions which may be close by, or somewhat remote. The tumors come and go without obvious reason and generally without method; they are, as a rule, painless, but may be the source of great discomfort. The characteristics of these tumors are very uniform; they are hard and resistant, smooth, and in shape they conform to that of the muscle, or groups of muscles, concerned; over the abdomen they are always resonant, but less so than the surrounding parieties. Sometimes they disappear during sleep, sometimes they do not; profound anæsthesia always leads to their disappearance. The causes of these tumors may be classified in the following way: 1. *Irritation*.—(a) Irritation of the skin or of other superficial parts either immediately over the muscle

or muscles concerned or over the course of the nerves which supply them; (b) the existence of underlying disease or abnormality—for an example, supposing the tumor to be in the abdominal wall, some disease in the abdominal cavity which, by reason of its situation or relation, causes nerve irritation leading to contraction of a corresponding muscular area (such tumors, when occurring immediately over the underlying disease, are usually “protective”).

2. *Occupation*.—In a certain number of cases in which the occupation of the individual entails the use of a particular muscle or group of muscles for a long period continuously, the muscles concerned come, as it were, into permanent action, and remain hard and enlarged, although the occupation has been temporarily discontinued. These are “occupation” phantoms.

3. *Irritation*.—In a certain type of neurotic people the tendency to imitate the diseases or deformities of others is very strong. This is the “nervous mimicry of disease,” of Paget. The nervous mimicry of hip disease is, perhaps, one of the commonest examples of this curious tendency with which we meet. Tumors are sometimes imitated in the same way; these are “imitative” phantoms.

The author cites clinical examples of each of these varieties. He calls special attention to a point in diagnosis, viz., that when such tumors disappear under anæsthesia, they never go away suddenly. With the oncoming of complete anæsthesia a little vibrating or quivering motion will be felt and then the tumor will perceptibly melt away gradually under the hand. A true tumor may suddenly slip away under anæsthesia, or a cyst may rupture; so that the hand should be kept upon the tumor during the giving of the anæsthetic. As regards treatment, the obvious indication in the irritation phantoms is to cure or to remove the source of irritation, if it has been discovered. In the occupation phantoms, rest from the usual occupation, as a rule, gives temporary relief only; a change of occupation is nearly always necessary. The discriminating use of electricity and massage is often of much advantage. The imitative phantom only requires the removal of the patient from association with the person imitated.

The General Principles of Treatment of Diseases of the Skin. By Dr. W. Evans.

Seventeen Cases Operated on for So-called “Internal Derangement of the Knee-joint.” By A. E. J. Barker, F. R. C. S.

On the Ætiology and Pathology of Scurvy. By G. Lamb, M. B.—The author has studied eleven cases of scurvy seen by him in India, with reference to the recent hypotheses as to the causation of that disease. These hypotheses are as follows: 1. Wright’s.—The scorbutic condition is probably a condition of acid intoxication—that is, a condition in which there is a marked diminution in the normal alkalinity of the blood plasma, the result of a dietary of food-stuffs which contain a large excess of mineral acids over bases; a dietary, in fact, of salted meats and cereals. Striking amelioration follows the administration of sodium lactate.

2. Liston’s.—Scurvy may be due to the presence in the intestine of the *Ankylostoma duodenale*.

3. Jackson and Harley’s.—Scurvy is a condition of ptomaine-poisoning produced through the eating of tainted animal food.

The author’s observations made upon eleven typical cases of scurvy, failed to coincide with any of these hypotheses. The dietary of the patients was such as to exclude any possibility of a lack of fresh vegetables or fresh meat. The alkalinity of the blood of all the patients was normal. No ova of *Ankylostoma duodenale* were found in the stools. There was no possibility of the development of bacterial poisons in the food, as the meat was always eaten the day the animal was killed. Further, there was no improvement in the symptoms, either as a result of the giving of a diet consisting of abundant alkaline food-stuffs, or on the administration of large doses of sodium lactate. The author concludes therefore that there seems to be more than one ætiological factor and pathological condition underlying the symptoms which are clinically known as scurvy.

Abdominal Pan-hysterectomy for Cancer of the Uterus, with Notes of Two Cases. By Dr. A. H. N. Lewers.—In cases of cancer of the cervix, operation by the vaginal route is usually to be preferred. In cases of primary cancer of the body of the uterus, however, abdominal pan-hysterectomy is to be preferred, for the following reasons: The cervix is usually quite unaffected, so that so long as the incisions into the vagina clear the cervix there is little danger of leaving any of the malignant growth behind. The body of the uterus is considerably enlarged, and it would be difficult to remove it *per vaginam*; the subjects of the disease are usually sterile, elderly women, whose vaginas are narrowed from disuse and from the contraction due to the senile atrophy following the menopause. By the abdominal route it is an easy matter to remove the ovaries and tubes, together with a good width of the broad ligament on each side—a matter of importance in cases of primary cancer of the body of the uterus. The mortality of abdominal pan-hysterectomy is about the same as that of vaginal hysterectomy, i. e., five per cent.

The author reports two cases of cancer of the body of the uterus in which he operated by the abdominal route with most gratifying results, the patients making uninterrupted recoveries.

Two Contrasted Cases of Hysterectomy: One during Pregnancy, the Other in Puerpery. By J. Bland-Sutton, F. R. C. S.—The most important point brought out by the author in his article is, that while, under ordinary circumstances, fibroids are painless tumors, it may be taken as an axiom, that when a fibroid becomes painful it signifies that the tumor is undergoing secondary changes or that some complication has arisen in the pelvis.

The Disappearance of the Addiment from Antimicrobial Sera. By Dr. E. W. A. Walker.—In a previous communication the author has shown by animal experiments that the bacteriolytic addiment of fresh normal serum tends to disappear with considerable rapidity, and is no longer present in a serum that has been kept for several days. In the present article he reports the results of experiments which fully confirm the above statements. The bacteriolytic power of a fresh serum rapidly diminishes

both in the immune and normal sera. Hence it appears that, as regards experiments in bacteriolysis, the age of the serum which supplies the addiment is a factor of the first importance, and that observations on bacteriolytic action with an addiment-containing serum cannot be properly compared unless they are performed at the same time.

Beef-worm in the Orbital Cavity. By T. W. F. Gann, M. R. C. S.—The author reports the case of a lad, aged eighteen years, from the orbital cavity of whose left eye he removed a beef-worm measuring one inch and three eighths in length. Treatment consisted in the injection of a few minims of a strong solution of tobacco into the inflamed orbital cavity, the aperture being covered with a plug of moist tobacco leaf, and left for a couple of hours. At the end of that time the worm was easily removed with fine forceps. The native treatment in Central America is to cover the swelling (usually on the limb) with a plug of wet tobacco for a day or two, and then forcibly to squeeze out the worm. The patient whose case is here reported, made a good recovery and did not lose the sight of his eye.

British Medical Journal, December 28, 1901.

Localization in the "Motor" Cerebral Cortex. By Dr. C. S. Sherrington and Dr. A. S. F. Grünbaum.—After briefly summarizing the results of the classical experiments of Ferrier and Horsley upon the subject of cerebral localization, the authors describe similar researches performed by them upon gorillas, chimpanzees and orang-outangs. They find the motor area to vary widely in individual cases, and that the fissures of the cortex do not mark in any sense the boundaries of the functional areas of the organ. Two landmarks of real value are the genua of the Rolandic fissure. The intensity of the current required to elicit movement is exactly the same in the anthropoid and lower apes. If, therefore, it is really necessary to employ intense Faradaization for the human motor region, that is a difference between the human motor region and that, not only of the lower ape, but of the anthropoid. In the majority of individuals experimented upon, cortical epilepsy has been easily provoked. Previous observers have stated that the contrary obtained. There is much greater integration of localized representation of movements in the anthropoid as compared with the lower ape. It is probable that as much of the motor area lies hidden from the surface in the sulci as actually lies at the free surface on the convolutions. It is with the exploration of the so-called inexcitable field that the progress of research has to deal, and by means of clinical and microscopical research rather than by such excitation experiments as are here recorded.

On the Quantitative Estimation of Chloroform in Animal Tissues. By Dr. A. D. Waller.—The author summarizes in this article the results of the quantitative estimations of chloroform carried on by Dr. Dodgson at his suggestion and by aid of a grant from the British Medical Association. After describing the apparatus and method used, the results of the experiments are given in tabular form. The most important conclusion reached is that the weight of chloroform recoverable from the body of

a small animal killed by the inhalation of chloroform amounts to one part in 10,000 of the body weight in the case of a small animal (rat), a quotient which is about twice that estimated by Snow as being lethal to the human subject.

Theories of Inheritance. By G. A. Reid, M. B.

Direct Introduction of Purgatives into the large Intestine in Cases of Operation for Septic Peritonitis. By A. M. Sheild, M. B.—The author believes the direct introduction of purgatives into the intestines at the time of operation to be of great utility in the surgery of septic peritonitis. In many cases the patient's life hangs on the possibility of overcoming the paralytic obstruction, and the free evacuation of gas and fæces. The nozzle of a small syringe is introduced into the "stump" of the appendix, and the solution directly thrown into the cæcum. Three drachms of magnesium sulphate, with ten drops of tincture of nux vomica, and a drachm of glycerin in an ounce of water, is the formula employed. Two hours later, a turpentine enema is given, and the result so far has been excellent. The author has employed this method in five bad cases of septic peritonitis associated with perforating appendicular inflammation, with surprisingly beneficial results in every case.

Vratch, December 1 (December 13, New Style), 1901.

On the Treatment of Fractures of the Clavicle. By Dr. V. A. Thiele.—During the past ten years the principles of treatment of fractures have undergone considerable change. It is no longer believed that immobility is an essential condition for healing, and it is recognized that the formation of a blood clot in the fractured region prevents the regeneration of the injured bone. Accordingly, the ambulatory treatment of Bardeleben came into existence, followed by massage of the parts. Under this method of treatment the healing of fractures occurred more rapidly than ever before, and the calluses were as strong, if not more so, than under the old methods. Massage may be given from the first, as it promotes the absorption of the blood clot, and secures a certain amount of motion for the part involved. Particularly in the treatment of fractures of the clavicle have brilliant results been obtained by the author, by means of a light bandage which left the part exposed for inspection, and massage. A dressing for such fractures should have for its object, not the immobilization of the clavicle, but the fixation of the fragment in approximation, so that massage may be employed as early as possible. The secret of success in fractures of the clavicle is not in the use of a particular form of dressing, but in the close observation of the fractured bone for the first five or seven days, so as to prevent the malposition of the fragments. In children, and in adults where there is not much separation between the fragments, the author uses the following method in treating his cases of clavicular fractures. He massages the region for ten or fifteen minutes and puts the arm into a sling, which is held in place by a few turns of a flannel bandage. Massage is repeated daily for ten or fifteen minutes, and when necessary twice daily. The position of the fragments is verified every time. The results obtained by these

methods are excellent, and cannot be compared with those of the old way.

The Correct Methods of Prevention of the Diseases and Mortality in Children. By Dr. I. V. Troitzky.—The author recommends the establishment of day nurseries and asylums, in which the working classes can have their children taken care of during the hours of labor. Such day nurseries should be under the supervision of competent medical men, and should be organized according to the laws of sanitary science. In connection with these nurseries it is necessary to establish schools for mothers, giving them instruction in the care of infants and children. In addition, arrangements should be made to provide for such pecuniary and other assistance as is needed to help mothers unable to bring up their children properly.

Graphic Methods of Estimating the Variations in the Blood Pressure in Man. By Dr. I. M. Levaschoff (*continued*).—The author experimented with Franc's sphygmograph in determining the variations of blood pressure at the bedside. He found, in examining tracings of the capillary pulse taken simultaneously with those of respiration, that the curve of the capillary pulse during quiet respiration did not appear to be altered, except very slightly, but during deep inspiration and expiration the curve was notably altered. At the beginning of deep inspiration the curve was slightly raised, *i. e.*, the amount of blood in the tip of the finger was increased, the pulse waves became a little slower, and their height was not altered. At the height of the inspiration, the capillary pulse curve fell, the pulse waves became still more slow, and their depth increased. At the beginning of expiration, the curve rose again, and the pulse waves became more frequent and increased in height. A more rapid deep respiratory movement, however, influenced the capillary curve in a still different way. The curve fell abruptly at the height of inspiration, the pulse waves became shallower, and at the end of expiration again reached their normal size and relation. The author further tested the effects of cerebral activity upon the blood pressure by taking a tracing of the capillary pulse while the subject was engaged in the solution of a difficult mathematical problem, etc. He found that cerebral activity was accompanied by a steady decline of the curve of capillary pulse, showing a lowering of the blood pressure and a lessening of the amount of blood in the finger. At the end of the mental effort, the curve gradually returned to normal. (*To be concluded.*)

Subhyoid Pharyngotomy in a Case of Lipoma in the Pharyngo-laryngeal Region. By Dr. N. N. Poroschine.—This operation is very rarely performed, because it is indicated only in cases in which the removal of a tumor of the subglottic region is not possible through the mouth. In the case reported by the author a hard lipoma of the pharyngo-laryngeal region was removed by pharyngotomy in two sittings. The first operation was Malgaigne's and was done under cocaine. The transverse subhyoid incision of Malgaigne, however, was not satisfactory, as it gave too little room. Accordingly, at the second operation, the author extended the incision along the hyoid bone, not reaching the extreme ends of the horn, in order to avoid the arteries of the neck. In this way the tumor was completely removed from the pharynx.

The Present Status of the Kumyss Treatment of Tuberculosis, and Its Defects in the Treatment of Tuberculosis. By Dr. N. A. Zolotavine.—The author reviews the advances in the treatment of tuberculosis that have been made with the establishment of sanatoria. In Russia there are at present only two public sanatoria and one private one of this kind. The author therefore pleads for the establishment of numerous national sanatoria, and particularly of institutions where with all other hygienic and dietetic means, the use of kumyss may be made a feature of the treatment. At present, the only places where one can send a patient for a kumyss cure in Russia are a few private institutions that are only accessible to the wealthy. The preparation of the kumyss is in the hands of Bashkires, who are a people of low state of civilization, and there is much improvement necessary in the technics of manufacture, especially in regard to the cleanliness of the dairies, and of the stables where the mares are kept. (*To be concluded.*)

Berliner klinische Wochenschrift, November 18, 1901.

Banti's Disease.—Professor Senator gives a résumé of the features of Banti's disease—splenic anæmia with ascites. He reviews the literature of the disease and reports four cases of his own.

Intra-uterine and Extra-uterine Communication of Self-intoxications. By Dr. Römer.—An experimental study.

Foreign Body Abscess in the Aural Region. By Dr. M. Reimar.

Early Diagnosis of Vesical Tuberculosis.—Dr. P. Asch records two cases in which a diagnosis was made with the cystoscope, despite the absence of tubercle bacilli in the urine. The author says that an early diagnosis is important, and in doubtful cases an early cystoscopy is permissible, although later it may be injurious to the patient. In the initial stages, cystoscopy is useful, especially when careful bacteriological examination fails to disclose the presence of the characteristic bacillus. Animal inoculation may be undertaken, but this requires several weeks to reach a definite conclusion.

Miscellaneous.

Mechanical versus Suture Methods for Intestinal Approximation.—Dr. Jacob Frank (*Annals of Surgery*, January) closes an article on this subject with the following conclusions: 1. That with no other method can be obtained all the excellent qualities in such an ingenious combination as with the mechanical devices of the Murphy type. 2. None of the suture methods can show such a low mortality. 3. The perfect holding together of the intestinal ends throughout their entire circumference with the button or coupler, obviating the danger of leakage, has been demonstrated by von Chlumski, who subjected all methods to the hydraulic-pressure test, and demonstrated the inferiority of the suture methods. 4. For end-to-end approximation, the button and coupler are the only devices that will achieve their greatest triumph, for it is in this operation that the suture methods yield the largest mortality.

Letters to the Editor.

VENTROFIXATION OF THE UTERUS.

37 EAST THIRTY-FIRST STREET,
NEW YORK, January 7, 1902.

To the Editor of the New York Medical Journal:

SIR: In your issue of January 4th Dr. Gilliam describes a method of hysteropexy which distinguishes itself from the other methods of ventrofixation by utilizing the round ligaments as a suspending means, by mobilizing a portion of them, and by including them in the abdominal wall, thus securing a certain amount of motion of the uterus.

The essentials of this operation were described by me as early as August 21, 1897 (*Eine neue Methode der Hysteropexie, Centralblatt für Chirurgie*). In the same year Dr. C. A. von Ramdohr reported my method in the New York Obstetrical Society, and shortly afterward it was the subject of a graduation thesis at the University of Paris under the auspices of Poirier, Berger, Guyon, and Albaran. Garrigues's *Diseases of Women* also contains a description of it, and the *American Journal of Obstetrics and Diseases of Women and Children*, Vol. xiii, No. 3, 1900, details my original operation and some of its modifications.

I called the attention of Dr. Gilliam to these facts on a previous occasion. It appears strange, therefore, that he persists in asserting that he had nothing to guide him when he devised this operation in 1899.

CARL BECK, M. D.

PROFESSOR SCHÜLLER AND HIS CRITICS.

BERLIN, December 22, 1901.

To the Editor of the New York Medical Journal:

SIR: The review of my book, *Die Parasiten im Krebs und Sarkom des Menschen*, which appeared in your paper (November 30, 1901, p. 1031) contains some misunderstandings and errors; likewise there have been left out several matters of importance. As I don't wish that readers who have not yet read my book by themselves should get a false view of my researches, I sincerely beg you, dear sir, to give the following corrections in the next number of the *New York Medical Journal*:

Your reviewer has omitted to mention that, as regards by first cultures, the *abdominal cavity of living animals* served me as a thermostat. Small pieces of the tumor, taken out immediately after or during the operation, still warm and with life (*lebenswarm*), were put into sterilized small bottles of about shilling-size. These bottles had been tightly closed up by means of small stoppers of caoutchouc (*not* of cork), were enclosed in the abdominal cavity of a living rabbit, and were taken out again after a time varying between a week and a fortnight. Only later on I used mechanical thermostats and larger cylindrical glass tubes of a finger's breadth, closed by caoutchouc or glass stoppers. Not before I had found hereby certain peculiar formations, which I was induced to view as parasites, and had studied those in all their various phases of evolution, did I search for them in the tissues of cancer and sarcoma. As regards, now, the compre-

hension of these parasites, your reviewer, as well as Mr. Hauser, mentioned later by him, evidently *confounds the two phases of evolution* especially emphasized by my book, namely, the *large capsules* and the *young organisms*. He says: "The size of these organisms is said to be from three to eight times the diameter of a red blood cell, and they occur in the tissues of malignant tumors and of affected glands in simply astonishing abundance." This statement of size, according to my book, only agrees with that of the large capsules, not, however, with that of the young organisms. The later statement of quantity, again, agrees only with that of the young organisms.

According to my examination, the *young organisms*, which I describe as the actual excitors of cancer, *partly arise in the protoplasm of the large capsule, partly increase by a two-, three-, or four-fold separation of their own main substance. They can grow out again to large capsules.* Also, according to the statements of my book, however not mentioned in your review, those cultures derived from the tissues may very well be continued in *sterile, life-warm human blood* with a bodily temperature, and are then unlimited and equal to "pure cultures."

The reviewer does not take into consideration in his representation of the parasites in the tissues that I did prove them not only in the way given by him, but also by *a series of others and by various methods*, not only in uncolored preparations, recognizable by their minutely described structure, their shape, their (iron-containing) color, which, by the by, is much weaker in the organisms among the tissues than in those among the cultures. But I have shown them, too, by various colorings, especially among others by thionin, with the following influence of different weak acids, and I did this in such a way that one method of research is always guaranteed by other methods. *Only by these different ways* I came to the conviction that the parasites cultivated by me were literally to be proved in all the stages of development in the tissues. I found also that in the majority of cases the parasites had evidently penetrated into the body, through the skin or the mucous membrane *from outside*. This factum of my researches, furnished with illustrations scientifically as well as practically highly important, which before me never was confirmed, scarcely presumed by few, the reviewer has also left quite unmentioned, as well as the quite new views on the typical occurrence and spreading of cancer and sarcoma, as the measures for prophylaxis and treatment, which I based on these facts of my researches. I could show that large capsules were found in fissures, folds, depressions, sometimes between the cells of the top layers of the surfaces, and that from those as centres young organisms penetrated the tissues down below, undergoing here and there further phases of development. Now, the smallest young organisms or smaller germs (*I call them "Körner"*) partly penetrate into the cells, partly lie between the cells. Everywhere one can, step by step, see in what a peculiar manner the cells and their nuclei are influenced by the young organisms, also by those which are in the neighborhood. By the growth of a young organism enclosed in a cell this cell can be inflated and so much enlarged that the surrounding cells are compressed flat, and such formations are known as "epithelial pearls." I could find out and

demonstrate, too, by drawings in what manner the cells and the *tissues are characteristically transformed* into what we call cancer in the epithelial tissues, sarcoma in the connective tissue (*Bindege-webe*). My researches enter here at every point in close connection with cellular pathology, but, on the other hand, call to mind many conclusions of modern zoology in the province of the intercellular parasitic *Protozoa*.

That the proportionately *large capsules*, first discovered by myself, formerly by all other examiners in the histology as in the parasitology of the tumors were overlooked, I do not explain, as the reviewer states, from their being destroyed, but partly by the fact that they can easily *fall out of the sections*, partly because they are closely enveloped in the fibres of the tissues and can only be recognized by special means. The same I have repeatedly confirmed of late. But the *young organisms* are mostly also so colored by the usual coloring proceedings that they are not to be distinguished, or only with difficulty, from the nuclei. Only by some peculiar coloring methods, published by me in my book, can they be shown very easily and to be distinguished at the first view as well as on closer examination from the cells and the nuclei of the tissues, as they appear in other colors than the elements of the tissues, and sometimes the large capsules besides in other colors than the young organisms. But the latter cannot be easily overlooked also in *uncolored* preparations, by very simple means, which I shall publish on another occasion.

Some remarks are still wanting as to the application of Hauser's criticism. Hauser, according to the report, takes the stage of development called by me large capsules for stone or cork cells, and believes, besides, that *they* were the cancer-causing parasites, as which I understand the young organisms. He confounds, therefore, the large capsules with the latter. As for the first statement, I was conscious of a resemblance *a long time before* the publication of my book, and it was the object of minute examinations also with men versed in the subject. I have expressed myself fully on this elsewhere (*Deutsche medicinische Wochenschrift*, 1901, No. 36; *Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, 1901, Vol. xxx, page 335), and I have, too, stated the impossibility of a confusion or of a pollution during the course of my researches. Hauser, to whom I, *immediately on this letter* announcing this, communicated all and more, nevertheless did not consider it necessary to mention my objections in his criticism, but stuck to his assertion. Although I could not formerly agree as to the want of cleanliness in the use of cork, I have *at once entirely excluded the use of cork since that unjust reproach*, stupidly also made from another quarter. I have excluded cork, too, for the fixation of the section preparations. *But, at the same time, I have found in my preparations the same large capsules and also the mesh-work* as before stated by my book, often, too, in the alcohol which contained the sections, also by different ways in pieces of tissue examined immediately after the operation, then, too, sometimes in the urine of living patients with cancer of kidneys or bladder taken with all care before the operation. That Hauser saw these large capsules empty and sprin-

kled or strewn upon the sections is *nothing wonderful*. If he had read my book more carefully, he would have found in it the corresponding explanation. But that he has not seen the young organisms, the actual exciters of cancer, and that he took for them the large capsules as my parasites is quite sure. To see the young organisms would be easier in particularly colored sections (as well in the animal as in the human cancerous tissues), which were not in his hands. Without this, it is possible, but as I believe only to the exercised man, who as an unprejudiced investigator has repeated my cultures and all the researches described in my book, which Hauser, according to his letter, had not done. It has occurred so often to the opinion or self-delusion of others that what I had found after several years' continuous work and after manifold repeated examinations, to these others should be comprehensible in half an hour's look at a few sections, or by a superficial peeping into my book. That Hauser in the *very few* preparations, which I on his pressing sent him, could not see what I have described and illustrated on the base of hundreds of preparations as *beginning* carcinomatous or sarcomatous alterations of the tissues in animals, caused by injections of cultures, I regret; but I am sure that my photographs taken now of such preparations will justify my drawings and show, besides, full-grown cancer.

If your reviewer wishes me more modesty and conservatism, *quoad* "modesty," neither the actual tone of my book nor his own representations should justify him in making me, an elderly man, such an unfit reproach; *quoad* "conservatism," I think we have been too long and too much conservative in the topic of tumors, and that new researches cannot always conserve conservatism.

The pathologists have during many years given us splendid, exact, and exhausting performances on the histology of tumors, but neither essentially furthered the ætiology of tumors nor the practical purposes, too, very important. The main business of the bacteriologists has alienated them too much from the histology of tumors, which is naturally of the greatest consequence for the study of the parasitic ætiology of tumors. In my opinion, this is just the task of a scientifically thinking surgeon, versed as well in histology as in experimental work. Why I undertook this as a surgeon I have already explained in the preface to my book. In such great questions as this we rather should oppress or exclude every poor and low guild—or corporation—thoughts and scruples. New ideas and great general progresses in medicine can be made fruitful, whether they come from the one or from the other side.

MAX SCHÜLLER, M. D.

Juvenal on Rectal Trouble as a Result of Pæderasty.—From *Satire II*. vv. 9-13:

* * * And dost thou rate at vice.

Thou who art far the most notorious sink
Of all the filthy pseudo-Socratists?

Thy bristly limbs, forsooth, and those stiff hairs
Upon thy arms, suggest a vigorous mind:
But, as the swollen hæmorrhoids are lanced
On thy lax anus, how the surgeon grins!

K. W. M.

Book Notices.

Beiträge zur Pathogenese und pathologischen Anatomie der Epilepsie. Von Dr. L. W. WEBER, Oberarzt und Privatdocent in Göttingen. Mit 2 Tafeln und 1 Figur im Texte. Jena: Gustav Fischer, 1901. Pp. 100.

This monograph is a very careful study of the pathology and pathological anatomy of epilepsy, together with many clinical observations. The author's conclusions are particularly valuable from the care he has observed in arriving at them. Some of them are follows: Arteriosclerosis of the aorta and of the left side of the heart are frequent sequelæ of epilepsy, and indicate the length of its duration and the severity of its attacks. The degree of cortical gliosis found in epilepsy is directly proportional to the duration of the disease and the chronicity of its course, and this fact helps to distinguish late epilepsy from epilepsy beginning in youth. When a focal brain disease has caused epilepsy, the anatomical examination must show diseased changes in the greater part of the cortex if the disease is to be regarded as genuine epilepsy.

Text-book of Nervous Diseases. Being a Compendium for the Use of Students and Practitioners of Medicine. By CHARLES L. DANA, A. M., M. D., Professor of Nervous Diseases in Cornell University Medical College, etc. Fifth Edition. With 244 Illustrations. New York: William Wood & Company, 1901. Pp. xiii-633.

With fifth editions reviewers have little to do. This well-known text-book won its place years ago. The present edition has undergone such modifications from the fourth (1897) as the advances made in the past four years have demanded. Conspicuous among the additions is new matter on cauda equina lesions, largely made possible through the work of Müller.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By RICHARD C. CABOT, M. D. With Colored Plates and Engravings. Fourth Revised Edition. New York: William Wood & Company, 1901. Pp. xxi-494.

The present edition of this well-known work maintains the same standard of excellence that was observed in the earlier editions. Although we are told by the author that the book represents the labors and observations of his associates rather than his own, one cannot fail to note the same care in the preparation of the text, in the study and arrangement of the clinical material, and in the digestion and utilization of current hæmatological literature. The work is now based on over twelve thousand observations. Extensive changes have been made in the sections on pernicious anæmia, leucæmia, typhoid fever, and the diseases due to animal parasites. It is to be regretted that in a work otherwise thoroughly up to date no mention has been made of the Jenner stain, and that the determination of the solid substances lately shown by Biernacki to be so valuable in the clinical study of the blood has not at all been dwelt upon.

A Handbook of Pathological Anatomy and Histology. With an Introductory Section on Post-mortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By FRANCIS DELAFIELD, M. D., LL. D., Professor of the Practice of Medicine, College of Physicians and Surgeons, Columbia University, and T. MITCHELL PRUDDEN, M. D., LL. D., Professor of Pathology, College of Physicians and Surgeons, Columbia University. Sixth Edition. With 13 Full-page Plates and 453 Illustrations in the Text in Black and Colors. New York: William Wood & Company, 1901. Pp. xix-3 to 819.

We are glad to welcome this sixth edition of a book that has long held its place among the best works of its kind in the English language. As an example of a text-book for students it leaves nothing to be desired. Throughout the subject is treated in a scholarly and masterly manner, and the style of the text is admirably lucid and concise. Dr. Delafield has not taken an active part in the preparation of this edition, but the title of the work remains unchanged.

The first impression given by the book is, not alone that it has been carefully revised, but that the entire work has been extended and rewritten. It is, in fact, a new book. Many of the old illustrations and drawings have been replaced, and a large number of entirely new and elaborate photographs and illustrations have been added. And the elegance of the printing as regards paper and type is above all criticism.

As heretofore, the aim and scope of the work is the teaching of general and special pathology. This is supplemented by the necessary directions for the making of autopsies, and the preservation and preparation of tissues for microscopical study. The acute infectious diseases are briefly described, and the methods of study of the pathogenic micro-organisms are outlined. Moot points are treated of at sufficient length to give the reader a clear and intelligent conception of what is known concerning them, and the advanced student will find numerous references on nearly every page to valuable and recent monographs. Dr. F. C. Wood has written an entirely new section on malaria, and has also revised the chapter on the blood. The chapter on the nervous system has been rewritten by Dr. F. R. Bailey. Both these writers deserve credit for their work and also for the excellent drawings contributed.

In the discussion of the ætiology of tumors, it is interesting to note that in the writers' opinion no adequate ground exists for believing that micro-organisms are the direct excitants of tumors. The question is still under investigation, and this dogmatic assertion is consequently open to criticism. The chapter on diseases of the respiratory system has been carefully prepared, and the full-page plates are beautifully executed. The pathological anatomy of the eye, the ear, and the skin, as heretofore, has not been considered at all. An error has occurred in the index which may prove misleading. The word "thymus" and the subheadings following it have been misplaced and are found after the word "thyreoid," instead of preceding it. A few typographical errors, such, for instance, as "micromo-

tist" for "microtometist" have been noted, but these are of minor importance.

The work, as a whole, is thoroughly up to date and deserves only the heartiest commendation. We do not hesitate in predicting a continuance of the popularity that it has enjoyed in the past.

A Text-book of Embryology. For Students of Medicine. By JOHN CLEMENT HEISLER, M. D., Professor of Anatomy in the Medico-surgical College, Philadelphia. With 196 Illustrations, 32 of them in Colors. Second Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 405. [Price, \$2.50.]

Only one familiar with the larger works on embryology can judge of the keen satisfaction that a book of this kind must afford the student. The subject in itself is so intricate and difficult that in order to be at all intelligible to the beginner the text must of necessity be particularly lucid and uninvolved. The clearness with which this work has been prepared by the author is obvious at a glance.

The general plan of the book has not been materially changed since its first edition, but the chapters dealing with the chorion, the placenta, and the decidua layers have been largely revised. Several new illustrations have been supplied which add distinctly to the value of the work. The tabulated chronology of the development of the embryo that appears at the end of the book is most valuable in determining the age of a young fetus. The work as a whole fills a distinct place for the use of students, and as such it is a pleasure for us to commend it again.

Miscellany.

Sensory Disturbances in Locomotor Ataxia.—

In an article on Locomotor Ataxia, Dr. R. T. Williamson (*Medical Chronicle*, September, 1901) redirects attention to the observations of Hitzing, Laehr, and others who have shown, that even in the early stages of tabes there is very frequently a peculiar localized diminution of sensation to light tactile impressions on the trunk. Usually the areas of diminished tactile sensation are in the form of bands or girdles around the trunk; they are in some cases unilateral, in other cases bilateral. The region supplied by the mid-dorsal nerves is the part most affected, and the breadth of the bands varies considerably. Very frequently the patient is ignorant of the sensory affection until specially tested. The hands of diminished tactile sensation do not correspond to the distribution of single nerves, but to the distribution of spinal nerve roots. Very frequently they are at the level of the fourth intercostal space, and extend over the shoulder blades. In advanced cases the area of diminished sensation extends also down the inner side of the upper arm or down the ulnar half of the upper arm and forearm and into the fingers. Finally the whole arm may be affected. These bands of diminished tactile sensation in the trunk were present in 55 out of 60 cases observed by Laehr, in 17 out of 20 cases observed by Patrick, in

15 out of 21 recorded by Bonar, in 45 out of 49 cases reported by Frenkel and Foerster.

Frenkel states that it is only in rare cases that sensory disturbances of the skin are absent—such as cases of very early tabes or cases with very little ataxia. It is very rare, however, to meet with total anæsthesia; the common sensory disturbance consists simply of diminution of tactile sensation. Usually, in these zones of diminished sensation, only tactile sensation is affected, while the sensation for pain and temperature (according to Frenkel) is generally normal or only affected in patches. Hence, in testing the patient's sensation, considerable care is necessary; the touch must be light, and the object used for testing must be of the same temperature as the patient's skin. Frenkel recommends the tip of the finger, warmed, if necessary, by hot water, so as to have the same temperature as the patient's skin. The touch should be as light as possible, and corresponding parts should be compared.

At the border of the zone of diminished tactile sensation, and in the region between adjacent zones, there is frequently hyperæsthesia, especially for cold. In the legs there are also frequently sensory disturbances, but as a rule, at first, there is diminution of the sensation of pain and the sense of position. The diminished sensation to pain is also often present in the gluteal region, the perinæum, and the genitals.

The Treatment of "Imperative Conceptions."—

Dr. Hugh T. Patrick (*Illinois Medical Journal*, November), in a paper on Imperative Conceptions, read before the Fifty-first annual meeting of the Illinois State Medical Society, records nineteen cases of obsession by a dominant morbid idea, and says that the treatment of imperative conceptions, in the broadest sense, must embrace every means of breaking up a habit vicious and confirmed. As in the case of other bad habits, the same method is not applicable to every case, and an intimate knowledge of malady and individual is an enormous advantage, indeed, generally a prerequisite of success. In the great majority of cases a course of systematic education or re-education based upon such knowledge constitutes the best treatment. An imperative conception is really a mental tic—a mental habit spasm—and as Brissaud has found that the best therapeutics for tic of muscles is careful, graduated, oft-repeated, and long-continued training of the individual in the suppression of abnormal movements, so the victim of an imperative conception must be carefully taught to suppress his obtrusive idea and its results. The first step in this education should be an explanation to the patient of the nature and harmlessness of his affliction, for he is apt to be in dread of insanity, paralysis, death or crime. Naturally, this explanation must be suited to the mental capacity, beliefs, and feelings of the person; but it must be plausible and encouraging, secure his confidence, and awaken his courage. The next step must be to teach him to be controlled by reason and judgment instead of by his feelings, emotions, and impressions. These neurotics are much like children and, like children, must be governed in different ways. Some can be reasoned with and by words made to see

the folly of their ways: a positive statement is enough to arouse inhibition. Others can be led, yet others must be driven. Mere suggestion sometimes suffices. A process of progressive demonstration is most frequently useful. Having to deal with an affection essentially mental, treatment must be aimed at mental processes. Bitter tonics, "reconstructives" and so-called nervines, are ridiculous remedies except in a purely incidental way, and the same may be said of all assumed sources of "reflex irritation" unless it is considered wise to attack such peccant part for its purely suggestive effect. Treatment by sudden compulsion is not successful and generally does harm.

Some Facts about Tetanus Antitoxine.—Dr. C. Fisch (*Interstate Medical Journal*, December, 1901) says that there are three reasons why the recent tetanus calamity that befell St. Louis did not result in many more fatalities, viz:

1. The employment of tetanus antitoxine.
2. The fact that the contaminated serum producing the disease contained just enough toxine to prove fatal only to a certain weight of human tissue.
3. The fact that a great number of immunizing doses of this serum were administered *per os*, and therefore did not exert their toxic effect.

On these facts the author remarks:

I. Our literature teems with contradictory reports about the value of antitoxine treatment in tetanus. The percentage of failures is certainly greater than that of recoveries, and the critical observer is ever skeptical about the latter. Patients suffering from tetanus have not rarely recovered before the antitoxine era, and even certain rules have been established as to the prognosis of these cases. A case with a long period of incubation gives from the beginning a much better prospect, and cases recover that, from the clinical symptoms, appear hopeless. The statistics have not perceptibly improved for the last five or six years. In direct opposition to this disappointment, which must be freely admitted, stands our scientific knowledge of the nature of the tetanus antitoxine, of its property of chemically combining with the tetanus toxine, and thus rendering it innocuous. We know that the toxine has a specific affinity for certain nerve-cells, thus causing intoxication. We know also that the antitoxine has a similar specific affinity for the toxic substance, and Ehrlich tells us that the antitoxine is simply an overproduction of those groups of the nerve-cell protoplasm that combine with the toxine. If in a test tube we mix corresponding amounts of toxine and antitoxine, the mixture proves absolutely harmless for the animal injected with it. If we inject the corresponding amounts of both toxine and antitoxine separately into a rabbit at the same time, it will not become sick; but antitoxine injected eight minutes after the toxine, will allow it to become slightly sick; one hour later, twenty-four times the amount of antitoxine is necessary; twenty-four hours later, thirty-six hundred times this amount will not save the animal. The chances in guinea-pigs and mice are better, for even after from forty to fifty-three hours most of the animals can be protected. In these two species of animals at the time when the typical tetanus symptoms have made their appearance, a great deal of the injected toxine can

still be discovered in the body fluids, which is not the case in rabbits, in which, with the first slightest symptoms of the disease, no trace of the poison can be demonstrated.

This and other facts show that in different species the rapidity of absorption of the toxine varies greatly, whence it follows that the fatal intoxication occurs in some species earlier than in others.

Since we can demonstrate that after toxine and antitoxine have chemically combined there are no physiologically possible means to sever this combination, the recovery or death of a tetanized animal depends altogether upon the extent of the lesions already produced; if fatal injury has been done, the animal will die, if injuries of a slighter severity, it may recover. The antitoxine subsequently injected will only prevent further progress of the poisoning.

In tetanus in man it is a very rare exception that toxine can be found free in the body fluids at the moment when the first symptoms appear. The fatal dose for man, as for the rabbit, horse, etc., is very nearly equal to the dose which makes him simply sick; so that, after the symptoms have appeared, antitoxine will avail only to eliminate the remaining uncombined toxine, and otherwise will merely throw the patient on his own resources.

Behring prescribes that for the valuation of the antitoxine treatment only those cases ought to be considered in which the serum was administered not later than thirty hours after the first slight symptoms, and where a certain amount of antitoxine had been used. But even with this restriction the results obtained are not proving satisfactory. The great rapidity with which in man the tetanus toxine is firmly fixed to the nervous system forbids the expectation of great effects from antitoxine; the methods (intracerebral, subdural, etc.) intended to bring the antitoxine more rapidly into contact with the focus of intoxication have no scientific basis. Nevertheless, for the reasons mentioned, antitoxine ought to be used in every case of tetanus; and the general opinion about its efficacy will be changed when it becomes customary to use it prophylactically in all suspicious injuries.

That in our epidemic the number of fatal cases was not greater is certainly partly due to the antitoxine. The distribution of the toxic serum lasted for two weeks, and nearly sixty bottles had been dispensed. Antitetanus serum was injected in a great number of cases even before the symptoms appeared (in one case where, fortunately, the first muscular stiffness was witnessed, recovery followed), and none of them developed tetanus. None of the patients that showed an advanced stage of the symptoms recovered.

II. We had to deal, not with an infection by the tetanus germ, but with an intoxication by the tetanus poison, with a serum not contaminated with spores, but drawn from a horse at the end of the incubation period of tetanus. If drawn three days later, it might have proved comparatively harmless, because, in the horse, the absorption is very rapid and complete, so that a horse with developed tetanus carries very little toxine in his blood. Owing to this fact, each bottle of serum contained a limited amount of toxine, equal in all of them. Exact experiments showed that 0.1 cubic centimetres of the serum was the fatal dose for 300 grammes of

guinea-pig weight. Comparing the average weight of the children that succumbed to tetanus after injection of this serum with the fact that a greater weight in other patients prevented a lethal issue, we arrived at the conclusion that in 10 cubic centimetres was contained the approximate fatal dose for a human being fifty pounds in weight. This, of course, elicited the very important and valuable information that the susceptibility for tetanus toxine in man is nearly equal to that of the guinea-pig, and about half that of the horse. If there had been spores or bacilli in the serum, not such a large percentage of the patients, and especially not, as a rule, the older ones, would have survived. The amount of toxine in such a case would have been illimitable.

That many of the patients died with a great amount of free antitoxine circulating in their blood, we could demonstrate in one case particularly. Here, forty-eight hours before death and one day after a tetanus antitoxine injection, a lumbar puncture was made and some cerebro-spinal fluid withdrawn. With a certain amount of this fluid we were able to protect animals against the fatal dose of toxine. Nothing could more clearly show the correctness of the foregoing remarks.

For no infectious disease has there been as yet a chance to determine approximately the relative toxic susceptibility of man and of those animals for which numberless experiments have established the fatal dosage of bacterial toxine.

III. In at least fifteen cases in which it was intended to immunize the members of the family the development of tetanus was prevented by the administration of the antidiphtheritic serum by the mouth. In no case was any bad effect noticed. We have known all along that tetanus toxine is not absorbed by the gastro-intestinal mucous membrane, and it is a fact that active tetanus bacilli are not rarely inhabitants of human and animal intestines. Why this is so we do not yet know. The results of experiments made in this direction some years ago by Nencki and Ransom contradict each other directly, the one asserting that the toxines are destroyed by the intestinal secretion, the other that they are eliminated intact with the fæces. It is, however, established that new-born or very young animals and infants can be intoxicated in this way, and as explanatory of this, a histological observation is offered. In the new-born (animal and man) and for a short time after birth, there is no secretion of mucus by the gastric mucous membrane. It is possible that the absence or the slight extent of mucin-formation is favorable to the absorption of the toxine. This is true, also, for the antitoxine. Unless pathologic placental disturbances (hæmorrhages, etc.) occur, no antitoxine is transmitted from the mother to her baby before birth. But this transmission takes place by the nursing process if the mother carries antitoxine of some kind in her circulation. The amount of antitoxine present in the milk is about five per cent. of that contained in the blood. With the advancing age of the infant the antitoxine found in its blood decreases more and more, and disappears finally altogether, notwithstanding the fact that the mother all the time transmits with her milk the same amount of antitoxine as before. This can only be explained by some chemical or physical change in the absorbing cells. Ex-

periments made in this line in earlier years, which gave positive results, have perhaps neglected the small abrasions and injuries especially liable to occur in animal experiments by the stomach tube, since we know that from such denuded areas toxines as well as antitoxines are easily absorbed. This would obtain, too, for experiments in adult human beings, where catarrhal, insignificant epithelial conditions exist in the gastro-intestinal tract.

Although this form of antitoxine administration was a very fortunate circumstance in the St. Louis cases, it is not to be recommended as a general method.

Per Capita Consumption of Wine, Beer, and Spirits.—In response to a request from a subscriber we present the following statistics of the per capita consumption of wine, beer, and spirits in the United States and in various foreign countries. The figures as to foreign consumption are taken from the statement of the British Board of Trade, under date of February 15, 1900, showing the production and consumption of alcoholic beverages in the various foreign countries and the United States. The figures for the United States, however, are taken from the Statistical Abstract of the United States, prepared by the Bureau of Statistics of the Treasury Department of the United States. Any of our readers desiring further information should procure the British publication in question, which can be obtained through any of the leading foreign booksellers at very small expense. This publication shows the quantities and values of liquors consumed in the various countries and other valuable information.

United States:	Wine.	Beer.	Spirits.
1901	galls.* 0.37	16.20	1.33
United Kingdom:			
1898	galls.* 0.41	31.9	1.05
Russian Empire:			
1898	vedros*	0.33	0.40
Norway:			
1898	litres*	21.6	2.6
Sweden:			
1897	litres	45.0	7.5
Denmark:			
1898 .....	.... (tonder)* 0.72	(potter)* 15.2	
German Empire:			
1897	litres 6.1	123	8.4
Holland:			
1898	litres 1.8	....	8.2
Belgium:			
1898	litres 4.0	207	8.7
France:			
1898	litres .02	25	9.44
Switzerland:			
1898	litres .67	70	6.2
Portugal:			
1898	litres 91.2	....	0.4
Spain:			
1895	litres .89	....	2.3
Italy:			
1897	litres .74	0.5	alcohol 1.20 at 50 p. c.)
Austria-Hungary:			
1896-7	litres .13	.45	.10
Dominion of Canada:			
1898	imp.galls. 0.08	3.8	0.55

*The Vedro contains 3.2465 gallons; the tonde, 28.9 English gallons; pot, one-fifth gallon; imperial gallon of United Kingdom, 1.2006 gallons U. S. Standard; French litre, 0.264417 gallon. In above figures, the gallon for other countries than the United States is the imperial gallon; that for the United States is the Winchester gallon.

Suprarenal Extract as a Vascular Tonic.—Dr. W. E. Deeks (*Montreal Medical Journal*, November, 1901) closes an article on Suprarenal Extract in Cardiac Conditions as follows: "To sum up, I believe that in suprarenal extract we have the best remedy known for toning up the vascular system in old myocarditic conditions attended by a lowered blood pressure, with the least possible disturbance to digestive and other functions."

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Special Articles.

CURETTAGE OF THE PUERPERAL SEPTIC UTERUS: AN INEXCUSABLE PROCEDURE.

By W. R. PRYOR, M. D.,

NEW YORK.

Twenty years ago we classed all fevers following and apparently due to delivery as puerperal fever. In our ignorance of the exact causes of a rise in temperature after delivery, we could do no better than to thus generically designate them. Therefore in this as in other fields many methods of treatment arose based upon personal experience and faulty observation. Intra-uterine irrigation, swabbing with strong antiseptics, the use of iodoform pencils or emulsions, the Kibbe cot, curettage, and antistreptococcus serum, not to forget extirpation of the pelvic organs, all found earnest, oftentimes belligerent advocates. But in more recent years, owing to the general adoption in all medical matters of the experimental method, careful bacteriological examinations have been made of the secretion of the vagina before and after delivery, and of the uterine discharges in febrile and afebrile convalescence after delivery. It is not my purpose to pay tribute in this short article to the gentlemen who have at great labor and by the exercise of much skill furnished us with these exact observations. We have thus been enabled to find out the accompanying and causative germs in all cases of fever after delivery; and we have been enabled to demonstrate that there is a consistent absence of certain germs in all cases in which there is no fever and their equally consistent presence in all cases in which the rise in temperature is marked. By means of precise but very simple methods of investigation, we are enabled to divide puerperal fever into two great classes—the saprophytic and the septic. We have been able to determine that so long as a case remains purely saprophytic and does not become septic the infection is always superficial and carries no risk to life; but inasmuch as this form of infection renders the patient susceptible to the implantation of more virulent germs, saprophytic infection has a greater importance and demands treatment of a preventive nature. Therefore, upon finding dead material in the uterus, it is our duty to remove it. Septic in-

fection of the uterus is never superficial, always penetrating deeply into the tissue with a tendency to become general with the production of grave lesions in remote organs; and if unchecked carries with it a mortality of from five to fifty-four per cent., although the latter figures are drawn from the report of Edgar Macharg, whose fifty-seven cases had apparently been subjected to all known methods of treatment, each of which probably contributed to the mortality.

In all cases of puerperal fever about seventy-five per cent. are non-septic and about twenty-five per cent. are septic. Therefore, the ignorant operator, indifferent as to precise methods, if he cures all cases, will do an indicated operation in about three fourths. What will be the result of his work in the other one fourth—the septic cases?

The commission of the American Gynecological Society, appointed in 1898, made an analysis of every case of puerperal fever reported in the literature of the world for the five preceding years, covering the period during which the bacteriology of the puerperal state was actively promulgated. The two men whose observations are the most reliable and whose treatment of septic cases is identical, Whitridge Williams and Krönig, applied no local treatment whatever to the inside of the uterus, doing nothing to it other than what was necessary to establish the diagnosis; and only having a mortality of five per cent.

Here, then, we have a basis upon which to work, and we are warranted in saying that excepting epidemics of particular virulence, but five per cent. of women with puerperal sepsis will *die* if the uterus is let alone. The normal mortality of puerperal sepsis then is five per cent. How is this modified by the mistaken curettage of the puerperal septic uterus?

In the analysis made by the commission mentioned we found that curettage of the uterus when bacteriological examination had been made and the streptococcus found *gave the frightful mortality of twenty-two per cent.* Since being appointed a member of this commission, and for two years previously, I have adopted and perfected a certain method of treatment which I applied to all cases in which I found the streptococcus present in the uterus. This method of treatment which has been described, gave no mortality either in my hands or in those of the gentlemen who have adopted it, except in one class of patients, and these were those

who had been *curetted* before coming into my hands. There were ten such patients, three of whom died, a mortality of $33\frac{1}{3}$ per cent.; and the lesions remote from the pelvis and in the pelvis which were found at the time of operation were in these curetted cases far more general and of a more serious nature than in any others I have seen.

In the light of such experience and of the findings of the commission of the American Gynecological Society, we are warranted in stating that curettage of the septic puerperal uterus is most mischievous. Such being the case, it is imperatively necessary that gentlemen who attend cases of puerperal fever should be able either from clinical symptoms, or, better still, from bacteriological examination, to determine what cases are septic and what cases are not septic; for if mistakes are made, valuable lives are lost.

I am constrained to draw attention to this subject because of the very great indifference of many practitioners to its importance. I use this disagreeable term advisedly, for when the American Gynecological Society appointed its commission, I was authorized by my colleagues on that commission, for the purpose of aiding in the investigation, to address an open letter to the profession of New York and to the readers of the three largest medical journals, requesting the aid of the profession in this matter. Nay, more than that, we furnished the necessary apparatus free. We appointed a place where it could be procured. We made announcement that investigation of discharges would be made free of charge and that reports of the findings would be made first by telephone and then by letter. The interest of the gentlemen who attend these unfortunate women is well measured by the fact that there has not been one call for the material offered. Those who resent the imputation of indifference and maltreatment cannot plead either difficulty in arriving at precise diagnosis or absence of its value.

Herodotus on Mosquito Nets in Ancient Egypt.—In his *History*, ii, 95, Herodotus says: "Against the gnats [*κνώσφι*—Latin, *culex*] which abound, their contrivances are as follows: Tower-like habitations that they ascend on going to bed protect those living above the level of the marshy grounds, for the gnats, on account of the wind, are not able to fly aloft. Those, on the other hand, who dwell on the marsh level contrive as follows: Each man possesses a net with which he fishes by day, and by night employs in this manner; he goes to bed on a couch about which he places the net and, getting underneath it, lies down to sleep. The gnats, if he sleeps in his clothing or rolled in linen, bite through these things; but through the net they do not attempt it."

Original Communications.

NOTES ON COW'S MILK AND INFANT TUBERCULOSIS.*

By A. JACOBI, M. D., LL.D.,

NEW YORK.

The very latest essays on tuberculosis in its relations to the consumption of raw milk are by Dr. David Bovaird in the December number of 1901 of the *Archives of Pediatrics*; by Biedert, father and son, in the *Berliner klinische Wochenschrift* of November 25, 1901, and by Ostertag, in the *Zeitschrift für Hygiene und Infektionskrankheiten*, November, 1901. The first two come to similar conclusions. Those of Dr. Bovaird are as follows:

1. English reports alone show any considerable number of cases of primary intestinal tuberculosis.
2. Primary intestinal tuberculosis is a very rare affection among children in or about New York, little more than one per cent. of tuberculosis having this origin.
3. The proportion of tuberculous cases found at autopsy in New York is lower than that of European observers.
4. The evidence connecting tuberculosis among children with the consumption of the milk of tuberculous cows is very scant.

It will be noticed that the author emphasizes, as all writers on the same subject do, *primary intestinal tuberculosis*, that means: Visible tuberculous changes in the intestinal mucous membranes, lymph follicles, etc. His conclusions are drawn from what he considers a fact, viz., that the twenty-two cases quoted by him are the sum total of cases in which the relation between milk and the tuberculosis of the child is fairly clear. It is true, what he says, that this number is astonishingly small. But he could not fail to overlook part of the literature which in all languages is vast and difficult to gather.

Professor Philipp Biedert's latest observations tally with what he published in 1883 and 1898. According to him, tuberculous infection through the intestinal canal takes an inferior rank, and he is disposed to teach that with our present knowledge no definite rules and regulations concerning the management and use of milk are permissible.

On the other hand, according to Ostertag (*Zeitschrift für Hygiene und Infektionskrankheiten*, 1901) and Müller and Ascher, it appears to be settled that the milk of cows that react on tuberculin injections without giving other symptoms of tuberculosis contains no tubercle bacilli, that calves and

*Read during a discussion on Tuberculosis, held in the New York Academy of Medicine, December 19, 1901.

pigs may be fed on milk furnished by such cows for weeks and months without becoming tuberculous; that, *however, the milk of cows with tuberculous udders is highly dangerous*, and that sometimes the milk of cows that could be clinically recognized as tuberculous contains bacilli, and that for that reason the destruction of these two classes of cows is advisable.

Guided by similar convictions, Bollinger, at the Congress for Tuberculosis of Berlin, held a year ago, committed himself to the following conclusions: The tuberculosis of cattle and hogs is ætiologically identical with that of man.

Human tuberculosis is no important factor in the causation of that of cattle.

The infectiousness of the meat of tuberculous animals increases with the stage and extent of the disease. Its dangers may be averted by cooking.

Most dangerous to man are the milk and the unsterilized milk products coming from tuberculous cows, no matter whether their tuberculosis is generalized or located in the udder or in other localities.

Milk of tuberculous cows, when taken unboiled in large quantities and through a long period, is very dangerous, both to children and to adults.

Proof thereof may be found in the tuberculosis of hogs; it is very frequent and is caused mainly by feeding with the infected milk of tuberculous cows. The frequency of tuberculosis in the young, particularly that which originates in the lymph bodies, is in part traceable to infected milk.

On the same occasion Virchow urged the necessity of a strict legal control of the sale of meat and of the tuberculin test for imported cattle. Milch cows and goats should be tested with tuberculin. When this test was positive, or not made at all, the sale of raw milk should not be permitted. If offered for sale, it should be first sterilized.

Demme¹ observed the following case: A boy of five months was perfectly healthy while at the breast of the mother. Then he was fed on raw cow's milk and suffered from emaciation, diarrhoea, and anorexia. He died after two months. There was tuberculosis of the intestines and of the mesenteric glands; all other organs were normal. The cow that furnished the milk died suddenly two months afterward. She had pulmonary and pleural tuberculosis; the udders were intact.

The same well-known and reliable author reported the cases of four children with intestinal tuberculosis. They had no hereditary predisposition, but had been fed with the raw milk of tuberculous cows.

Olivier, also quoted by Dr. Bovaird, reports other cases. In a Paris boarding school thirteen girls contracted tuberculosis; six of them died, several

perished of primary intestinal tuberculosis. The milk furnished came from a tuberculous cow with badly infected udders. Prümers tells the same story of three children that died in their third year. There was no hereditary predisposition, but the cows were tuberculous. Johne had the following case: He received for examination the thoracic and abdominal viscera of a cow that had enjoyed the reputation of being the finest cow on the farm until she emaciated rapidly and died. That is why her milk was selected by the farmer, on account of her splendid condition, for his own infant. This child commenced to pine away and died of miliary cerebral tuberculosis at the age of two and a half years. Many similar cases, well authenticated, were collected by Baum in the *Archiv für Thierheilkunde*, 1892, No. 3.

All of which proves the possibility and the actual occurrence of tuberculous infection through cow's milk. It is not necessary to prove that such cases are very numerous; their very existence demonstrates the necessity of preventive measures. (It has been claimed, however, that if the cases were frequent, there would be more primary intestinal tuberculosis.)

Such clinical facts are naturally more rare than the positive results of milk feedings. Bang,² when experimenting with milk from tuberculous udders, had always positive effects. It should be remembered that tuberculosis develops slowly, can be discovered with difficulty only in the living animal, and that most infants get their milk from a mixed herd, and not from a special cow.

Still there is a different aspect of the question.

Before the Association of American Physicians, in 1897, I read a paper entitled: Jacksonian Epilepsy; Adenoma of Liver; Acute Ascites with Tubercle Bacilli. I am here interested in the latter part of the subject only. The amount of ascitic fluid was excessive. There were no tuberculous deposits or degenerations anywhere. Nor were there any lesions of the intestines which might be charged with admitting bacilli into the circulation. But it has been demonstrated that lesions of the mucous surface are not required to admit tubercle bacilli. Nor are hiatuses in the epithelial covering, such as Stoehr has found on the normal tonsils, demanded for that end. It has been known for some time, as an additional fact, that initial tuberculous lesions need not correspond with the localities of original affections, for pulmonary infiltrations will follow the injections of bacilli, though made in distant places. Koch proved that lymph bodies might become diseased without affection of their roots. Solid particles are swept through the lungs. The

¹*Thiermedizinische Vorträge*, Schneidemühl, 1895, part 7, quoted by Dr. Bovaird.

²*Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege*, 1901.

spores of saprophytes and of anthrax are so introduced. Probably this happens more readily in children, whose organs are less altered by the solid results of previous morbid processes. Bollinger and Heller also have demonstrated that tubercle virus may penetrate through intact tissue, and that the assumption of Babes that cocci prepared the soil for such penetration and absorption is unfounded. In my case the presence of tubercle bacilli in the abdominal cavity can therefore be explained in one of two ways only. They were originally circulating in the blood or contained in the intestine. As there were no miliary or other deposits anywhere, the former is hardly credible. The presence of bacilli in the intestine is explained by the facility of their admission with ingesta. Indeed it is probable that many intestinal tracts, perhaps most, harbor bacilli now and then. When circumstances are favorable, they are absorbed instead of being expelled. Such favorable circumstances are either local lesions of the surface or sudden changes of osmosis. The latter existed in my case to an unprecedented extent; the former were absent. Thus it would seem as if absorption of tubercle bacilli might take place though the intestinal lining be ever so normal, not to speak of the greater facility of absorption during the frequent occurrence of local lesions like those of catarrh, inflammation, and ulceration. As a rule, disintegrated or absent epithelium and open blood-vessels or lymph channels are ready passes for the entrance of microbes or toxines.

Moreover, the young intestine is particularly predisposed, it appears, to absorption, both in its normal and diseased conditions. Its net of blood-vessels is extremely complex, its lymph nodes and villi numerous and large. It seems therefore that noxae, mainly tubercular, contained in the intestinal tract must be expected to be readily absorbed. Is that really so? I should say it is. For the frequency of peritoneal tuberculosis in infants and children is amazingly great. Where does it originate?

To judge from the fact that peritoneal tuberculosis is almost always isolated and localized (and therefore apt to get well) and rarely follows, generally precedes, pleural or pulmonary tuberculosis when there is an occasional dissemination of the tubercular infection, I must conclude that tuberculosis often enters the free abdominal cavity, and may spread from there, through the intestine, no matter whether the latter is in a healthy, or fairly healthy condition, or not.³ This much *must* be ad-

mitted that, after all, primary tuberculous ulcerations are rare. When they are found, they are mostly connected with pulmonary tuberculosis, mostly of a mixed type. Not less rare is primary tuberculosis of the mesenteric glands. But peritoneal tuberculosis is *very, very frequent*.

Measures for the prevention of tuberculosis should begin at a very early date. It is quite frequent in the first year of life, and quite serious, even fatal. When it is met with in more advanced childhood, it may be, and generally is, traced back to early influences. It is often difficult to say where the invasion took place, through inhalation, aspiration, in the nose, adenoids, the tonsils or the bronchial glands, or, in less frequent cases, in the intestines and mesenteric glands; that is why every road to access should be blocked.

One of them is the abnormal or normal intestine through which invasion may take place. I firmly believe that the intestinal danger is underestimated. I repeat: It is true that ulcerating intestinal ulceration is not frequent; but, after all, there is no reason why these rare cases should not be prevented. But on the peritonæum it is very frequent. First it is local and may even heal out. If at a later time generalized tuberculosis is found, in connection with the peritoneal form, it was the latter whence the general process started. On the peritonæum it can originate in two ways only: Either through the blood; in that case there would be most likely, or surely, disseminated processes; or through the intestine, no matter whether healthy or diseased.

In conclusion, no rules prohibiting the sale and use of milk of cows with udder, or with general clinical, tuberculosis can be strict enough or too strict. We have no dealings, as Dr. Biggs appeared to suggest, with an agricultural or economic problem, but with a very urgent hygienic and sanitary question.

Blue or Green Urine is often due to the eating of candies that have been colored with methylene blue. In the absence of other explanation, inquiry may be advantageously directed to this subject.

and finally perhaps the kidneys. That is a mistake that may be corrected by every practitioner. The primary occurrence of chronic peritoneal tuberculosis and its protracted isolation is a well-known fact. If that were not so, we should not meet with so many recoveries with or without laparotomy. Indeed, as long as it remains localized we expect nothing short of a complete recovery. It is only when dissemination to the pleura or the lungs takes place that the prognosis becomes doubtful or bad. Generally it takes months or years before this untoward complication sets in.

Dr. Theobald Smith remarked in the paper he read the same evening that the virulence displayed by bovine bacilli in the human body was perhaps, or probably, less than that manifested by human bacilli. It strikes me that the prolonged isolation of peritoneal tuberculosis resulting from the invasion of bovine bacilli contained in the milk may be the result of that mitigated, or lessened, virulence. Still, after a while, this may be increased, for it is certain that a fair percentage of peritoneal tuberculosis will extend to other organs and constitute full-fledged forms of generalized human tuberculosis.

³In the discussion following the reading of these notes Dr. Northrup remarked that the position taken by the author was erroneous; that peritoneal tuberculosis was one of the very last manifestations of generalized tuberculosis, which commenced in the lymphoides, extended to the lungs, the pleura, the liver, the spleen, the peritonæum,

THE NEED OF A MUNICIPAL SANATORIUM FOR THE TREATMENT OF TUBERCULOSIS.*

By GEORGE L. PEABODY, M. D.,

NEW YORK.

It is a humiliating fact that we have been very slow in recognizing the importance of public sanatoria for the treatment of tuberculosis. But few of the States have thus far established them, and there is as yet only a promise of an awakening of the public conscience to the necessities of the situation in this and other large cities of the country.

Europe is far in advance of us in this humanitarian field. Two years ago there were thirty-three public sanatoria for tuberculosis in Germany and sixteen others under private direction. In 1900 eleven more, and in 1901 fourteen more were opened, and still thirteen others were projected. Thus it is estimated that in the very near future there will be ample accommodation in Germany for the care of 20,000 tuberculous patients unable to contribute to their own support.

The results of sanatorium treatment are well known to depend largely upon the stage of infection in which the patients are received. In order to obtain patients in early stages, *i. e.*, *curable patients*, Polikliniks are being erected and equipped in all the larger cities of Germany, with small outlying so-called "observation stations."

In order that heads of families, fathers and mothers, may come early under treatment and be restored to lives of usefulness, an attempt is being made to provide means for the maintenance of their families during their absence.

Much is hoped, too, from the educational value of a residence in a well-managed sanatorium and from the ultimate wide diffusion of the knowledge which may thus be acquired.

It is estimated by Pannwitz that about seventy-five per cent. of those treated in sanatoria are again restored to usefulness as practically cured within three months. To us this statement has an extravagant sound.

As to the location of a sanatorium, there seems to be very wide difference of opinion as to whether it should occupy an elevated situation or as to whether lower levels are equally good.

In some the gain in appetite and weight and the general results are better in cold weather, in others in summer.

The widest discrepancy of opinion exists as to whether patients should or should not exercise; some believing that muscular patients should freely exercise their muscles, others stoutly maintaining

that tuberculous lungs should be kept at rest as tuberculous joints are, and for the same reasons. All are agreed, however, that the greatest benefits of sanatorium treatment are due to life in the open air, in a dust-free environment, without undue fatigue, where there are no sudden changes of temperature. There is substantial agreement, too, that fever contraindicates exercise and that food should be nutritious, wholesome, and abundant.

In my student days Kussmaul called my attention to the fact of the relative infrequency of tuberculosis among cab drivers, notwithstanding the fact that they are exposed to two evils of serious importance, namely, alcohol and inclement weather. He explained their relative immunity by their life in the open air.

As to the expense of erecting and equipping sanatoria, much depends upon their size and the character of their equipment. In a large number of establishments it varies between 2,600 and 7,700 marks per bed.

For such patients as cannot find admission to sanatoria the Berlin Red Cross has erected an establishment where patients may spend the day under medical care and instruction; and, with a general extension of knowledge of the means of preventing a spread of the infection, the general hospitals of Germany are more and more opening their doors to these unfortunates and subjecting them to intelligent treatment.

In France, too, well directed and humane efforts are being made. In Paris a special polyclinic for tuberculous children collects patients in suitable condition for treatment and sends them to a public sanatorium.

Sooner or later those that are sufficiently improved are transferred to a convalescent home and make room for others to follow them. In this convalescent home they are put to work under intelligent supervision experimentally at open-air occupations, in gardens, fields, pastures, etc. Later, if they improve in this environment and with these occupations and acquire sufficient strength, they are once more transferred, this time to a sanitary farm colony. Here, under favorable conditions and with properly regulated out-of-door work, they grow up to be strong, healthy men. At the present time the benefits of this system are not extended to girls, although it is hoped to add to the endowment sufficiently soon to include both sexes in the beneficent sphere of its operation. Thus far, with boys, the best results have been obtained between their third and seventh years. Among them, under the humane and intelligent operation of this charity, which is known as the *Œuvre d'Ormesson*, fifty per cent. of permanent cures are claimed. Most of the other

*Read at a meeting of the New York Academy of Medicine, on January 2, 1902.

large cities of France have already established municipal sanatoria; a few are about to do so.

Canada, England, Scotland, Australia, Norway, Sweden, Denmark, Holland, Russia, Belgium, Italy, and Austria are all in a sense possessed of organized methods of combating the great evil. All seem alive to the necessity of the situation. According to Brouardel, it is grave enough, for he tells us that the proportion of the total mortality due to this cause varies in different countries between a sixth, a fifth, and a quarter.

A very grave responsibility is upon us to press upon this great city the urgent need of provision for the large army of unfortunates who are victims of tuberculosis among us. Every hospital doctor, every dispensary doctor, must see many cases in his daily work, many incipient cases in which the disease is as yet local, in most of which he feels justified in believing that arrest of the process and its cure are only a question of proper food and environment. Sooner or later, when they are hopelessly ill and incapacitated, the municipality does supply them with a place to die in.

Apart from all humanitarian considerations, which perhaps appeal more strongly to doctors than to boards of estimate and apportionment, solely upon business principles, would it not be economical for this municipality to care for these unfortunates at an earlier period of their disease, when it is still incipient and curable? Is it economical to let them suffer a few years and then die at the public expense, with the result perhaps of infecting many others quite unnecessarily in the process, and thus adding to an indefinite extent to the number of the dependent poor in the persons of new victims and of widowed mothers and fatherless children?

It should be remembered that the evil of tuberculosis is not confined, like so many others, to the individual that it attacks. It threatens the environment of every victim, and is therefore more legitimately a subject of public concern than are most diseases which are cared for by the public purse.

The prohibitionists should be especially interested in the campaign against tuberculosis for the reason that alcoholism is generally admitted to be a potent predisposing factor in its development.

All the higher considerations of humanity coincide with the utilitarianism of the taxpayer in claiming for the tuberculous early and proper treatment in well-constructed sanatoria, which must be originally started and maintained at the public expense. It is not expecting too much to believe that private individuals of wealth will come to the assistance of so good a cause when once public attention has been sufficiently aroused. Nor is it unfair to hope that with the lapse of time the needs of the tuberculous will diminish with their numbers, for in theory the

disease may be caused to disappear; practically it should be possible to control it and cause it steadily to diminish in numbers.

Those of you who have seen the monument which has been erected at Saranac to the skill and judgment and humane desire to lessen suffering, on the part of one of our profession, cannot fail to be stimulated by the example of Trudeau. To his work as an object lesson we are all most deeply indebted. His results should have induced us to follow in his wake many years ago.

PARATYPHOID.*

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All reports agree that typical cases of typhoid are met with in which the Widal reaction remains persistently negative. This failure is commonly explained by the assumption that in some cases the infection simply fails to produce an agglutinative power within the blood of the patient. Quite recently, however, some facts became known which would permit another interpretation of these failures. I shall employ the time accorded to me in our discussion on typhoid to a brief presentation of these facts and a discussion of their meaning.

In the literature of the last two or three years there are about a dozen cases on record which clinically presented all the symptoms of typhoid in which Widal was persistently absent, but in which a close bacteriological study revealed new conditions. The first case came from Osler's clinic and was described in 1898 by Gwyn (1). The patient had all the symptoms of typhoid: continual fever, splenic tumor, rose spots, diazo-reaction, delirium and intestinal hæmorrhages. Widal remained persistently negative. However, on the cultures made from the blood of the patient a bacillus was found which differed in essential points from the *Bacillus typhosus*, and which reacted upon the serum of the patient in a dilution of 1 to 200. Serum from other typhoid patients did not affect these bacilli. Next came a case from the Hamburg General Hospital, described by Schottmüller (2) in 1900. This case, too, presented the clinical features of a typhoid, Widal was persistently negative and the cultures from the blood revealed a bacillus which was agglutinated by the blood of the patient in 1 to 100 and showed no reaction with typhoid serum. In the course of this year two more comprehensive publications made their appearance. The first one emanated again from Schottmüller (3). Since the attention of this author was aroused by his first case, he began to study systematically the blood cultures

*Presented at a discussion on typhoid fever at the German Medical Society of the City of New York, December 2, 1901.

of typhoid cases with negative Widal, and in an epidemic of sixty-eight cases he found six with negative Widal. From the blood of all these cases bacilli were isolated which gave a prompt reaction with the blood of their hosts, the dilutions being sometimes as high as 1:10,000. The second publication came from Dr. Kurth (4), the lamented director of the Bacteriological Institute of the City of Bremen. Kurth met with a typhoid case without Widal from the fæces of which he isolated a bacillus which he at first set aside as an object of small interest. However, he soon met with a similar case and then started to study systematically the fæces of all his typhoid cases with negative Widal. The results of his studies were that in an epidemic of sixty-two cases, five failed persistently to give a Widal reaction. From the fæces of each of these cases a bacillus was isolated which gave a prompt reaction with the blood of these patients in high dilutions.

In connection with these communications I have to mention an instructive study by Cushing (5) of a bacillus which he found in pure culture in an osteomyelitic abscess of the left fifth rib. This abscess was apparently the sequel of a disease which was considered typhoid. The blood of this patient, however, gave an unmistakable reaction with the mentioned bacillus, but failed to agglutinate the typhoid bacilli.

We possess accordingly already a number of reports of a disease which clinically presented all the characteristic symptoms of typhoid, but in which the Widal reaction remained persistently negative. However, in the cultures obtained either from the blood or the fæces of these patients a bacillus was found which responded with an unmistakable reaction to the blood of these patients, but failed to respond to the blood of typhoid patients. Although the observations were made in parts remote from one another and by observers who had no knowledge of one another's work, the bacilli found in these cases are apparently identical, at least they have many characteristic features in common. They belong in the first place to the colon-typhoid group, are motile, have flagella, do not liquify gelatin, etc.; morphologically and in many cultural peculiarities they resemble more the typhoid bacilli than the colon. Physiologically they differ from the latter by not coagulating milk, not fermenting lactose and failing to form indol. They differ from the *Bacillus typhosus* by their ability to produce gas, to ferment glucose and to produce alkali in their nutrient media.

These characteristics, especially the alkalization of the media, calls to mind Petruschki's *Bacillus fæcalis alkaligenes* (6). This bacillus was found by a number of well-known investigators in the Berlin

Institute for Infectious Diseases to be present in the stools of some typhoid patients or "typhoid suspects" either in association with the typhoid bacillus or alone, nearly in pure culture. It has certainly many features in common with our bacillus. Petruschki's communication was published in 1896, that is, before the agglutination period. But "Pfeiffer's phenomenon" was known then already and Petruschki employed it to distinguish his bacillus from the typhoid bacillus. It seems quite probable that the *Bacillus fæcalis* is at least closely related to our bacillus, and the cases in which the *Bacillus fæcalis* was found in pure culture were probably not typhoid, but belong rather to the category of diseases with which we are dealing in this paper.

Widal (7) isolated from an abscess of the œsophagus a bacillus which had some features in common with the colon as well as with the typhoid bacillus, and also differed from both in certain other points. By the similarity of this micro-organism with the *Bacillus psittacosis* of Nocard and the bacillus of calf's septicæmia of Thomasson, Widal was induced to put them together into one group which he termed paracolons. It was on account of this group that Gwyn named the bacillus of his patient paracolons. However, the members of this group, at least the *Bacillus psittacosis* and the bacillus of calf's septicæmia, belong to a much larger group, of which the *Bacillus enteritidis* of Gaertner is the best-known representative. Gaertner (8) isolated his bacillus from the meat of a cow which caused quite an extensive meat poisoning epidemic in Frankenhäusen, Saxony, in 1888. Since then quite a number of meat poisoning epidemics were observed and in each case a distinct bacillus was discovered to be the cause of the poisoning. Although all these bacilli bear a different name (*Bacillus breslaviensis*, *fridbergenses*, *morbificans bovis*, etc.) and offer, indeed, minor differences, their main features stamp them to one group which shows a certain relationship to the group of bacilli we are dealing with in this paper.

Apologizing for making here a side remark, I might be pardoned for making here a side remark. In an address delivered at Oldham, England, in 1898, on meat poisoning, Durham (9) enumerated the epidemics which had occurred in different countries, and in which every time the guilty bacilli were found, and remarked he was sorry that no such records were forthcoming from England. But in the very same year Durham was in a position to study there two such epidemics and to discover their bacilli. Epidemics occurred in England as they occurred in other countries, only the investigator was late in arriving. Here in this country we have not as yet heard of a meat poisoning epidemic in which a well-defined bacillus was found to be the cause. Do they

really not exist here? We read often enough of wholesale poisoning by food, etc., but it is always the handy ptomaine which is at the bottom of the evil.

Returning now again to the group represented by the *Bacillus enteritidis* of Gaertner, we have to note in the first place that this group is steadily growing. It comprises already, for instance, the hog cholera bacillus, the *Bacillus icteroides* of Sanarelli, Shiga's and Flexner's bacilli of dysentery, and many more. For practical purposes we can accept provisionally the classification given by Durham (10), *i. e.*, that the colon group presents one end and the typhoid group presents the other end of a related line of micro-organisms of which the meat poisoning bacilli and the allied organisms present an intermediary group. But we must bear in mind that this group contains numerous heterogeneous elements.

Our bacillus, then, belongs to the intermediary group of which Gaertner's *Bacillus enteritidis* is a well-known representative. Kurth at first considered the bacillus in his first case as belonging to the meat poisoning group of organisms. However, Kurth and Schottmüller have investigated their cases and have established that they were not caused by some meat poison. Kurth enumerates some points by which his bacilli can be distinguished from the *Bacillus enteritidis*. The most important point is his statement that the serum of his patients did not agglutinate Gaertner's bacilli. On the other hand, I find in a paper by Durham (11) that the sera of the patients of the Chadderton meat poisoning epidemic did not agglutinate the bacilli which Gwyn has obtained from his case in the Johns Hopkins Hospital. Thus we see that the sera of our patients do not agglutinate meat poisoning bacilli, and the sera of the meat poisoning patients do not agglutinate our bacilli. On the other hand, we have to point out that in Kurth's cases, as well as in Schottmüller's, the bacilli of the several patients were agglutinated by the sera of all their patients, which shows their close relationship among themselves.

Let us now recapitulate briefly. We possess descriptions of a disease observed now more than a dozen times, which clinically presents all the features of typhoid, but in which the Widal reaction remains persistently negative. On the other hand, the sera of these patients agglutinate promptly specific bacilli which were isolated either from the blood or the fæces of these patients. These bacilli belong to the intermediary group, are closely related to the meat poisoning bacilli, but can be distinguished from these especially by the serum reaction. As to the symptoms of this disease, I have already stated that they resemble those which occur

in true typhoid—general malaise, headache, continued fever, slow pulse, splenic tumor, rose spots, diazo-reaction. We also find noted nose-bleed, intestinal hæmorrhages, moderate affections of the respiratory organs, and as a sequel osteomyelitic abscess. The behavior of the blood of these patients has not yet been studied. All the patients got well and therefore there is no pathological anatomy of this disease. Kurth believes that these cases run a milder course than the real typhoid, and he proposes to revive the old term of "gastric fever" for this disease. However, two of Schottmüller's cases had certainly quite a grave course, neither could the case of Gwyn be considered a mild one. I wish to point out that in seven of the cases I find that the disease was introduced by diarrhœa, to turn afterward into a mild constipation, a condition which is not frequently met with in true typhoid.

Regarding the name of these bacilli, we have already seen above that Gwyn adopted the term paracolôn. Cushing designates his organisms as O-bacillus. Kurth has the name *Bacillus bremensis febris gastricæ*, and Schottmüller decided in his last publication upon the term paratyphus. Kurth's term can hardly be accepted, especially if it should comprise the bacilli found in other places than Bremen, and also in serious cases. The term paracolôn is inadequate. In the first place, this name comprises also other organisms which are not even closely related to our bacilli. Secondly, our bacilli seem to stand nearer to the typhoid than to the colon bacilli. Finally, the term paracolôn certainly does not indicate that the disease which is caused by these bacilli has a typhoid-like course. For the very same reasons, I believe with Schottmüller that the designation "paratyphoid bacilli" is the most suitable term for these organisms. I shall also suggest naming the disease which is caused by these germs *paratyphoid*.

In the foregoing I have given an account of a dozen cases of typhoid in which the Widal was absent simply for the reason that the disease was not caused by the *Bacillus typhosus*, but by another organism. In two epidemics in Hamburg and in Bremen in which every case without Widal reaction was searched for another organism, such an organism was found in each case. As there is at present no case of typhoid without Widal reaction on record, in which a search for another organism was properly made and not found, we are justified, at least for the present, in putting forward the following assumption: The persistent absence of Widal reaction in a case of clinical typhoid does not mean that the *Bacillus typhosus* of the patient failed to communicate to the blood the agglutinating power, but it means that the disease is caused by another, a typhoid-like microbe.

This, however, is not yet all. In the first place, there is an apparent contradiction which requires some brief discussion. The Hamburg epidemic consisted of sixty-eight investigated cases, of which six were paratyphoid. In the Bremen epidemic were sixty-two cases with five paratyphoid. That means that in the two typhoid epidemics there were found eight per cent. of paratyphoid. But that means also that in eight per cent. the Widal reaction was persistently negative, which is rather a high figure compared with figures from some other sources. Thus, for instance, we read in the report for Osler's clinic by Gwyn that there the Widal reaction was positive in 99.6 per cent. of all the cases. Gwyn explains this high figure of positive reactions by the excellent facilities of the Johns Hopkins Hospital. But this explanation does not seem to me to be sufficient when we consider, for instance, the facilities of the Hamburg General Hospital under the direction of Lenhartz. Besides, we should remember that the statements of Kurth and Schottmüller are the results of careful, scientific study, while the statistics emanating from hospitals or boards of health are at best routine work. In recent discussions which took place in some of the medical societies in our city, competent men have justly pointed out how much such statements in regard to the Widal reaction depend upon the personal equation of the various observers. That which appears to one to be positive appears to another to be negative. However, it seems to me that the question has to go deeper and does not end with the cases of negative reaction. I shall try to explain briefly my point of view.

If in a given case the Widal reaction appears to be positive in 1 to 20, there seems to be no doubt in anybody's mind that the case is typhoid. Some observers are already satisfied even with the dilution of 1 to 10. But is it not surprising that in human typhoid the agglutination should show up only in very low dilutions, while in experimental typhoid on animals the agglutination takes place in dilutions which go into the hundreds and thousands? At the same time the infection in animals is usually by far not as intense as in human beings. Furthermore, the blood of typhoid patients shows sometimes agglutinating reactions with other organisms. In an epidemic in England, Durham (12) found many cases which, besides the Widal reaction, gave also a distinct reaction with Gaertner's bacillus. Usually such a double reaction is explained by the assumption that both organisms have some proteid or some kind of a quality in common which is connected with the production of the agglutination, and therefore the infection with one organism will cause a change in the blood which will enable it to agglutinate also the other organism. This may be

true, indeed, and will satisfactorily explain some phenomena. But the double reaction might be explained in still another way, *i. e.*, by double infection. The following considerations will show us the importance of such an assumption. All will agree that the presence of a few typhoid bacilli in the intestines will not always cause typhoid fever. It has been shown that the intestines of the normal human being contain sometimes typhoid bacilli, and probably contain often enough some paratyphoid bacilli. If these typhoid or typhoid-like bacilli are small in number and not very virulent, they will probably bring no harm to their host, and sooner or later will perish by the overgrowth of the saprophytic inhabitants of the intestines. And even if some of their number succeed in penetrating the epithelial layer and enter the circulation, they will meet there their destruction from the bactericidal forces normally present in the blood. (Possibly even this innocent invasion might be the cause of lending the blood some degree of agglutinating power. The individual was not sick; nevertheless, his blood might show a moderate degree of the Widal reaction.) However, if one kind of pathogenic micro-organisms or another is present in the intestines in greater numbers and is of a virulent type, it will, in the first place, affect the intestinal mucosa and destroy the impenetrability of the epithelial layer, and then invade in larger numbers the circulation, where the slight force of the normal bactericides will soon be overpowered and consumed, and the individual will become sick, septicæmic. Now, in this phase, if the intestines harbor at the same time another kind of pathogenic bacteria, be they even in small numbers and of a less virulent type, since the protective epithelial layer is destroyed and the bactericidal forces of the blood are reduced or annihilated, they, too, will find their way into the circulation, where they might linger and even grow moderately, thus increasing perhaps the general infection, at least causing a specific agglutinating power of the blood against their own kind. Many combinations are possible, but let us illustrate it by a combination which has a special interest for us in this paper. Suppose the intestines contain, in the first place, in large numbers very virulent paratyphoid bacilli and contain besides a small number of typhoid bacilli of moderate virulence. The paratyphoid bacilli will, in the first place, affect the intestinal mucosa, causing necrosis of the epithelial layer and thus facilitating the entrance of large numbers of their kind into the circulation, and the individual becomes, in a word, sick with the symptoms of typhoid fever. Now, the entrance being free, a small number of typhoid bacilli, too, enter the defenseless circulation and, harmless as they may be, they might be influential enough to

cause an agglutinative capacity of the blood against their own kind—the blood will show a moderate reaction. The patient has then all the symptoms of typhoid fever and his blood gives a Widal reaction 1 to 20; the disease is then, according to the current practice, beyond doubt typhoid. In reality, however, this hypothetical disease was caused by another germ, by the paratyphoid bacillus, and the moderate Widal reaction which was found to be present was due to an incidental invasion of only a small number of typhoid bacilli of perhaps a perfectly harmless type. If the blood, the fæces, or the urine of this patient had been searched, the other bacillus, the really guilty one might have been found, and the reaction of the blood of the patient toward this organism might have been found to be considerably more pronounced and of longer duration than the reaction toward the *Bacillus typhosus*. The following statements will perhaps demonstrate that my suggestion is not purely hypothetical. Durham (13) tells of himself that a few years ago he passed through a disease which showed a Widal reaction and which was considered a mild typhoid. Later on he discovered that after the Widal reaction had already disappeared his blood still gave a reaction with Gaertner's bacillus in 1 to 100. Widal (14) reports that the blood of a patient convalescing from typhoid, in whom the previously positive Widal reaction was already absent, gave a distinct reaction with the paracolon which Widal isolated from an œsophageal abscess. I have mentioned above this paracolon, and I should add that the patient who had the abscess had a history of typhoid. The probability is that the disease of this abscess patient was not a typhoid, but a paratyphoid, and that the disease of the above-mentioned convalescing patient of Widal's was a paratyphoid superimposed upon an invasion of typhoid bacilli.

My suggestion would be nothing more than the precise presentation of a problem which is as follows: Even cases of typhoid with a positive Widal reaction in 1 to 20 may in reality be paratyphoid followed by a secondary invasion of a small number of typhoid bacilli. The solution of this problem can be brought about in two ways: 1. By searching the blood, fæces, and urine for organisms which will give a strong reaction with the blood of the patient. 2. By testing the blood of such patients with paratyphoid bacilli obtained from established cases of paratyphoid.

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NEPHRO-URETERECTOMY; A REPORT OF TWO CASES.*

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The subject of nephro-ureterectomy is not so well known as to require an apology from a reporter of an operation of this kind before a congregation of surgeons even so learned as these present. The number of reported cases to date are less than a dozen and it is only by carefully reporting cases as they occur with thorough study of them that the proper indications and methods may be determined. It is with a view to assisting in this good work that I to-day report a case of partial and a case of complete nephro-ureterectomy. Since reporting a case of complete ureterectomy to this association two years ago, together with a résumé of the literature on the subject, my interest in it has not lessened.

The report of my two cases follow:

CASE I.—*Nephrotomy Followed by Incomplete Nephro-ureterectomy for Pyonephrosis, Adrenal Tumor, and Pyo-ureter; Extraperitoneal Operation; Recovery.*—Mrs. F. S., white, thirty-eight years of age, was seen with Dr. Roman, of my city, February 16, 1900. She had had five children, the last of which having been born seventeen days previously. The preceding autumn she had had chills and fever, which did not yield to the administration of quinine, but continued to time of labor. With the beginning of the chills she noticed a "tumor" to the right of the womb, which was very painful and prevented her from getting her usual sleep. During labor Dr. Roman had discovered the mass in the region of the right kidney and her temperature to be 102° F. The labor had been normal, but the fever had continued, ranging from 100° F. to 104° F. Believing he was dealing with a suppurating kidney, I was called. At this visit I found a small emaciated woman, weighing about eighty pounds, having a temperature of 102° F. and a pulse of 130; her skin was very dry and tongue furred. A mass

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of about the size of an average sized infant's head was notable in the region of the right kidney. Nephrotomy was advised, and she was sent to Columbia Hospital for Women for that purpose. The uranalysis made the following day showed as follows: Color, brownish yellow; heavy sediment, acid reaction; specific gravity, 1.023; a trace of albumin was present, urea seven grains to the ounce; pus cells abundant; no casts or tubercle bacilli were found. No ureteral catheterism was resorted to, as the patient was very ill and a nephrotomy, at least, seemed urgently necessary, which was done on the 19th, opening seven pus pockets in the kidney and cutting away a piece of the organ for microscopical examination. The operation required but a few minutes and was done during extreme stimulation, yet death was barely averted. The pulse ranged from 136 to 160 at the time, and nothing more than emptying the pus collections was to be considered. Destruction of the kidney structure seemed universal. The temperature returned to normal, the pulse dropped to less than 100, and she improved materially, though pus continued to come freely from the loin wound. The day after nephrotomy the uranalysis report was: Quantity for twenty-four hours, 21½ ounces; reaction, acid; two per cent. of albumin present; no casts or blood, but pus present. The quantity gradually increased to more than thirty ounces, having occasionally an alkaline reaction and nearly always a trace of albumin and pus. On March 10, 1901, the temperature and pulse rapidly raised to a dangerous point, though the wound was discharging large quantities of pus. Two days later I removed the kidney and ureter to the middle of the pelvic portion. The kidney was found to be very much smaller and contained a few pus pockets. No urine had leaked through the drainage tract since the nephrotomy. About the middle of the pelvic portion of the ureter was found a mulberry calculus with diameters varying from three eighths to five eighths of an inch, completely blocking its lumen. The peritonæum was slightly opened in two places during removal of the ureter and they were immediately closed with running catgut. Daily examinations of the urine from the time of this operation to April 4th showed a gradual decrease in the abnormal elements and a complete absence of them at the time of her leaving the hospital, April 6, 1901.

Dr. James Carroll, U. S. A., examined the specimens removed and reported on them as follows: "The kidney is the seat of a chronic interstitial inflammation, probably a pressure nephritis. The pelvis is lined by a wall of granulation tissue. In the cortical substance beneath the capsule and in the deeper structures there are sharply circumscribed and diffused areas composed of large polygonal epithelial cells whose protoplasm is filled with fine fat droplets. They are usually arranged in single rows, separated by a delicate stroma, and appear to be aberrant adrenal growths originating from embryonal remnants. In the gross specimen these areas were sharply circumscribed and of a distinctly yellow color. The kidney is dotted with yellow masses of new growth and the same growth appears on the capsule. The ureter was much thickened and dilated above the site of the calculus."

CASE II.—*Nephrotomy Followed by Complete Nephro-ureterectomy for Pyonephrosis and Pyoureter; Extraperitoneal Operation; Recovery.*—Mrs. J. E., white, aged about twenty-seven years, had been troubled with vesical tenesmus with purulent urine at intervals for about three years and dating from an attack of apparently renal colic. At her labors she was in a much weakened condition, probably from this cause, though having no fever. Her husband, an intelligent and careful physician, with special qualifications for such work, had made a great many urinalyses without ever finding any indications of renal or ureteral involvement other than a faintly acid urine containing pus, but no kidney or ureteral epithelium or tubercle bacilli. Bladder irrigation was frequently employed, much to the discomfort of the patient, but always affording relief. She was in moderate flesh, but very pale and anæmic. At the time I was summoned to see her, which was six months after the birth of her last and only living child, she complained of pain and an enlargement in her right loin and stiffness of the right side of the body. An examination revealed a mass, irregular in shape, having diameters varying from four to eight inches. Urinalyses made daily for about one week revealed nothing abnormal in the urine but pus. Palpation revealed nothing abnormal on the left side, and nephrotomy was planned. She was sent to Providence Hospital December 12, 1900, where, on the following day, this operation was done. Five pus pockets in the right kidney were evacuated and drained, about twenty ounces of pus being removed. Three tubular calculi were removed from the upper portion of the ureter, but the very feeble condition of the patient prevented further ureteral exploration. Just after this the record of the urinalyses shows the daily quantity was twenty-two ounces, having a yellowish red color with a heavy sediment, a specific gravity of 1.026, acid reaction, one-sixth per cent. of albumin, many pus cells, a few red blood cells and bladder epithelium. December 22, hyaline casts and some pus; daily quantity, thirty ounces and the reaction acid. Granular and hyaline, as well as epithelial, casts were continued for some time, with a normal amount of urea and a good specific gravity. Up to January 8, 1901, the quantity varied from 27 to 36 ounces, was always acid, and contained a trace of albumin, a few pus cells with casts and calcium oxalate crystals. No odor of urine was ever detected about the loin wound and it was thought the kidney function on that side was permanently lost. She left the hospital January 9th with a discharging sinus in the track of the wound. Her general condition was greatly improved and she was able to walk about. Occasionally she came to my office to complain of the annoyance incident to the discharge from the sinus. Early in March she had some fever and malaise, with no evidence of lessening of the discharge. I recommended removal of the diseased structures, and she reentered the hospital for that purpose March 17, 1901. An examination of the urine just before operation was reported as follows: Specific gravity, 1.017; reaction, acid; albumin, one tenth per cent.; urea, 10 grains to 1 ounce; squamous epithelium and leucocytes. Centrifuged well and could find no casts. Some pus was noticed. The pus was thought to be from the right

ureter, as the urine was acid and the absence of casts indicated a good condition of the left kidney. As no urine had escaped from the wound, I had only to consider the general condition of the patient in deciding the advisability of the operation. March 18th, in the presence of my friend, Dr. Wallace Neff, I removed the kidney and ureter through a long lumbo-ilio-inguinal incision, which was a continuation of the former one and extended to near the spine of the pubes. The kidney, much shrunken, contained three pus pockets. The ureter contained pus and was very much thickened and enlarged as far down as the broad ligament. By stretching the lower part of the wound with strong retractors, I was enabled to remove it in entirety. The broad ligament was forcibly split and lifted up by careful traction on the ureter. The portion passing through this ligament was practically normal in size and consistence. It was severed just at the bladder junction and not ligated. In my former paper I noted the danger of this procedure and recommended ligation in all cases. This is in conformity with authorities on this subject, but I am confident it is necessary in but few cases. Drainage through gauze brought out the wound was liberal for a few days. The subsequent changes in the urine were an increase in the amount of urine, the presence of epithelial, granular, and hyaline casts beginning two days after operation and disappearing on the twelfth day, a few red blood cells and an occasional blood cast with a trace of pus for a few days immediately following operation. April 21st, left the hospital with some discharge from the wound. June 17th, uranalysis by husband; quantity in twenty-four hours, about forty ounces; specific gravity, 1.021; solids per 1,000 cubic centimetres, 50 grammes; and urea, 20 grammes; considerable albumin; no sugar; no casts; a few epithelial cells and amorphous urates.

Dr. James Carroll, U. S. A., the pathologist, reports his examination of the specimen as follows: "Atrophy of the kidney structure with obliteration of nearly all evidence of tubules. It consists almost entirely of newly formed fibrous and granular tissue, which shows purulent infiltration and miliary abscesses. The ureter shows miliary abscesses in the submucosa and the outer layer of connective tissue. The lumen is not effected. The infection was probably carried by the lymph channels."

In both these cases I had to deal with idle kidneys and in both nephrotomy was as much as could have been done at the first attempt. Both patients are now perfectly well, which speaks volumes for the advisability of the operations.

Indications.—The principal reason for nephro-ureterectomy is tuberculous disease of both these structures. Malignant disease and severe traumatic injury throughout most of the course of the ureter, multiple marked strictures from ureteritis and marked destruction of kidney and ureter from calculus pus accumulations, especially the last, are other conditions indicating the operation. Le Dentu removed them for a papillomatous growth of the bladder at the ureteral orifice. It is doubtful,

however, if the average surgeon would be willing to sacrifice a kidney for that condition. After nephrectomy for pyonephrosis, from various causes, a sinus connecting with the ureter frequently continues to discharge for a long time and requires a secondary partial or complete ureterectomy. In some cases like this the whole has not been removed secondarily and the surgeon has again been obliged to resort further to exsection. When tuberculous disease has descended from the kidney along the ureter the actual extent of the progress along the duct is not easily demonstrated at the time of operation and removal of a large portion or all the duct is advisable. When this disease has passed from the bladder through the ureter to the kidney and so involved the latter organ as to make its removal appear necessary, little hope of cure can be entertained with retention of the ureter. In fact, in this condition bladder extirpation will probably be required, though the condition of the opposite side must be excellent to justify any surgical intervention, beyond emptying pus. Frequently in calculus pyonephrosis the ureter will be partially or completely obstructed by a calculus and the condition of the duct above it materially altered. In such case, if the kidney must be sacrificed, it is best to remove the ureter to below the calculus and to explore the remainder, which may be allowed to remain if not evidently diseased or obstructed. Otherwise, this portion, also, had best be removed. It happens in most cases of tuberculous kidney the disease has spread along the ureter, usually by the mucosa, occasionally by the lymph channels, and manifests itself in the bladder mucosa about the ureteral orifice. This would seem particularly to indicate complete nephro-ureterectomy. But in many cases where the involvement of the duct has been slight no trouble has followed simple nephrectomy. I am inclined to believe further experience with nephro-ureterectomy will lead to complete removal of the ureter with the kidney in these cases. Whether resort to nephrotomy should not precede nephro-ureterectomy or even nephrectomy is an unsettled question, though the French surgeons have decided it in the negative. In tuberculous or malignant disease the earliest possible removal of the organs should be done. In all other conditions, I am of the opinion, that nephrotomy should be first tried, as often cure is brought about by it and frequently the kidney is not all diseased, but is capable of good work when the pus is removed. This is frequently proven in early pyonephrosis from ureteral calculi. It may even be in better condition than its fellow. It may be entirely destroyed, on the other hand, as demonstrated by absence of urine from the loin drainage. Of course, when such is the case the opposite kidney has already adjusted itself to the extra work

imposed upon it and the surgeon need not fear on this account if removal of the functionless kidney and the ureter is deemed advisable. It may not be out of place here to refer to a few points regarding differential methods in diagnosis by bladder and ureter exploration. If a pyonephrotic kidney is non-functionating there may yet be a discharge of pus from the corresponding ureter into the urine from a healthy fellow-kidney. In such case the presence of a mass on the diseased side, together with pyuria, offers a presumptive diagnosis of unilateral disease. If the diseased kidney is excreting urine, pus may be the only abnormal material found in it. Should urine offer other evidence, as tube casts, this presumption is not so great. The diseased kidney may be the origin of the casts, tubercle bacilli, etc. Or part may come from the supposedly healthy kidney. Casts may come from the opposite kidney as a result of increased function, and do not necessarily contraindicate operation on the diseased kidney. The amount of urine affords no evidence whatever as to the functional power of the diseased kidney. The Harris segregator, in most cases, offers a plan for collecting the urines from the sides separately, which permits estimation of the relative amounts of the two sides without entering the ureters, a matter of some importance at times. To pass a ureteral catheter through a bladder that has been holding pus for some months into a healthy ureter is liable to carry infection. Catheterism of the ureter on the diseased side may be done with perfect safety. If this is done and the bladder washed, then urine taken from the bladder must be from the other side and will offer an index to the state of the kidney, while the ureteral catheter is furnishing evidence as to the diseased side. Nephrotomy does afford an opportunity of approximating the amount of urine coming from the diseased kidney and from the opposite side. And subsequent analyses of the urine from the bladder compared with those before operation offer a fair method of arriving at a conclusion as to the condition of the fellow kidney.

Methods and Technique.—As reports of operations for removal of the kidney and ureter and of the ureter alone appear the modifications of former methods are exhibited. Early in the history of the operation the two principal methods were the loin extraperitoneal and the transperitoneal. The former was considered preferable as ureterectomy and—especially nephro-ureterectomy—was done nearly always for tuberculous disease, pus being present in nearly every case. To avoid contamination of the peritonæum with these materials seemed strongly advisable. Up to the time of preparation of my paper, in 1889, eighteen cases of ureterectomy and nephro-ureterectomy had been done by this route as

against one by a combined loin extraperitoneal and vaginal and one by the transperitoneal route. Of the eighteen operations by the extraperitoneal route (loin), complete nephro-ureterectomy had been done twice in males and once in women. Complete ureterectomy had been done twice in males, twice in females, and in one case the sex was not given; incomplete nephro-ureterectomy had been done six times in females and once on a man, and incomplete ureterectomy had been done once in a male and twice in females. By the combined loin extraperitoneal and vaginal one complete nephro-ureterectomy had been done and a partial one on a woman by the transperitoneal route.

Since that time I have had the pleasure of witnessing a complete nephro-ureterectomy by a combined loin extraperitoneal and vaginal method by Montgomery and have had access to reports of two of the same character by Noble, of Atlanta, and Ill, one by Le Dentu by the lumbo-ilio-inguinal, two incomplete ones by Lennander and Tait by the same route, three complete operations by Baldwin and one by Pryor by the transperitoneal route, seven total ureterectomies by Meyer and Israel and one partial one by Tait by the extraperitoneal route, and a complete ureterectomy by the loin extraperitoneal and vaginal routes by Garceau.

These make to date by the extraperitoneal route five cases of complete nephro-ureterectomy, including my own, nine of incomplete nephro-ureterectomies, complete ureterectomy twelve cases and incomplete ureterectomy four. By the loin extraperitoneal plus the vaginal, four complete nephro-ureterectomies and one complete ureterectomy. By the transperitoneal route complete nephro-ureterectomy has been done four times and incomplete nephro-ureterectomy once. Thus, of forty ureterectomies, thirty of them have been done by the loin extraperitoneal route alone; by this route, plus the vaginal, five, and by the transperitoneal, five. Of the complete nephro-ureterectomies, five have been done by the loin extraperitoneal route; by the loin extraperitoneal, plus the vaginal, four, and by the transperitoneal route, four. This record shows that ureterectomy has been done without crossing the peritoneal cavity in eighty-eight per cent. of the cases and that total ureterectomy by the transperitoneal route has been done but four times of the eighteen operations. This demonstrates the transperitoneal route has not been adopted for this work.

It is scarcely allowable in this connection to consider the mortality rate, as very likely all the fatal cases of nephro-ureterectomy were in individuals that had suffered with a tedious and devitalizing pathologic process calling for operation. But as a surgical proposition, *per se*, the transperitoneal route certainly has dangers of infection that do not

belong to the extraperitoneal. Baldwin is very emphatic in his advocacy of its superiority, and Pryor prefers it. Most operators prefer the extraperitoneal route. I am sure Montgomery's and my three cases would have been very dangerous ones to attack from the peritoneal side, as pus was abundant and soiling the peritonæum could hardly have been avoided. Kelly, Noble, Montgomery, and Ill recommend the combined loin extraperitoneal and vaginal plan for complete nephro-ureterectomy. This is probably due to their desire not to injure the broad ligament and their hope of avoiding it by the vaginal work, a desire to have vaginal drainage, and a belief in the necessity of ligating the lower end of the ureter. The last is really not necessary unless the uretero-vesical junction is involved, which is not usual, except in severe tuberculous conditions. If this part is not involved, even ligation of the stump is not advisable. But two cases, those of Meyer and Hartmann, are reported in which reflux of urine into the stump of the severed ureter are reported. In both of these this junction was much thickened and prevented a proper pressure being exerted here to prevent outflow of the bladder contents. In such cases exsection of that portion of the bladder is often advisable. The entire removal of the ureter may be done by the lumbo-ilio-inguinal route, as one of my cases demonstrates, though some injury to the broad ligament must necessarily attend it. The advantages of this over the combined routes mentioned are the danger of infection and the duration of the operation are lessened. Following this procedure, the drainage is all in one direction and reaches the surface in a region in which it is more easily managed. The advantages of the vaginal incision are greater facility in dealing with the terminal end of the ureter, which may include partial exsection of the bladder, as in Le Dentu's case, and downward drainage, though some operators have not considered this latter an advantage, for they have promptly sutured the vaginal roof opening.

Most operators employing the combined routes have begun at the renal end, making the vaginal incision very late in the operation. Montgomery made this opening first, having in view ligation and division of the bladder end of the ureter and facilitating upward removal by traction. Another modification he made was in employing the König incision in the loin. Removal of the kidney and ureter proved with him an operation of but a very few minutes. Ill removed the kidney through a loin incision, dissecting the ureter well down, and made a second incision in the semilunar line just above the pubes. Through this he pushed back the peritonæum until the iliac vessels were reached, continuing the dissection of the ureter to the iliac artery.

He tied the uterine artery anterior to his finger and the internal iliac posteriorly, opening the vagina along the line of the ureter which was completely loosened. The ureter was finally cut in two after ligation, and the lower part drawn into the vagina, where it was ligated next the bladder and severed. Meyer uses Israel's incision. Noble removed the kidney and ureter in one piece, separating the kidney and upper portion of the ureter from the loin opening and, after severing the lower end through the vagina, pulled it upward and out of the loin wound. Tait removed the lower part of the ureter through an anterior extraperitoneal opening the same as Kelly and Ill. Baldwin and Pryor prefer the transperitoneal route. The former makes button-hole openings in the peritonæum over the ureter, long enough to insert two fingers, and closes them with suture after the ureter is removed. Pryor operates through the semilunar line, draws the ureter in front of the uterine artery, and inverts three fourths of an inch of the ureter stump into the bladder by means of a probe passed through the urethra. In this case the probe was passed over the pubes, the ureter sloughed and the probe was withdrawn in the third week.

Since writing this paper I have learned of a case of complete nephro-ureterectomy operated on by Dr. R. S. Cathcart for tuberculosis of the kidney and ureter. (*Transactions of the Tri-State Medical Association, Carolinas and Virginia, 1900, p. 272.*)

FARM COLONIES AND TENT LIFE FOR THE TUBERCULOUS.*

By W. FREUDENTHAL, M. D.,
NEW YORK.

In this great discussion on tuberculosis we have heard to-night several plans for instituting sanatoria for tuberculous patients. But the question to my mind is, whether any of them is feasible. I do not intend to discuss the necessity of sanatoria; nobody doubts that. But what, let me ask, does one city or State sanatorium of a few hundred beds amount to? When we consider that there are in the borough of Manhattan about 25,000 tuberculous patients, such an institution is but a drop in the ocean. In Germany, you are aware, such sanatoria have been established in abundance during the last few years, but this is due entirely to the universal compulsory sick-benefit insurance in that country. Every laborer has to contribute a few pennies weekly to a certain sick fund, and when he becomes a victim of tuberculosis he is sent to a sanatorium as one who has paid for his treatment, and *not as a pauper*. This is an advantage that, from a moral standpoint,

*Remarks made at a discussion on Tuberculosis before the New York Academy of Medicine, January 2, 1902.

cannot be overestimated. Although such a system would produce excellent results in this country as well, I cannot see how it could be enforced here.

But we have to provide for our patients some place where they can be treated advantageously. I have always believed, and still do so, that climate is a great factor in the treatment of tuberculosis. The better the climatic conditions, the better are the results obtained. Thus, for years I have sent patients to the South and Southwest of the United States. Some of the young men I have sent there, and who have spent their time judiciously on the "ranches," have done excellently well. But these comprise only a small minority of all tuberculous patients. It is difficulty, for example, to send a young lady to the South or Southwest, even if she is financially able to go there, without any escort; and it is impossible to send there numerous other patients who have not even money enough to pay their railroad fare. But, gentlemen, although climate is a great therapeutic factor in this disease, it is only one of many, and we may attain good results in the East as well. Thus, for example, the climate of Liberty or that of Saranac is surely not an ideal one in winter, and still the results obtained there, as well as at Rutland, Mass., are quite good. They are due entirely to the facts that there are in these places conscientious and experienced physicians at the head of these institutions, and that the air is pure. But, even without such surroundings, good results can sometimes be obtained, when proper care is taken of the patients. I remind you of the publications of Professor Lazarus, of the Jewish Hospital at Berlin. He had, on the average, about as good results as others, although his patients were treated in a general hospital, not at all fitted for the special treatment of consumptives, and situated in the centre of a densely populated neighborhood of a great city.

Now, if we want to help the multitude, we must adopt the most economical methods. In thinking how this could best be accomplished, I have found no plan that seemed to me so rational as the following: We can acquire land enough in this State, and in many places near by, at a very reasonable price for the purpose of establishing *farming colonies*. This should be laid out in large farms, and these will fulfill several requirements. Part of the ground should be used for the erection of dwellings for the consumptive colonists, and the rest cultivated. While a large, handsome hospital building, with all modern improvements, looks imposing, it is entirely too expensive for the masses. I therefore propose to *erect tents* instead, and believe that these tent colonies will be a step nearer toward the solution of this problem. You can erect many tents for the amount of money that would have to be expended on one building alone. That *all* the hygienic de-

mands can be fulfilled in the best and cheapest way in tent life, every one who has had some experience on that subject will admit. One might object that the tents are too hot in summer and too cold in winter; but these objections can be overcome easily. During the writer's service in the army abroad, there was an epidemic of typhoid fever in his regiment. The hospital was soon overcrowded, and tents had to be erected in haste. The men were kept in these tents even during the month of October, which is a very unpleasant month, and when they were to be transferred back to the hospital in November, which is quite a cold month in Germany, they begged to be left in their tents. The difficulties of tent life have also been overcome in this country. Every army surgeon can tell of the beneficial effect of camp life, even in winter, and equally good results have been obtained by physicians in treating consumptives in tents.¹

The second requirement to be fulfilled by these tent and farm colonies is to provide the patients with some physical work. I have never been in favor of an indiscriminate rest-cure. I do not doubt that rest will do good in the case of a man who has been subjected to prolonged overwork and overstrain; *i. e.*, a rest of about two months probably. More is harmful. It is also injurious to the great majority of all other patients. I have expressed this opinion before, and would draw your attention once more to the work of a layman, Mr. A. Grohmann, of Zürich,² who has published an ingenious little book on the technics and psychology in the occupation of nervous patients. He started an institution for this purpose at Zürich, with the help of Professor Forel, and deserves the greatest credit for his unfailing energy.

The way he defines the influence on the patient of work and of having accomplished something, the good and bad influence of one patient on the other, all this ought to be read in his book, and it can be applied to a certain degree to our phthisical patients, too.

As the main occupation, he recommends agricultural work, then gardening, carpentering, and a few more. We could, somebody might say, achieve all this by rational gymnastics, but the difference in the influence between the two on the mind of the patient is as day is to night. When the patient knows that he has to plant flowers to-day, and to-morrow he has to shovel snow, he feels that his life is not worthless. When he sees the flowers blossom which he himself has planted, he experiences a satisfaction and pride that are better than any medicine

¹See discussion before the Denver and Arapahoe County Medical Society, *Journal of the American Medical Association*, December 21, 1901, p. 1696.

²A. Grohman, *Technisches und psychologisches in der Beschäftigung von Nervenkranken*, Stuttgart, 1890.

we can give him. Therefore I wish to emphasize my conviction that, instead of the rest cure, *I am in favor of a working cure*. Let the patient work and feel happy; that is the first step toward improvement.

I am aware how difficult this task is, but I feel confident it can be done and must be done.

When I first published this view³ I was attacked from different sides; but now it seems as if the tide were commencing to turn the other way. No less an authority than Sir Herman Weber, of London, has published an article in the *Zeitschrift für Tuberkulose*, in which he says that there is a class of patients who absolutely cannot stand the rest cure. He had observed cases where even the fever disappeared after the patients were allowed to go about and do some physical work.

Practical experiments in this direction have been made in different places. Thus, for example, Dr. Brecke,⁴ physician in chief of the sanatorium at Grabowsee, near Berlin, believes that the less the patients are harassed by the disease, and the more they feel like healthy persons, the stronger is their desire for occupation. We have to reckon with this factor accordingly. He recommends all sorts of light occupation for this purpose. Dr. Gebser (Heilstätte Albertsberg, 1897) and Dr. Weicker (1898) present similar ideas. It is, of course, understood that these patients are to engage only in light labor and such work as is conducive to their health. If the majority of the members of such a colony work an hour or two hours a day, a great deal of the running expenses will be saved and the sanatorium placed on a much more economical basis.

Furthermore, if we teach the patients how to do certain work in the gardens, on the farms, etc., they might perhaps learn enough to make a livelihood for themselves in this way after their discharge from the sanatorium. We should thus fulfil the *third requirement*, which is also of great importance, viz.: to give such patients the opportunity to work under hygienic conditions, so that they are not forced to return to their old occupation and mode of life under which they acquired the disease.

If the question of caring for the masses of consumptives is approached from this point of view, I firmly believe that very satisfactory results will be obtained.

Jami Alludes to Spectacles.—Nuruddin Abdurrahman, a Persian poet born A. D. 1414 in Jam, Khorassan, whence his *nom de plume*, Jami, speaking of old age, says (Fitzgerald's version of *Salam and Absal*):

"My teeth fall out—my two eyes see no more
Till by Feringhi glasses turn'd to four."

³Medical Notes, February 24, 1900; *Zeitschrift für Tuberkulose*, etc., Bd. II, Heft 3, 1901.

⁴Ueber die Beschäftigung der Lungenkranken, etc. *Volksheilkunde*, etc., Berlin, 1900.

THE PERSONAL LIBERTY PLEA; THE MOST COMMON ARGUMENT RAISED AGAINST MEDICAL LEGISLATION.*

By FLOYD M. CRANDALL, M. D.,

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"O Liberty! Liberty! how many crimes are committed in thy name," cried Madame Roland in 1793; "and how many evil doctrines seek refuge beneath thy mantle," she might have added had she lived a century later.

Scarcely an attempt has been made to advance the standard of medical practice in this country which has not been met by the plea that the liberty of the citizens of the State is threatened. It has been for a century the stock argument of quackery. Time after time it has been buried by unanswerable arguments, but, like the ghost of poor Banquo, it will never down. Its last resurrection was through the agency of Mark Twain, not apparently from animosity for the medical profession, for he spoke in kindly terms of medical men and of their devotion to the public interests. But he advanced arguments which, if they have any significance whatever, mean that all laws regulating the practice of medicine are wrong and subversive of the rights of the people. I propose, therefore, to briefly consider these arguments, for they are fallacious and, if carried into effect, would be disastrous to the general welfare. If carried to their logical conclusions in other directions, they would result in the abolition of all restrictive laws, with nothing short of anarchy as the result.

People are continually quoting the real or fancied errors of medical practitioners, closing often with the question, Why are incompetent men allowed to practise? The answer is simple. Every attempt to exclude such men from practice is at once met by the personal liberty plea, and every step that has been taken to improve the character of medical practice has been fought for inch by inch. Only last winter, when the most impudent system of quackery which has arisen for years sought privileges from the legislature, Mark Twain argued that if he wanted to employ an incompetent practitioner, his personal liberty was interfered with if he were prevented from doing so.

Not only has there been a bitter fight for every advancement made in the standard of medical education and practice, but eternal vigilance is necessary to maintain the ground already gained. In the State of New York, the various medical societies have found it necessary to have standing com-

*Read before the Society of Alumni of Bellevue Hospital, January 2, 1902.

mittees upon legislation and to retain legal counsel at large expense, whose chief duty during sessions of the legislature is to watch every bill introduced, lest the medical practice laws be broken down. Not a session passes without determined attacks upon the laws as they stand. Last year over three hundred bills pertaining to medical matters were introduced. Most of them were designed to weaken or annul existing laws. It would be unjust, however, to severely criticize recent legislatures of New York for action taken on medical matters. They have usually evinced a real desire to raise the standard of medical education and practice, often against great personal and political pressure and always in the face of fallacious reasoning and specious argument. It may be said without exaggeration that the medical practice laws of New York are now, on the whole, superior to those of any other State.

Of all the arguments brought against the enactment of medical laws, the one which comes up most persistently is that pertaining to personal liberty. Those advanced by Mark Twain at a hearing before the legislature on the Osteopathy bill were the boldest and most clever that have been presented for years. Coming from such a source, they have unquestionably done harm, not so much for the certificate of good moral character given to the Osteopaths, as for the arguments furnished to the unthinking against all medical legislation. It is certainly creditable to the Committee on Public Health, that the bill for which he spoke was never reported to the legislature. The keynote to his whole argument is sounded in the following paragraph: "I believe we ought to retain all our liberties. We can't afford to throw any of them away. I don't know as I cared much about these Osteopaths until I heard you were going to drive them out of the State, but since I heard that I have not been able to sleep."

Mr. Clemens argues further in the same vein as follows: "Now, I am always wanting to try everything that comes along. It doesn't matter much what it is. I want to try it. * * * I should like to have the right to experiment with my own body to my heart's content. I don't care whether it is to my own peril or anybody else's. I am not particular about that. * * * Now, what I contend is that my body is my own, at least I have always so regarded it. If I do it harm through my experimenting, it is I who suffer, not the State."

It is surprising how a man of ability may sometimes utterly miss a point. The State puts no prohibition upon a man's experimenting upon himself. The Osteopaths, the Electropaths, the Hydropaths, the Vitopaths, the Nature Healers, and Christian

Scientists do not go to the legislatures year after year seeking the privilege of experimenting upon themselves. They want to experiment upon others; it is more agreeable and much more profitable. The laws of this country give the widest latitude for personal experimentation. It is only when one proposes to experiment upon others that he is in danger of being restricted. For example, it may be well known that alcoholic drink renders a certain individual insane and dangerous. Yet the law makes no attempt to restrain him from drinking. He cannot be arrested or punished for doing it. Only when he interferes with others or threatens to do so, is he interfered with. The sole object of restrictive laws is to protect the many against the few. Medical restrictive laws are not peculiar nor exceptions to the rule. They are designed for the protection of those who would not otherwise be able to protect themselves. Mr. Clemens is an educated and intelligent man, and if he wants to try everything that comes along he can do so with a reasonable degree of safety. He has himself recently asserted that he is "very old and very wise." He is probably a sufficient judge of human nature to estimate the character of a practitioner and perhaps to detect a quack. He may, perhaps, be able to judge of the safety of the treatment he is receiving. There are tens of thousands of the citizens of the State, however, who are not thus able to judge. If they try everything that comes along, even under present conditions, they are in imminent danger of losing their health or even their lives. With no restrictions put upon the practitioners of the healing art, that danger would be vastly increased. The only protection for these unprotected thousands is the guarantee afforded by the State, which is contained in the license to practice, given after adequate evidence of fitness. Medical laws are not enacted for the benefit of the medical profession, but for the good of the people. This is a point upon which there is much popular misconception.

There is another point, also, upon which there is popular misunderstanding. It is frequently supposed that the medical profession enjoys privileges and advantages which it is unwilling to share with others. This, in fact, formed a prominent argument of the Osteopaths last winter. Now, the State has adopted a certain course as necessary to qualify an individual to treat disease. No person pursuing that course successfully is debarred. In New York it consists of a preliminary education tested by an examination, four years of study in a medical college evidenced by a diploma conferring the degree of doctor of medicine, after which the State requires further examination by an independent board of its own, upon the passing of which a license to practise is granted. It should be clearly understood

that the medical profession makes no objection to this course of preparation, but, on the contrary, strongly approves of it. It is the quacks and members of peculiar sects unwilling to follow the course prescribed for all who are constantly seeking privileges and favors. The medical profession seeks no favors nor special privileges. It asks only fair play and the same treatment for all. There was never a more impudent argument than that made by men who are seeking the privilege to practise after a few months of study, who assert that those who have spent four years in preparation, with perhaps other years in unremunerated hospital work, are a privileged class and the recipients of special favors from the State.

It might be argued that the State would be justified in limiting the personal liberty of a few hundred or possibly a few thousand individuals if benefit would thereby accrue to several million. But it is a fact that it does not even do this. It simply requires certain necessary qualifications, and the door is open to all possessing them. The State insists that all must enter upon the same plane and by the same door. It merely takes precautions that none be permitted to enter by secret or subterranean passages not open to all. It is those who are yearning to thus creep in and to obtain special favors who whine most about personal liberty. To require certain qualifications of some and permit others to enter with less—that would be a blow against personal liberty and equal rights.

Should all these unqualified applicants be granted their demands, educated physicians would be the only ones discriminated against. There would be but slight inducement for talented and educated young men to enter upon the study of legitimate medicine, if they knew that after their years of preparation they would be obliged to compete with shoals of the mercenary and unqualified. It is certainly to the interest of the community that the medical profession should consist of men of talent and education.

"I am so constituted," says Mark Twain, "that I want to give everybody a chance. I want to give the mountebank a chance, if you please. I do not want to have any restrictions put upon my free will." The desire to have no restrictions put upon one's free will—that is, to have one's way, is a rather common human attribute. It develops early and is frequently observed in children to the discomfort of their parents. The desire to give "everybody" a "chance" is certainly liberal and philanthropic, but it might occur to the judicious that it would be opening a rather wide door. It seems to indicate a lack of philanthropic regard for the honest portion of one's fellow-men to give too wide a scope to the mountebank ("any impudent

and unscrupulous pretender"—*Century Dictionary*). It was this feeling no doubt which prompted Mr. Clemens to go to Albany in the interests of the Osteopaths.

The principles promulgated in the statement quoted above would undermine the very foundations of civil liberty. "To do what we will," says Paley, "is natural liberty; to do what we will consistently with the interests of the community to which we belong, is civil liberty; that is to say, the only liberty to be desired in a state of civil society." It is natural to wish to do as we will. But if one may do so, then all may do so, in which case the individual would find so many limitations placed upon his own will by that of others with whom he must come in contact that he would gain no additional freedom. Greater freedom would accrue only to the strong or the unscrupulous. Such conditions prevail in barbarous society, devoid of restrictive laws. If the individual be weak, or even of average strength, he must lose a portion of his freedom, for his rights would be usurped by the strong. The liberty of the average citizen is actually increased by equitable restrictive laws, for he gains more by the restriction of others than he loses through the restriction of himself. Civil liberty is necessarily a compromise, for something must be yielded by each individual when he comes into contact with others. Absolute liberty can only be obtained in absolute solitude. What has been called natural liberty is the liberty of the hermit or the savage, and is unlimited only while he remains in solitude. Civil liberty is the right to act in unmolested freedom within a certain limited sphere, and is conferred by wise laws applying equally to all. It is the only liberty possible in civil society.

As the population becomes more dense and the people are brought into closer contact, their freedom of action must become more and more restricted. The ranchman on the plains has comparatively broad freedom of action and enjoys many liberties. In the village his freedom must be curtailed, for he comes in contact with others whose rights are equal to his own. In the densely crowded city his freedom is still more limited, and he must be brought under restrictions which would be unnecessary on the plains. And so, as the population increases and changes, the necessity for restrictions varies and new laws must be constantly enacted. It is the only way by which the rights of all can be conserved. All this is frequently misunderstood, especially by foreigners coming to our shores. They do not discriminate between liberty and license. The early training of the native-born American should be such that he will not fall into this error. Unfortunately, this is not always the case.

Mr. Clemens was not able to sleep after he heard that the personal liberty of the Osteopaths was in danger of being curtailed. A few days before he made that speech, the legislature before whom he was speaking passed an enactment making it illegal for butchers to keep their shops open on Sunday. It is not on record that he lay awake any considerable number of nights over this curtailment of the personal liberty of the butchers and their patrons, whose free will was thus restricted should they have the disposition to buy meat on Sunday. A large proportion of the bills passed by every legislature are framed with the deliberate design of placing restrictions upon some class of the people. The personal liberty plea, however, seems to be reserved chiefly for use against medical laws.

"The State stands a Gibraltar between me and anybody who insists upon prescribing for my soul what I don't want to take, and why shouldn't I have equal liberty with regard to my body, which is of so much less concern." Thus argues Mr. Clemens, and the argument contains three fallacies—

1. The State stands a Gibraltar between him and anybody who insists upon prescribing for his body what he does not want to take. It never forces him to employ a physician. The State does not disturb the Christian Scientist who chooses to die without medical aid. It interferes only when he prevents another from receiving such aid and withholds it from dependent and helpless children who cannot decide for themselves. It requires the isolation or removal of those suffering from contagious diseases when they would endanger the health or lives of others. But it abridges no one's personal liberty by insisting upon treatment which he does not wish to take. In other words, it does not interfere with the individual so long as he remains in what may be called his civil liberty sphere. Only when he goes outside of it and interferes with others does the State restraint him.

2. Two things are compared which are so dissimilar as to make comparison valueless. Religion is a matter of faith and belief, which may or may not be translated into action. The practice of medicine, while based upon certain beliefs, is purely a matter of acts. Religion deals with the relation between man and his Creator. The practice of medicine is purely a relation between man and man. The State takes no cognizance of beliefs, for they do not extend beyond the personal sphere. In rendering the decision of the Supreme Court of the United States upon the Mormon case, Chief Justice Waite said: "Laws are made for the government of actions, and while they cannot interfere with mere religious belief and opinion, they may with practice." We are absolutely free to believe what we choose upon any subject, religious, political, or medical. Only acts

are recognized by the State, except in rare cases where words may induce unlawful acts. So long as the mind remains sane and normal, thoughts and beliefs are unmolested. This was not always so. In former times, even in the American colonies, beliefs or supposed beliefs were the subject of control by the public authorities. In the days of the Inquisition the very suspicion of unorthodox beliefs was sometimes punished by death. The American State, however, stands a Gibraltar in protecting its citizens in their beliefs, no matter how distorted or how erroneous.

3. The State does not stand as a Gibraltar to permit acts, even under the guise of religion, which are detrimental either to its individual citizens or to the community at large. When the Mormons violated the fundamental law of the land and outraged the sense of public decency under the guise of religion, the strong arm of the State interfered to stop it. Not long since, the Salvation Army was enjoined in New York against the use of drums and other noisy instruments in the course of its religious services on Sunday afternoons, on the ground that it annoyed many citizens and disturbed the public peace. Does any one suppose that the State would permit the revival of the old Druidical worship with its offering of human sacrifices? It is not true that the State never interferes with acts done in the name of religion. Yet it is not a contradiction to say that religious liberty is absolute in the United States.

The practice of medicine, then, is chiefly a matter of acts; religion is chiefly a matter of faith and belief. The practitioner of the healing art goes outside of his civil liberty sphere and comes within that of others in every professional act. That is, his entering houses, making physical examinations, applying or prescribing treatment would be trespass, did not his patients waive their own personal rights for advantages they expect to derive by doing so. The practitioner has a right to do these various things only so long as his patients desire or permit it. The very fact that he performs acts thus within the sphere of others indicates the necessity for strict rules governing his conduct. Acts of religious service, being largely those rendered to God by man, are mostly within his civil liberty sphere. Hence, the one comes continually under the jurisdiction of the State, the other but rarely. But when man in his religious acts does go outside of his own sphere and encroaches upon that of others, the State exercises the same control over him that it does under other circumstances.

Were it not for the fact that such arguments as those advanced by Mark Twain are repeatedly brought forward, it would seem a waste of time to argue that the practice of medicine should be re-

stricted to specially trained men and women. It would seem unnecessary to argue that the State, in requiring certain necessary qualifications, is not abridging the personal liberty of its citizens. It would seem almost childish to contend that the State does not use unfair discrimination in requiring the same qualifications for all, and that those who have fulfilled its requirements are not the recipients of special favors.

Perpetual vigilance is necessary to prevent serious inroads upon existing medical laws, but the accomplishment of this result should not be considered sufficient. The standard of both medical education and practice should be raised still higher. This may be accomplished if the medical profession is agreed as to how that result may be best attained and presents an undivided front before the legislature, as it has usually done in New York during the past ten years. Such united action has resulted in securing the highest medical standard that has as yet been attained in this country. Should this wise policy be continued, it is improbable that the State will recede materially from the position already taken, but, on the contrary, the standard may be raised much higher.

TRANSITIONAL DISPLACEMENT OF
PURULENT FLUID OF AN EMPYEMA BY
NORMAL SALINE SOLUTION AT THE
TIME OF OPERATION (RIB RESECTION),
OBVIATING DANGER OF
HÆMORRHAGE BY TOO SUDDEN RELIEF
OF PRESSURE (MECHANICAL),
WITH REPORT OF A CASE AND METHOD
OF PROCEDURE.

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In looking over the more recent literature on the subject of empyema and its treatment, I have been surprised to learn that the progress made has not been very great or the degree of success that might be expected in any given case that of which one could be certain. As the title of this paper implies, I wish to bring before the profession a method of operation which will rob it of its most grave element, *i. e.*, the danger from hæmorrhage from the too sudden withdrawal of the effusion. It is but necessary for me to quote from Da Costa's article, *Progressive Medicine*, March, 1901, page 78: "If he becomes faint or coughs violently, we infer that the pressure is being too rapidly removed from the

lung and the blood-vessels of that organ are being filled up too quickly; we ought to lessen the rate of withdrawal of the fluid or suspend it for a time," to shows the trend of what might be called—and with good reason, too—our temerity heretofore, in dealing with such cases.

The procedure I am about to describe has been tried and not found wanting, by me. A brief outline of the case will suffice; the more delicate technics can, no doubt, be improved upon or modified to suit the individual taste of the operator.

On August 10, 1901, Private Owen O——, Thirty-second Company, Coast Artillery, æt. twenty-one, was admitted to the post hospital, Fort Lawton, Washington, suffering from pneumonia involving the lower lobe of the left lung. So far as the pneumonia was concerned, it ran its regular course and the man was making a fairly good recovery, when a pleurisy with effusion made its advent. This apparently, though there was considerable fluid, was doing well. In fact, the man was gaining in weight, and his appetite was good, etc. A sudden change came over things on the 13th of October, when his temperature ran up and he showed signs of empyema. Physical examination indicated the lung to be crowded, almost solid, up against the vertebral column. Aspiration resulted in the finding of a creamy pus, and the whole picture, in a short time, was one of septic poisoning.

After consultation with Dr. Moses, of the United States army transport *Egbert*, which was then in the port of Seattle, an operation (resection of a rib) was decided on as the only chance, if any there were, of saving life. Accordingly, on October 14th, Dr. Moses giving the anæsthetic (chloroform), I proceeded to resect the rib. I removed an inch and a half of the seventh rib at the angle of the scapula.

Now, here is the point I wish to emphasize: Simultaneously with the cutting away of the rib with the bone forceps, prior to slitting the pleura, I introduced the glass nozzle of a fountain syringe, containing normal saline solution at 100° F. The moment the cavity was opened the solution was turned on, with good pressure from a height of at least six feet. By an adjustment of compresses the too rapid expulsion was prevented, the saline solution gradually displaced the purulent effusion, and I was enabled to flush it out entirely without stopping, at the same time obviating the danger from hæmorrhage (the saline solution doing away with the necessity of leaving part of the purulent fluid in), thus insuring a clean cavity from the start. A simple gauze dressing was applied and the saline solution, by the aid of a gauze wick, was gradually absorbed by capillary attraction. After the pus had been removed, the adhesions existing were broken down and the lung expanded perfectly.

On the second day, after the lung had expanded, the wick was removed and a small drainage tube put in its place. This was removed on the fourth day. The best part of the case was that a complete recovery took place in three weeks and four days, and the soldier returned to "light duty."

The only other treatment consisted in the syringing out with hydrogen peroxide, followed by the

saline solution. A collodion seal was put on on the tenth day. In this connection I might say that the degree of rapidity or retardation of the absorption of the saline solution is entirely in the hands of the operator. An oiled silk sieve-like pad can be put next the skin.

To sum up, this method insures a clean cavity from the start. No one would leave a known thief to guard a house he had broken into. Why leave the sapper of vitality to produce further infection? The expanding lung is prevented from doing so too suddenly by the presence of the saline solution, which also serves the purpose of flushing out. It was estimated (the exact quantity of saline solution used being known) that in this case 1,500 cubic centimetres of purulent fluid was removed. I should like to hear of a similar method, if there has been one to date. If not, others might try for corroboration.

THE MAJESTIC, 356 WEST ONE HUNDRED AND FORTY-FIFTH STREET, January 1, 1902.

Therapeutical Notes.

The Treatment of Cancer of the Stomach.—A. Robin (*Journal de médecine interne*, July, 1901; *Nord médical*, January 1st), in cases of absolute anorexia, gives a cachet containing:

℞ Ammonium chloride. 4 grains;
Dover's powder. $1\frac{1}{2}$ grain;
Sodium bicarbonate. 4 grains.

M.

Or this:

℞ Potassium sulphate, } of each. . . $\frac{3}{4}$ of a grain;
Potassium nitrate, }
Powdered ipecac. $\frac{1}{3}$ of a grain;
Sodium bicarbonate. $4\frac{1}{2}$ grains.

M.

When there is lactic fermentation, a soup-spoonful of the following mixture is to be preferred, administered in the midst of a meal:

℞ Ammonium fluoride. 4 minims;
Water. 10 ounces.

M.

But if the fermentation is butyric, sulphur iodide in a dose of $1\frac{1}{2}$ grain may be taken.

If there is much pain, a plaster may be applied to the epigastrium containing confection of opium, extracts of belladonna and hemlock, and acetum cantharidis, to be dressed with $1\frac{1}{2}$ grains of crude opium.

Cocaine and codeine may be used according to the following formula:

℞ Lime water. 5 ounces;
Cocaine hydrochloride. $\frac{3}{4}$ of a grain;
Codeine. $\frac{9}{10}$ " " "

M.

A dessert-spoonful during the access of pain.

For Hyperidrosis.—Scheffer (*Médecine moderne*, December 18, 1901; *Gazzetta degli ospedali e delle cliniche*, January 2d) has obtained good results from the local application of the following solution:

℞ Salicylic acid. 1 part;
Bismuth subnitrate. 10 parts;
Talc. 30 "

M. To be used as a dusting powder.

Irrigation with Hot Silver Nitrate Solutions in Acute Gonorrhœa.—M. Hodara (*Monatshefte für praktische Dermatologie*, Bd. xxxi, No. 2; *Intercolonial Medical Journal of Australasia*, November 20, 1901) recommends that the urethra be irrigated with a 1 in 4,000 to 1 in 2,000 solution of silver nitrate, as hot as the patient can bear, about a pint being used each time. Cure is said to take place in from two to four weeks, without complications. The irrigation, it is said, can be safely used in the presence of acute epididymitis.

Eggs in Therapeutics: Erratum.—In our issue for January the 18th, page 107, under the foregoing heading, the fourth formula, for a restorative tea, should read:

℞ Yolks of. 2 eggs;
Cloves. 30 grains;
Sugar. 14 drachms;
Water. 23 ounces;
Brandy. 8 drachms.

M.

Ammonia-ichthyol in Skin Diseases.—Hodara (*Monatshefte für praktische Dermatologie*, 1901, Bd. xxxii, No. 12; *British Medical Journal*, January 4th) recommends ammonia-ichthyol in the following cases: Furunculosis, impetigo contagiosa, folliculitis of the scalp, impetiginous eczema, herpes genitalis, and sycosis barbæ. The drug is applied as a thick ointment; this soon dries like a varnish. It is reapplied daily. Under this, pustules soon dry up and boils soften and open. The treatment is said not to cause secondary dermatitis.

For Hæmorrhage in Gastric Cancer.—A. Robin (*Journal de médecine interne*, July, 1901; *Nord médical*, January 1st) to combat or prevent hæmorrhage in gastric cancer, when the patients have blackish sanguinolent filaments in the vomit, recommends:

℞ Tannic acid. from $3\frac{3}{4}$ to $7\frac{1}{2}$ grains;
Powdered crude opium. $\frac{1}{3}$ of a grain;
Calcined magnesia. $1\frac{1}{2}$ grain;

in a cachet. One to be taken before each meal.

If the vomiting is intractable, he recommends as a last resort:

℞ PicROTOXINE, } of each, $\frac{3}{4}$ of a grain;
Morphine hydrochloride, }
Atropine sulphate. $\frac{15}{100}$ " " "
Ergotine. 15 grains;
Cherry-laurel water. 180 minims.

M.

From five to six drops before food.

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THE SMALL-POX SITUATION.

Perhaps there are now more cases of small-pox in progress in the world than there have been before at any one time since the pandemic of thirty years ago. Fortunately, however, as concerns its immediate effects, the present visitation has not been attended with anything like the high rate of mortality that usually accompanies the disease, and it is not likely that the proportion of deaths to the number of cases will rise, for the rule with infectious diseases is that they are more deadly during the early weeks or months of a particular outbreak than at any subsequent period of that term of prevalence. But from another point of view the mild nature of the present epidemic is, we fear, almost sure to work destruction in the long run. The antivaccination fanatics have always striven with all their might and all their capacity for misrepresentation to belittle the danger and the horrors of small-pox, while persistently magnifying the acknowledged risks incident to vaccination and charging it with evils of which it is in no wise the cause. The present benignity of the disease can hardly fail to play into their hands or to favor neglect of vaccination even with people who have no definite objection to the practice.

Another feature of the situation that bodes ulterior disaster as the result of mistrust of vaccination is, however unwarranted, the inference that will widely be drawn from the recent unfortunate occurrence of tetanus in a number of newly vaccinated persons. By many people tetanus will now be reckoned among the possible evil consequences of vaccination, and the thought of that dreadful disease, coupled with the anti-

vaccinationist's jaunty portrayal of the benignity of small-pox, will, it is to be feared, so far delude the people as to increase vastly the unprotected population, thus piling up fuel for the next great outbreak of a loathsome, deadly, and disfiguring disease that for centuries—until it was checked by Jenner's beneficent demonstration—so ran riot that every woman who was not pock-marked was universally looked upon as a beauty.

A third disquieting element of the situation is to be found in the laxity, ever increasing, with which of late years the necessary details of a satisfactory vaccination have been observed. Apparently, blind reliance on the alleged freedom of glycerinated vaccine from pathogenic germs has had much to do with this neglect of the simplest precautions against secondary infection. As a consequence of that neglect, many an unduly sore arm has undoubtedly played its part, a not inconsiderable one, in smoothing the path for the antivaccinationist. Moreover, we cannot resist the conviction that great numbers of recent so-called vaccinations have not really been fully protective, for we read of supposed pocks so superficial as to leave hardly an appreciable scar and to be unattended with the classical Jennerian test of an areola, and these deficiencies are even held up by certain physicians as evidence of the superiority of some of the vaccine now in use. However, while we think there is reason to fear that the influence of all these circumstances will be felt for evil for a number of years to come, we believe that ultimately vaccination will be allowed its due opportunity as a protective measure.

THE LECITHINS IN MEDICINE.

The idea has long prevailed that phosphorus is of preeminent value as a nutrient, particularly of the nervous system, and innumerable attempts have been made to provide more and more readily assimilable compounds of the element, the main conviction, and a most reasonable one, being that the organic combinations are the most suitable. Almost ever since cod-liver oil came into use as a nutrient, there have been many who saw its chief usefulness in its organic phosphorus compounds. Then, a quarter of a century ago or more, the late Dr. Samuel R. Percy devised a cereal product which

he termed "vitalized phosphates." Within the last ten years the glycerophosphates have come largely into use in various morbid conditions supposed to be dependent on malnutrition of the nervous system. There are indications that they are now in turn destined to be supplanted by the lecithins, which also are glycerin derivatives. It will be interesting to our readers therefore if we summarize briefly our present knowledge of the nature of these substances.

The lecithins are natural constituents of nervous tissue, and they exist also in yolk of egg (from the Greek name of which, *λέκιθος*, they take their name), in the liquor amnii, in bile, in spermatozooids, and in certain vegetable substances. Derived from glycerin, as has already been said, they are formed by the substitution of the molecules of two fatty acid radicles for two molecules of hydroxyl, while the third molecule of hydroxyl is replaced by a molecule of neurine in combination with phosphoric acid. The lecithin obtained from the brain is most probably palmityl oleyl lecithin, a hygroscopic waxy substance the composition of which, according to Strecker, is $C_{42} H_{82} NPO_8$, soluble in alcohol, but insoluble in water. This form is sometimes called dipalmitic lecithin; the distearic form is said to have the formula $C_{44} H_{90} NPO_8$, and the dioleic form that of $C_{44} H_{86} NPO_8$. These formulæ of the distearic and dioleic varieties are those given by M. J. Laumonier in *Nouveaux remèdes* for December 8th; if they are correct, the NPO_8 of Strecker's formula apparently requires to be changed to NPO_9 . Lecithin is said to represent ten per cent. of the white matter of the brain, seventeen per cent. of its gray matter, and five per cent. of the yolk of the hen's egg.

Pure lecithin has been used subcutaneously, first by Danilewski and latterly by Sereno, according to Laumonier, in such conditions as anæmic neurasthenia and athrepsia. It is said to increase the appetite, to favor assimilation, and to augment the weight of the individual. It does not seem necessary, however, to use the isolated principle. Muggia has reported good results from the employment of a preparation made as follows: The yolk of a fresh-laid egg is placed in a glass containing from five to six ounces of sterilized water, and a third of the bulk of a 7.5-to-1,000 solution of sodium chloride is added. The whole is thoroughly stirred

with a glass rod and filtered through absorbent cotton. For subcutaneous use, one cubic centimetre is the initial dose, and the dose is not to be carried beyond ten cubic centimetres.

Another preparation is termed "oil of eggs." It must not be confounded with the old *oleum e vitellis ovorum*, which was extracted by ether from hard-boiled yolks of eggs or expressed from them with the aid of heated plates of metal, and employed topically for hæmorrhoids, chilblains, and fissures of the nipple. The new "oil of eggs," attributed by M. Laumonier to Colleville, is a "solution" of yolk of egg in oil of sweet almonds or in liquid vaseline. Colleville is said to have found this preparation more active than the glycerophosphates. In its subcutaneous use, the dose of five cubic centimetres must not be exceeded. These preparations, as well as pure lecithin, have been given by the mouth, and apparently they have proved quite as efficient as when injected beneath the skin. Necessarily, considerable time must elapse before extensive practical experience can establish the real value of the lecithins in therapeutics, but it is to be hoped they will prove all that their advocates allege for them.

THE NEW GOVERNING BOARD OF THE MUNICIPAL HOSPITALS.

The board of trustees which, after the end of this month, will be charged with the government of Bellevue, Harlem, Gouverneur, Fordham, and the Emergency Hospitals has been appointed by Mayor Low. It is gratifying to learn that the mayor, while not constrained by the charter to do so, has actually selected the appointees from the persons whose names were presented to him by the United Hebrew Charities of the City of New York, the Particular Council of the Society of St. Vincent de Paul in New York, and the New York Association for Improving the Condition of the Poor. We may be sure, therefore, that the trustees are all men eminently qualified to perform the duties of their office to the improvement of the hospital service and to the amelioration of the inmates' condition, as well as to the avoidance of unnecessary expense.

We should have liked to see more than one medical man on the board, but it is a matter for congratulation that the one physician among the trustees has the longest time to serve, seven

years; also that the board has held a meeting and chosen him as its president. The physician in question is Dr. John Winters Brannan, one of the physicians to Bellevue Hospital and, if we are correctly informed, the man who first conceived the idea of applying to the hospitals mentioned the trustee system of government, a system that has worked well in some other American cities, notably Boston and Cincinnati. We understand that the details of the plan were elaborated by Dr. Brannan, and we can quite realize that no little ingenuity was required on his part to render the scheme acceptable to the legislature of the State without robbing it of some measure of efficiency. It is fortunate that for the first seven years at least of the trustees' government of the hospitals he is to preside over them, and it is fairly to be expected that his colleagues in the board will show an inclination to be guided largely by his counsels.

To conduct the work of the municipal hospitals of New York—or, rather, to direct it—creditably, from the two points of view of economy and efficiency, is no easy task, but we feel confident that the board of trustees appointed to perform it will so acquit themselves as not to suffer by comparison with the boards that govern the great hospitals that are not under the immediate control of the city government. It must not be forgotten that the members of the board are to serve without remuneration. If they do their work well—and we have no doubt they will—they will deserve the gratitude of the community, and it will be given to them ungrudgingly.

THE MEDICAL DEPARTMENT OF THE BUFFALO PAN-AMERICAN EXPOSITION.

We have heretofore in general terms commended the organization and working of the medical department of the exposition; we must now unreservedly praise the determination with which professional secrecy was observed. In his report, published in the January number of the *Buffalo Medical Journal*, the medical director, Dr. Roswell Park, says: "From the outset, I insisted that patients coming to us for help should be treated with every courtesy and with becoming privacy. During the earlier weeks of the fair, I had considerable trouble with reporters from various papers who exhibited an undue and unbecoming anxiety to get what they considered news

and construct out of the items given them more or less sensational reports. The rule was laid down, and strictly adhered to, that no names should be given out without the consent of the individuals concerned, that our records were private, that our hospital was a retreat and an asylum to which those who were sick and injured could come when they desired for refuge from the public, and that from this rule there should be no departure. The local manager of the local press made himself peculiarly offensive in protesting against this rule, but it was nevertheless adhered to, and the riot act was read to him on more than one occasion."

DENVER'S GREAT LOSS.

In the recent death of Dr. Eskridge and that of Dr. Parkhill, Denver has met with a heavy loss. We know what a shock is felt when two prominent medical men of even so large a city as New York are cut off in quick succession, but we are not sure that here quite the parallel to Denver's loss has occurred within such a brief space of time, for it was only a few hours apart that Dr. Eskridge and Dr. Parkhill died. Graduates of the same medical school, workers in the same community, officers of the same hospitals, and collaborators in literature, the two men died, not only on the same day, but also of the same disease—each in his prime and apparently destined to contribute much further to the advance of medicine. But the loss is not Denver's alone; the entire profession feels it and takes part in Denver's sorrow.

THE VITAL STATISTICS OF NEW YORK.

One of the important tasks awaiting the new city government is the proper disposition of the vital statistics of the city, which for the past two years and a half have been packed away on the third floor of the old New York Athletic Club Building, on Sixth Avenue, which has been rented for the health department. The records, which cover about a hundred years, are almost inaccessible as now kept and are in constant danger of destruction by fire. These records are of great value as legal evidence, and it is highly important that they be suitably housed and cared for.

THE BROOKLYN MEDICAL JOURNAL.

With its January number, beginning the sixteenth volume, our esteemed Brooklyn contemporary comes out with enlarged, double-columned pages, of which there are forty-eight of reading matter. Its appearance is much improved, and we have no doubt that its prosperity will be correspondingly enhanced.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 27th.—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, January 28th.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, January 29th.—Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield).

SATURDAY, February 1st.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

St. Vincent's Hospital.—Dr. William R. Pryor has been appointed Consulting Gynecologist to St. Vincent's Hospital.

The Medical Director of the St. Louis World's Fair Appointed.—Dr. Leonidas H. Laidley has been made medical director of the World's Fair, St. Louis.

Scarlet Fever.—Seven hundred inmates of the Hebrew Orphan Asylum, at One Hundred and Thirty-eighth Street, New York city, have been quarantined in that institution for the last two weeks, owing to an outbreak of scarlet fever.

The Medical Advisory Board of the Health Department of the City of New York has elected the following officers: Chairman, Dr. Edward G. Janeway; secretary, Dr. T. Mitchell Prudden; executive committee, Dr. Bryant, Dr. Brannan, Dr. Janeway, and Dr. Prudden.

The Philadelphia County (Pa.) Medical Society, at its annual meeting, elected the following officers: President, Dr. Thomas H. Fenton; first vice-president, Dr. F. M. Perkins; second vice-president, Dr. J. Chalmers Da Costa; secretary, Dr. Ellwood R. Kirby; assistant secretary, Dr. William S. Wray; treasurer, Dr. Collier L. Bower, and censor, Dr. W. J. Hearn.

The Board of Trustees for the Bellevue and Allied Hospitals, to which, under the revised charter, is to be entrusted authority over these institutions, which were formerly under the control of the commissioner of charities, has been appointed by the mayor as follows: Howard Townsend, for a term of one year; Theodore E. Tack, for the term of two years; Marcus Stine, for the term of three years; James K. Paulding, for the term of four years; Samuel Sachs, for the term of five years; Myles Tierney, for the term of six years; Dr. John W. Brannan, for the term of seven years. After being sworn in, the board met and elected Dr. Brannan president and James K. Paulding secretary. The members of the board receive no pay for their services.

A State Sanatorium for Tuberculous Persons.—A movement has been set on foot by the Medical Society of the City Hospital Alumni of St. Louis looking toward the erection of a sanatorium for tuberculous persons by the State of Missouri.

Small-pox.—Two public schools in Brooklyn borough have been closed because of the discovery of small-pox among the pupils.—More than two thousand employees of the Brooklyn Rapid Transit Company have been vaccinated by inspectors of the Brooklyn Board of Health.—Dr. George W. Salter, a Brooklyn practising physician of fifteen years' standing, was sentenced recently to pay a fine of \$50 for failing to report to the board of health a case of small-pox.

Tetanus following Vaccination.—Dr. Joseph McFarland, professor of pathology and bacteriology at the Medico-chirurgical College, Philadelphia, requests us to state that he is engaged in a critical analysis of those cases in which tetanus has followed vaccination, with a view to determining their etiology, and desires to secure all the data possible concerning such cases. He would like to communicate with any of our readers who have had or who know of cases of this character.

One Hundred Additional Vaccinators have been appointed by the New York City Board of Health, at a salary of \$100 a month, the appointees all being taken from the list of medical school inspectors, in which capacity they have been receiving salaries of \$30 a month. Dr. Lederle, the health commissioner, was also authorized by the board to provide a disinfecting plant in each of the boroughs of the city at a cost of \$5,000 each, and also to build an isolation hospital for contagious diseases on Staten Island.

The Proposed Change in the Form of Government of the State Hospitals.—A meeting of nearly 300 persons was held in the assembly room of the United Charities Building, on January 20th, to protest against the passage of the measure now before the legislature which provides for the abolition of the boards of managers of New York State hospitals for the insane. Abram S. Hewitt and Professor George S. Canfield, of Columbia, vigorously denounced the measure, and a committee was formed to appear before the legislature in opposition to the bill.

The Brooklyn (N. Y.) Medical Society has elected the following officers: President, Dr. William H. Haynes; vice-president, Dr. Malcolm E. Parrott; recording secretary, Dr. Hugh E. Rogers; corresponding secretary, Dr. Alfred Bell; treasurer, Dr. Albert H. Brundage; librarian, Dr. Lewis E. Meeker; trustees, Dr. Peter Scott, Dr. J. H. Droge, Dr. J. C. Kennedy; trustee, one year, to fill vacancy, Dr. John T. Gibbons; committee on membership, Dr. H. S. Pettitt, Dr. Alfred E. Shipley, Dr. H. H. Arrow-smith, Dr. S. P. Truax, Dr. William Alten.

The Baltimore Medical and Surgical Association has elected the following officers: Dr. J. L. Ingle, president; Dr. John W. Chalmers, first vice-president; Dr. Randolph Winslow, second vice-president; Dr. Eugene Lee Crutchfield, secretary; Dr. M. B. Billingslea, treasurer; Dr. Charles D. Hill, Dr. William F. Love, Dr. W. B. Wolf, executive committee; Dr. H. H. Biedler, Dr. G. Lane Taneyhill, Dr. J. M. H. Rowland, committee of honor.

The South Branch of the Philadelphia (Pa.) County Medical Society has recently been formed. Active membership is limited to doctors who live south of South Street and between the two rivers. The objects are to bring local physicians into more intimate professional and social relations, and to permit of an interchange of opinions, views, knowledge, and skill. The latest meeting of the society was on Friday, January 24th, when the members discussed the subject of tuberculosis. Dr. Lawrence Flick, Dr. James R. Young, Dr. Charles P. Noble, Dr. P. S. Donnellan, and Dr. O. J. Keely took part in the discussion of the subject.

The Kansas City (Mo.) Academy of Medicine held its ninth annual banquet in that city on January 9th. About 150 of Kansas City's doctors were present. Dr. George W. Webster, of Chicago, was the guest of honor and responded to the toast, *The Medical Profession in the West*. Other speakers were Dr. H. C. Crowell, Dr. E. G. Blair, Dr. W. F. Kuhn, Dr. R. T. Sloan, Dr. J. H. Thompson, and Dr. J. N. Jackson. The following officers of the academy were installed: President, Dr. J. W. Gaines; vice-president, Dr. C. B. Hardin; secretary, Dr. J. G. Lapp; treasurer, Dr. C. Lester Hall; censor, Dr. G. E. Bellows.

The Milwaukee Medical Society, at its recent annual meeting, elected the following officers: President, Dr. Frederick G. Shimonek; vice-president, Dr. Carl Zimmermann; second vice-president, Dr. J. W. Coon; secretary, Dr. A. T. Holbrook; treasurer, Dr. U. O. B. Wingate; librarian, Dr. L. F. Frank; curator, Dr. J. M. Boffel; member of committee on membership, Dr. Bryan Smith; member of committee on directory and nurses, Dr. A. P. Patek; members of council, Dr. H. A. Sifton, Dr. H. V. Ogden, Dr. T. H. Hay, Dr. W. H. Washburn, Dr. F. E. Walbridge, and Dr. G. E. Seaman.

The Medico-legal Society of New York held its annual dinner and election of officers on January 15th at the Hotel St. Andrew. Officers were elected as follows: Clark Bell, president; Dr. A. P. Drinell, of Burlington, Vt., vice-president; Samuel Bell Thomas, secretary; A. A. Jacobi, assistant secretary, and Caroline G. Taylor, of Bridgeport, Conn., treasurer. On motion of Clark Bell, the following were elected honorary members of the society: Professor Moritz Benedikt, Vienna, Austria; Professor Mierzyewski, St. Petersburg, Russia; Dr. A. Natal and Dr. Maquan, Paris, France; William Orange, London; Dr. C. Lombroso and Buono Ferri, Rome, Italy; Robert Earle, New York; Dr. S. K. Davis and Dr. Nicholas Fenn, Chicago; Dr. C. H. Hughes, St. Louis.

The Medical Club of Philadelphia held its tenth annual meeting at the Hotel Bellevue on January 17th. Preceding the evening's social festivities, officers for the ensuing year were elected as follows: President, Dr. E. L. Duer; first vice-president, Dr. T. H. Fenton; second vice-president, Dr. A. McAllister; secretary, Dr. Guy Hinsdale; treasurer, Dr. F. Savary Pearce. It was announced that the club's membership was 365, and that its fund had passed the \$5,000 mark.

The Woman's Hospital, New York, may be Forced to Move.—Among institutions whose existence is said to be threatened by the recent real estate purchases of the New York Central Railroad for its plans of tunnel extension is the Woman's Hospital, at Forty-ninth and Fiftieth streets, Park and Lexington avenues. The Woman's Hospital was founded in 1854 by Dr. J. Marion Sims and incorporated in 1857. It has about 156 beds, of which twenty-five are free. The yearly expenses are met by voluntary subscriptions and the income of an endowment fund.

The Medical Society of the County of Erie (N. Y.), at its forty-first annual meeting, elected the following officers: President, Dr. William M. Ward; vice-president, Dr. Ernest Wende; secretary, Dr. F. C. Gram; treasurer, Dr. Edward Clark; librarian, Dr. W. C. Callanan; delegates to State society, Dr. C. A. Clements, Dr. W. D. Bidaman, Dr. John J. Twohey, Dr. E. M. Dooley, Dr. B. S. Bourne, Dr. C. A. Tyler; board of censors, Dr. J. B. Coakley, Dr. H. R. Hopkins, Dr. Francis E. Fronczak, Dr. Irving W. Potter; legislative committee (reappointed), Dr. Ernest Wende, Dr. W. W. Potter, Dr. Edward Clark.

The Chicago and Alton Railway Surgeons' Association was organized at Jerseyville, Ill., on January 13th. The association is unique in that it is said to be one of the first of its kind to be organized in the United States. The following officers were elected: President, Dr. W. R. Rhodes, Mexico, Mo.; secretary, Dr. Theodore H. Page, St. Louis; vice-presidents, Dr. W. E. Guthrie, Bloomington, for eastern division; Dr. C. H. Fairbrother, East St. Louis, for the middle division; Dr. F. A. Howard, Slater, Mo., for the western division.

Western State Boards of Health Form a Federation.—The boards of health of six States have combined in a federation of State Medical and Examining Boards. The prevention and cure of infectious diseases is one of the main objects of the federation. The organization was perfected on January 16th at a meeting held in the Great Northern Hotel, Chicago, when the following officers were elected: President, J. R. Currens, Two Rivers, Wis.; vice-president, James M. Dinnen, Fort Wayne, Ind.; secretary, B. D. Harrison, Sault Ste. Marie, Mich.; treasurer, W. A. Spurgeon, Muncie, Ind. Besides the health boards of Illinois, Indiana, Michigan, and Wisconsin, which were represented by delegates, the Ohio and Iowa boards are included in the organization.

Coroners' Physicians to Fight against Removal from Civil Service Lists.—The coroners' physicians are going to fight the move to remove them from the list of civil service officers. They were recently taken out of the civil service lists by an act of the Municipal Civil Service Commission. The act of the commission has been approved by Mayor Low and awaits the approval of the State Civil Service Commission. The physicians will protest against the ratification of the action of the municipal commission. They will object on the grounds that their tenure of office should not be subject to the whim or caprice of elected coroners, and that as they were selected on merit they should hold office on that basis.

The New Detroit Clinical Laboratory, situated in the old veterinary building of the Detroit College of Medicine, on Mullett Street, was opened on January 2d. By paying a small fee, Detroit physicians are permitted to send to the laboratory for analysis and examination medical specimens and bacteria, or they may use the laboratory themselves if they see fit. The board of directors of the new institution are Charles G. Jennings, M. D., president; William F. Metcalf, M. D., vice-president; Wadsworth Warren, M. D., secretary-treasurer; Oscar LeSeure, M. D., Arthur D. Holmes, M. D., Frederick W. Mann, M. D., and Ernest T. Tappey, M. D. The laboratory staff consists of Thaddeus Walker, M. D., superintendent of the laboratory and chief of the department of hæmatology and clinical analysis; Heneage Gibbes, M. D., chief of the department of bacteriology; Frank T. Stephenson, M. D., chief of the department of chemistry; Preston M. Hickey, M. D., chief of the x-ray department. There will also be a department of medical photography in connection with the institution.

The Serums Used by the New York Board of Health formed the subject of discussion at the meeting of the Medical Association of the County of New York, on January 21st. The Committee on Public Health made a report of its investigation into the antitoxine and vaccine virus products of the laboratories of the Department of Health.

The committee, which comprised Dr. Brill, Dr. J. F. Erdmann, Dr. F. P. Hammond, and Dr. J. J. Nutt, concluded its report by saying that it is "unanimously agreed that the character, professional qualifications, and standing of the men engaged in the supervision and control of the manufacture of these products of the laboratory of the Health Department, none other than skilled help carrying out the details, are more than sufficient guarantee as to the quality of the curative sera and vaccine virus. These men represent the highest professional and scientific skill to be found in this city in these departments, as is well known to the entire profession. The methods which are used, and which you have had presented, are beyond criticism. In conclusion it is most worthy of remark that the committee has been unable to find any recorded cases of tetanus in New York following the use of antitoxine or vaccine virus, and that it is their opinion that these products of the laboratory of the Department of Health are absolutely safe."

The Sanitary Improvement in Havana.—Major W. C. Gorgas, in his report for December, 1901, to the adjutant-general of the Department of Cuba, dated January 9th, says that "the last month of the year 1901 shows the same steady improvement in general sanitary conditions that has been going on for the other months. The number of deaths, 463, gives a death rate of 20.47. In December, 1900, there were 485 deaths, giving a death rate of 23.28. Since last December the population of Havana, outside of the ordinary increase, has been augmented by the incorporation of the suburb of Regla. Taking the last nine years of Spanish rule, from 1890 to 1898, inclusive, we find that the minimum number of deaths for December occurred in 1893, when there were 517, with a death rate of 28.32; maximum, 1,924 deaths, in 1897, giving a rate of 100.08 per 1,000. Taking the three years of American occupation, we have for December, 1899, 534 deaths; for December, 1900, 485 deaths, and for December, 1901, 463 deaths, showing a progressive decrease, which is the best indication of the general sanitary conditions of the city, and places Havana in the class of healthy cities of the civilized world, having an equal population. Very few cases of infectious diseases occurred during the month and not a case of either yellow fever or small-pox. * * * But the matter most deserving of comment is the entire disappearance of yellow fever during this month and the two preceding months. This has never occurred in Havana before, and taken together with the record of the year, seems to confirm the claim that yellow fever has been rooted out of Havana, after more than a century of continuous existence here."

French Savants Report on Consumption.—The Secretary of State has received from Mr. J. B. Scovent, the United States Consul at Lyons, France, a translation of the report of the commission, consisting of thirty-two members, appointed by the French Parliament to inquire into the subject of pulmonary tuberculosis, its ravages in France, the cause of its prevalence and the progress made toward its cure. The mortality from consumption in France is very heavy, 150,000 persons dying of the disease annually. According to the report the breath of the consumptive does not transmit the disease. The air which he expels does not contain the germs. The spittle, dried and pulverized, is generally the agent of contagion. It is contended that this clings to the walls, furniture, and floor of the patient's room for months, and even years; on the other hand, sunlight in a few hours destroys the bacilli.

Alcohol makes the best bed for tuberculosis. The departments of France which are the greatest centres for tuberculosis are almost always those in which there is greatest consumption of alcohol. Among the precautions urged is the prevention of the act of expectorating on the ground and profuse sprinkling before sweeping.

The report declares that consumption is curable at all stages. A Dr. Darffberg is quoted as having said: "During the last ten years I have cured a number of consumptives, who have re-

sumed their active occupations, have married, and now have healthy children. I can even say that I myself am the consumptive that I know the best whom I have cured. I am, therefore, able to affirm that consumption is curable."

Pure air, such as is found on the seashore and on high mountains, is the best remedy for consumption. In order that this remedy should be effective it should be continuous—the patient should not only keep his windows and doors open night and day, but should persevere in this air cure for a long time.

Reorganization of the Louisville Health Department.—The Louisville Health Department was reorganized on January 7th. Hereafter water, milk, and food will be regularly inspected and sanitary inspections of all premises needing such overseeing will be made regularly. Ordinances covering all these matters have long existed, but have not been enforced on account of a lack of funds and an inadequate number of employees to do the work. Hereafter, those employees who are negligent will be reported and dismissed from the department. The city has been divided into six sanitary districts. Dr. Albert Deig will be assistant health officer, in charge of milk and food inspection. Dr. Vernon Robbins will be the chemist. There will be six inspectors outside of the office who will look after the inspection of all outhouses, vaults, stables, cellars, etc., needing attention and report the results of their investigations in writing to the health officer daily. Any citizen can invoke their assistance in abating nuisances.

At the request of Health Officer Allen, the Board of Public Works to-day made an order forbidding rag picking on dumps. Hereafter all rags found in dumps will be taken to the city incinerator and burned. The incinerator is to be reopened; it will consume fifty tons of garbage a day. Arrangements will be made as soon as possible to open another incinerator in the western part of the city.

All houses where there have been cases of infectious disease will be fumigated by the city inspectors, and where the occupants are able to pay for it they will be required to do so.

The physicians for the poor, Dr. J. W. Guest and Dr. William A. Keller, will have charge of the district east of Sixth Street and the district west of Sixth Street, respectively. They will attend the sick poor free of charge, and will vaccinate gratis children whose parents are unable to pay for it.

Hospital Buildings and Endowments.—At the next session of the New York State Legislature a bill will be introduced providing for the erection, equipment, and maintenance of a State hospital at Buffalo for the temporary accommodation of suspected lunatics.—The De Wit C. May Library Association, Saratoga Hospital, and the New York Infirmary for Women and Children were heirs under the will of the late Marietta P. Hays, but a decision has just been rendered in the Supreme Court that the bequests are inoperative because the statutes under which these institutions were incorporated

prohibit them from receiving bequests made them by wills which have not been executed more than two months prior to the death of the testator.—A portrait show is to be held in either February or March of next year for the benefit of the Orthopaedic Hospital.—The Chimborazo Hospital Company has purchased a fine lot at Thirtieth and Main streets, Richmond, just back of the Soldiers' and Sailors' Monument, and will proceed at once to erect a \$15,000 building. Half of the stock has been subscribed, and the plans will be in hand at an early date.—The Stillman Hospital, at Harvard University, which has just been completed and equipped at a cost of about \$100,000, is the gift of James Stillman, of New York. The hospital grew out of and forms part of an elaborate system of medical supervision of the students.—The buildings of the Samaritan Hospital, Philadelphia, are to be improved and two two-story wings, 50 by 50 and 42 by 85 feet, respectively, will be built. A building for private patients and a maternity hospital will also be erected.—By the will of Roswell A. Roberts, of Yonkers, N. Y., \$9,000 is bequeathed to the Homœopathic and Maternity Hospital and \$6,000 to St. John's Riverside Hospital, of that city.—The \$5,000 left to the Albany (N. Y.) Hospital for Incurables by John G. Myers will be applied to the building fund.—It is confidently expected by the physicians of Albany that the legislature, at its coming session, will make an additional appropriation for the establishment of the State hospital for the treatment of patients suffering from tuberculosis in its incipient stage. The site has been selected—Ray Brook, between Lake Placid and Saranac Lake, in the township of Borth Elba, Essex county. The members of the hospital commission have discussed plans for the new hospital, and have made known their ideas to the State architect, who has completed a drawing of the proposed building. It is proposed to erect a hospital which will accommodate perhaps 100 patients in the beginning, and the building will be so arranged that it can be enlarged by additions from time to time.—According to the plans prepared by the architects, the out-patient department of the Massachusetts General Hospital, at Boston, will be the most complete department of its kind in the world. Ground was broken a few weeks ago, and the new structure will be ready for occupancy about June, 1903. The building is L-shaped. Some idea of its unusual size may be gained from a statement of its dimensions. Its length is 204 feet; its width about 52 feet. On the courtyard side it runs back 122 feet with the same width, until the amphitheatre and lecture hall are reached. This part of the building has dimensions of 41 feet by 60 feet. The building has three—or what practically amounts to four—stories, for the basement is no less than 14 feet 6 inches high, and is entirely above ground except on the street and courtyard sides.—With the beginning of the new year the Society of the Lying-in Hospital, New York, took possession of the model hospital built for it by J. Pierpont Morgan, in Second Avenue, between Seventeenth and Eighteenth streets. It required more than \$1,000,000 to

build and equip the institution, and it is already so well known that the Czar of Russia is erecting a hospital modeled upon the same lines in St. Petersburg.—Mrs. Frederick S. Newell and Mrs. J. J. Hoyt, of Kenosha, Wis., have given \$10,000 to the Hahnemann Hospital, Chicago.—The will of Mrs. Susan Cornelia Warren, of Boston, bequeaths \$20,000 to the Massachusetts General Hospital.—The new Emergency Hospital, at Buffalo, N. Y., was blessed on December 29th and thrown open to the general public a few days later.—There is talk of establishing a Baptist hospital at Atlanta, Ga.—As a New Year's gift an endowment fund of \$100,000 came to the Brooks Memorial Hospital, of Dunkirk, N. Y., from Mrs. Alfred Solano, Mrs. Frederick H. Stevens, Marshall L. Hinman, Mrs. W. Jarvis Barlow, Mrs. Victor Morris Tyler, and the Misses Kathleen and Gretchen Stevens. It is stated in a letter received by President A. W. Cummings that the \$100,000 is a permanently invested fund and the interest is to be devoted to the maintenance and support of the hospital.—Nearly \$10,000 was received in donations by the Children's Hospital, San Francisco, during the holidays.—The aldermen of Buffalo, N. Y., have approved the employment of architects to draw plans for a new quarantine hospital, to cost \$50,000.—The new cottage hospital, at Peoria, Ill., has just been completed and will probably be dedicated on January 15th. It has cost not less than \$125,000, and is one of the finest buildings of its kind in the world. It is a four-story brick and stone structure, and is as nearly fireproof as modern skill can make it. Covering a site ninety by one hundred and thirty feet, it has 100 rooms and two large wards. All floors and walls are constructed on aseptic principles.—By the will of Mary Dugard, Christ Hospital, Palisade Avenue, Jersey City, is to receive \$1,000 and the Methodist Home and Hospital, of Brooklyn, is to receive about \$10,000.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 18, 1902:

DISEASES.	Week end'g Jan. 11		Week end'g Jan. 18	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	27	16	38	11
Scarlet fever.....	277	26	276	23
Cerebro-spinal meningitis.....	0	3	0	3
Measles.....	872	28	689	25
Diphtheria and croup.....	310	49	314	52
Small-pox.....	30	3	8	5
Tuberculosis.....	239	140	257	147

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the seven days ended January 16, 1902:

CRAIG, R. C., Acting Assistant Surgeon. To report to Surgeon F. W. MEAD for duty.

DECKER, C. E., Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days from January 15th.

GLENNAN, A. H., Surgeon. Detailed to represent the service at the meeting of the International Sanitary Conference at Havana, Cuba, February 15th.

GUIERAS, G. M., Passed Assistant Surgeon. Detailed to represent the service at the meeting of the International Sanitary Conference at Havana, Cuba, February 15th.

LAVINDER, C. H., Assistant Surgeon. The Bureau letter of January 2, 1902, granting Assistant Surgeon LAVINDER leave of absence for two days, is amended so that the said leave shall be for one day only.

SWEETING, C. B., Acting Assistant Surgeon. Granted leave of absence for five days from January 23d.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending January 18, 1902:

BANISTER, JOHN M., Major and Surgeon, is assigned to duty as transport surgeon on the *Buford* during the voyage from New York to the Philippine Islands.

BARNET, E. B., Contract Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month, and to go beyond the limits of the Department.

CRAMPTON, LOUIS W., Major and Surgeon, will proceed to Washington and report to the surgeon general of the Army for instructions.

FLETCHER, RICHARD M., JR., Contract Surgeon, is granted leave of absence for twenty-seven days, to take effect on or about January 25th.

HALL, HENRY M., Contract Surgeon, is relieved from duty as transport surgeon on the *Buford*, and will report in person to the commanding officer of the transport *McClellan* for duty as surgeon on the latter transport.

HALLWOOD, JAMES B., Contract Surgeon, will report in person to the commanding general, Department of California, for temporary duty at the General Hospital, Presidio of San Francisco.

HAVARD, VALERY, Lieutenant Colonel and Deputy Surgeon General, is detailed to represent the Medical Department of the Army at the meeting of the Pan-American Sanitary Congress to be held in Havana, Cuba, on February 15, 1902, in addition to the officers designated in Special Orders of December 29, 1901. Lieutenant Colonel HAVARD will proceed to Havana in time to reach that place on or about February 15th, and, upon the adjournment of the congress, he will rejoin station at Fort Monroe, Virginia.

McVEAN, WILLIAM A., Contract Surgeon, is relieved from duty at the General Hospital, Presidio of San Francisco, and will report in person to the commanding general, Department of California, for transportation to Manila.

RICHARDSON, C. H., First Lieutenant and Assistant Surgeon, is granted leave of absence for twenty days, to take effect on or about March 7th.

RAYMOND, THOMAS U., Captain and Assistant Surgeon, is assigned to duty as attending surgeon and examiner of recruits in Chicago, relieving HENRY I. RAYMOND, Major and Surgeon.

SILER, JOSEPH F., Contract Surgeon, is relieved from further duty in the Division of the Philippines, and will proceed to Fort McPherson, Georgia, for duty.

WAKEMAN, WILLIAM J., Major and Surgeon, will proceed to San Francisco, for instructions.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 18, 1902:

ARNOLD, W. F., Surgeon. Detached from the *New Orleans* and ordered to duty at Guam.

BACKUS, J. W., Assistant Surgeon. Detached from the *Brooklyn* and ordered to the *Princeton*.

BRAISTED, W. C., Passed Assistant Surgeon. Detached from recruiting duty and ordered to the Naval Hospital, New York.

HOLCOMB, R. C., Assistant Surgeon. Detached from the *Helena* and ordered to the *Manila*.
 KENNEDY, J. T., Assistant Surgeon. Detached from the *Brooklyn* and ordered to the *Helena*.
 KITE, I. W., Surgeon. Ordered to the Norfolk Navy Yard, Virginia.
 PAYNE, J. H., Assistant Surgeon. Detached from the *Isla de Cuba* and ordered home.
 PERCY, H. T., Surgeon. Detached from the Norfolk Navy Yard and ordered to the League Island Navy Yard for duty at the naval recruiting rendezvous, Philadelphia.
 PLUMMER, R. W., Assistant Surgeon. Detached from the *Princeton* and ordered to the *New Orleans*.
 PRYOR, J. C., Passed Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Newport.
 WARD, B. R., Passed Assistant Surgeon. Detached from the Boston Navy Yard and ordered to the *Constellation*.

Births, Marriages, and Deaths.

Born.

TROTTER.—In Havana, Cuba, on Tuesday, January 7th, to Dr. F. E. Trotter, United States Marine-Hospital Service, and Mrs. Trotter, a daughter.

Engaged.

THOMPSON—BARNHURST.—Dr. Edward M. Thompson, of New York, and Miss Marie Louise Barnhurst, of Germantown, Pennsylvania.

Married.

BARRICK—JOYCE.—In Buffalo, on Thursday, January 10th, Dr. Calvin Worcester Barrick and Miss Jessie Agnes Joyce.

BRIGGS—PITT.—In Sanford, Connecticut, on Wednesday, January 15th, Dr. Thomas J. Briggs and Miss Louise E. Pitt.

MCLEAN—GIRVIN.—In Los Angeles, California, on Monday, January 6th, Dr. Robert L. McLean, of San Francisco, and Mrs. Viola Girvin.

SCHRAG—SULZBERGER.—In Karlsruhe, Germany, on Wednesday, January 15th, Dr. Hugo Schrag and Miss Belle Sulzberger.

STERN—LICHTENSTEIN.—In New York, on Wednesday, January 22d, Dr. Abram Richard Stern and Miss Stella Lichtenstein.

Died.

BONNELL.—In Brooklyn, on Wednesday, January 15th, Dr. Charles Lewis Bonnell, in the fifty-sixth year of his age.

COVERT.—In Clinton, Wisconsin, on Thursday, January 9th, Dr. George Covert, in the seventy-third year of his age.

DIXON.—In Philadelphia, on Friday, January 10th, Dr. William C. Dixon, in the sixty-second year of his age.

ESKRIDGE.—In Denver, on Thursday, January 16th, Dr. J. T. Eskridge.

FORTIER.—In Montreal, Canada, on Thursday, January 9th, Dr. L. A. Fortier, in the sixty-seventh year of his age.

FURBECK.—In Saratoga, N. Y., on Friday, January 17th, Dr. Peter K. Furbeck, in the sixty-seventh year of his age.

GODDARD.—In Philadelphia, on Friday, January 17th, Dr. Kingston Goddard, in the sixty-third year of his age.

HILL.—In Davenport, Iowa, on Friday, January 10th, Dr. Richard W. Hill.

JOHNSON.—In Somerville, L. I., on Sunday, January 19th, Dr. Thomas Johnson, in the eighty-seventh year of his age.

JONES.—In New York, on Tuesday, January 21st, Dr. Samuel Seabury Jones, in the fifty-sixth year of his age.

LAUDERS.—In Hampton, Virginia, on Thursday, January 9th, Dr. Thomas Lauders, United States Army.

MULVANE.—In Chicago, on Friday, January 10th, Dr. Phineas I. Mulvane, in the sixty-fifth year of his age.

PARKHILL.—In Denver, on Thursday, January 16th, Dr. Clayton Parkhill, late of the United States Army.

RODMAN.—In Hopkinsville, Kentucky, on Friday, January 10th, Dr. James Rodman.

SMITH.—In Redlands, California, on Friday, January 17th, Dr. William Merwin Smith, in the seventy-sixth year of his age.

SPARHAM.—In Brockville, Ontario, on Saturday, January 11th, Dr. Terence W. Sparham, in the eighty-ninth year of his age.

STEARNS.—In Newton, Massachusetts, on Thursday, January 9th, Dr. D. Waldo Stearns, in the thirty-eighth year of his age.

Obituary.

JEREMIAH T. ESKRIDGE, M. D.,

OF DENVER.

The late Dr. Eskridge was a native of Delaware and a graduate of the Jefferson Medical College, Philadelphia, of the class of 1875. Soon after taking his medical degree he was appointed post-graduate instructor in nervous diseases in his alma mater, and he practised in Philadelphia until 1884, when he settled in Denver. He was a member of many learned societies, and at the time of his death he was alienist and neurologist to St. Luke's Hospital and consulting alienist and neurologist to the Arapahoe County Hospital.

Dr. Eskridge was a voluminous writer and a frequent contributor to this journal. His writings were exceptionally clear and logical, and his literary style was one of singular excellence. Among the last of his contributions was a very valuable article entitled *A Study of the Temperature, Pulse, and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain*, which was published in the *New York Medical Journal* for August 31st and September 1, 21, and 28, 1901. Although it was in the field of neurology that Dr. Eskridge was best known, his writings show him to have been a general clinician of remarkable discernment and acumen. Not Colorado alone, but the profession as a whole, will feel acutely the loss of so strong and at the same time so kindly a man as Dr. Eskridge.

CLAYTON PARKHILL, M. D.,

OF DENVER.

On the same day with Dr. Eskridge there died in Denver one of the most promising surgeons of the country, Dr. Clayton Parkhill, professor of surgery in the Gross Medical College, of Denver, and surgeon to the Arapahoe County Hospital and St. Luke's Hospital. Dr. Parkhill had been president of the Colorado State Board of Medical Examiners. During the war with Spain he saw service in Puerto Rico as surgeon of the First Regiment of Colorado Volunteers, and he was a member of the Association of Military Surgeons of the United States.

Dr. Parkhill was not a frequent contributor to medical literature, but his productions were all of a high order of merit. In 1889 we published an article on Abscess of the Brain, written jointly by Dr. Eskridge and Dr. Parkhill, an article that has attracted much interest. In a notable degree Dr. Parkhill had won the admiration of his professional brethren, both as a surgeon and as a man. In his death a brilliant career has been cut short and the profession has been deprived of a most honored member.

Pith of Current Literature.

American Medicine, January 18, 1902.

Artificial Respiration by Direct Intralaryngeal Intubation, with a Modified O'Dwyer Tube and a New Graduated Air-pump, in Its Application to Medical and Surgical Practice. By Dr. Rudolph Matas.

Proper Foot-wear and the Treatment of Weakened and Flat Feet by Mechanical Devices for Maintaining the Adducted Position. By Dr. John A. Sampson.

Concerning a Sugar-forming Ferment in Suprarenal Extract. A Preliminary Report on Suprarenal Glycosuria. By Dr. Alfred C. Croftan.—As the result of experimentation, the author concludes that the presence of a diastatic ferment of great power in the suprarenal glands, in quantities of nearly as large a percentage as those found in the pancreas, the factory of the diastatic ferment *par excellence*, certainly justifies us in deducing that the suprarenal glands are in some way concerned in the conversion of glycogen to sugar. Experiments reveal the fact that the injection of suprarenal extract can cause the excretion of dextrose, provided the quantity injected is sufficiently large. It is desirable that the suprarenals be examined with the same degree of accuracy, in all cases of diabetes that come to autopsy, as the pancreas.

Obstetric Forceps in Relation to Tuberculous Lungs, Cardiac Lesions, Anæmia, Etc. By Dr. George E. Abbott.—The fact of so many cases of cardiac and tuberculous disease, in which the patients invariably date the commencement of their unfavorable or serious relapses to the time of having unwisely exposed themselves to an extra physical strain, lends strength to the author's belief that the cause of many tuberculous mothers failing so markedly, almost immediately after the birth of their child, is the severe straining of the lung tissue at the time of delivery. The use of the forceps immediately the second stage has begun, in order to prevent all straining, will save many a mother from an increase of her heart symptoms or tuberculous troubles, and perhaps prevent an early death.

Hysterectomy and Removal of a Nine Months' Fœtus, Dead in Utero for Fifteen Months; Transposition of the Heart to the Right Side. By Dr. Frank J. Thornbury.

Perforation in Typhoid Fever; Operation; Recovery. By Dr. Richard T. Davis.

Astasio-abasia. By Dr. George S. Gerhard.

Boston Medical and Surgical Journal, January 16, 1902.

Difficulties in the Diagnosis of Syphilis. By Dr. James C. White.—The author points out that failure to get a history of an initial lesion is of little importance; the lesion may have been exceedingly trivial, or situated extragenitally, or shame may prompt the patient to deny the existence of an initial lesion. Too great stress is also

laid upon the "copper color" of the efflorescence. In leprosy, tuberculosis, and all chronic tissue changes in the skin, if the lesions exist a long time, and especially on certain sites of the body, they may have a dull reddish copperish hue. The same is true of syphilis, but as we see more of the earlier manifestations of the disease, such tints are exceptional. Loss of hair is also an exceptional symptom, as is also the presence of emaciation or marasmus in infantile syphilis. The author insists that one must never be deterred by the high social position of a patient or the family in which suspected cases occur or the moral character of the suspected parties, from making a diagnosis. It is also important to inform the patient seen for the first time with syphilis that it is a matter of three years' care at the shortest, in every case: one year of continuous treatment; another year of interrupted treatment, and a third year for observation.

Needless Laparotomies, with a Report of Eight Cases. By Dr. John C. Munro.—The author records a very interesting series of cases in which no surgical lesion could be discovered at operation in spite of the fact that the symptoms, so far as they could be analyzed, led definitely to a diagnosis of some grave surgical trouble within the abdomen. They might be described more accurately as operations for medical lesions, or operations in which no adequate cause for the symptoms could be found.

The Vagus Reflex. By Dr. Thomas J. Mays.—The author writes of the supersensitiveness to pressure over the course of the vagus in phthisical subjects. This supersensitiveness will usually be found over the side of the chest having the affected lung. As the result of further research the author believes that this vagus reflex is not only an almost constant concomitant of phthisis, but that it is a frequent premonitory symptom of this disease, and is often associated with other pulmonary and nervous disorders, either as a forerunner, or as an accompanying sign.

Auscultation of the Knee Joint. By Dr. William Ernest Blodgett.—The author records a few preliminary observations. He asserts, however, that if auscultation of joints is to have any practical value, the value will depend on the ability to infer the condition of cartilage and synovial membrane, and rightly to interpret this condition.

Medical News, January 18, 1902.

Congenital Atresia and Stenosis of the Rectum and Anus. By Dr. W. Reynolds Wilson.—This article makes it apparent that the treatment of imperforation demands, in order to determine the best procedure to be followed, first, the strictest observation of the anatomical condition present; second, a study of the condition of the infant, relative both to the urgency with which it may be necessary to relieve the obstruction, and to the ability of the infant to withstand a second operation.

General Medical Treatment of Syphilis. By Dr. G. Frank Lydston.—The cardinal principle that the author emphasizes in the therapy of

syphilis is that the physician should remember that he has to do with three factors: first, a specific disease to be controlled by specific medication; secondly, a distinct individual personality in each patient; thirdly, the results of antispecific medication. The author believes that there is too great a tendency to treat syphilis and absolutely ignore the individual afflicted by it.

A Conservative Element in Acute Mastoid Surgery. By Dr. E. W. Pyle.—In early operation, the experienced surgeon with clear conception and faultless technics may save life and function; but in the hands of the many the protective and the reparative processes of Nature will be abetted *more* and embarrassed *less* by rational antiphlogosis than by meddlesome surgery.

The Class of Cases of Simple Chronic Glaucoma in which Operation is Not Advisable. By Dr. Charles Stedman Bull.—The author asserts that in advanced chronic glaucoma with great contraction of the visual field, marked impairment of the vision, undoubted increase of tension and deep cupping of the disk, the prognosis for operation is more than doubtful; it is distinctly unfavorable, and iridectomy should not be done. In those cases in which contraction of the visual field has approached close to the fixation point, even though the central vision is still good, iridectomy is positively contraindicated; for the contraction of the field is not arrested, is often made immediately worse, and may be followed by total loss of central vision.

A Résumé of the Subject of Actinomycosis, with Report of a Case of Actinomycosis Abdominalis. By Dr. A. Van Der Veer and Dr. Arthur W. Elting.

Philadelphia Medical Journal, January 18, 1902.

Results of Operative Treatment for the Different Forms of Puerperal Sepsis. By Dr. Barton Cooke Hirst.—The author's article demonstrates the very gratifying advance that has been made in recent years in the operative treatment of puerperal sepsis. Conditions that were well nigh hopeless ten years ago are easily amenable to a surgical treatment that has steadily improved in precision of technics and certainty of results. The two cases of necrosis of the fundus and the cornu of the uterus associated with salpingitis are particularly interesting. One was operated on four, the other six, weeks after labor. The whole infected area was removed by salpingectomy and by exsection of the diseased portion of the uterus. A wedge-shaped piece was removed from the latter, the wound being united by interrupted catgut (formaldehyde) sutures. A few years earlier, hysterectomy would have been done for such a condition, but recent experience teaches that a less mutilating operation often suffices. Both women recovered and were capable of child bearing.

Decreasing Fecundity Concomitant with the Progress of Obstetric and Gynæcic Science. By Dr. George J. Engelmann.—The author brings forward statistics to show that the birth-rate in this country is lower than in any other country

except France, and that the fecundity of the American woman is lower than that of the women of any other country. He points out that health is far more common as the badge of motherhood, while early exhaustion and premature decrepitude are much more likely to issue from the various methods resorted to for the prevention of conception. The avoidance or prevention of conception, if possible, the premature termination of pregnancy, if need be, are factors more potent by far in the causation of decreasing fecundity than is the progress of gynæcic science for the contrary.

The Obstetrical Forceps. By Dr. A. Laphorn Smith.—The author admonishes us never to use the forceps until the woman has been twenty-four hours in labor if a first confinement, or twelve hours if a second or subsequent one, unless there is some urgent indication to do so; never to use the forceps to save one's own time, and to remember that the woman's safety increases with the fewness of the digital examinations. The forceps should never be used when there are no uterine contractions, and, in fact, a fair chance should always be given to Nature before resorting to the forceps.

Primary Carcinoma of the Uterine Fundus. By Dr. J. M. Baldy.—The author records three cases which illustrate the supreme importance of a close and critical study of the bleedings of every woman who passes through our hands professionally. The symptom of bleeding after the natural bleeding has ceased is such a grave one that no practitioner of medicine of average intelligence should overlook it, and having once observed it, no possible excuse should be accepted for not acting upon the hint, not in a month, but instantly.

The Immediate Repair of Injuries of Parturition. By Dr. A. L. Beahan.—There is no more important work to be done for child-bearing women by their physicians, and none more easy if the proper principles are applied in the best way.

Remarks on Early Ectopic Gestation. By Dr. E. K. Browd.—Early ectopic pregnancy runs a treacherous and uncertain course. Symptoms of pain, tumor, or oozing of blood are not the absolute signs of an early ectopic gestation, but their existence must be considered and each case must be observed *per se*. A clear history cannot always be obtained from the patient, and the period of lactation will still more darken the clinical history. Microscopical examination of the uterine scrapings, for the presence of decidual cells of chorionic villi, find advocates in many observers, but also as many opponents. Early operation is strongly advised; if the diagnosis is not positive, an exploratory laparotomy is justifiable and advisable.

Puerperal Myelitis. Report of a Case following Abortion, with Remarks. By Dr. Harry Morell.

On the Desirability of Further Data Concerning the Prevention of Ophthalmia Neonatorum. By Dr. Lucien Howe.

Outline of the Surgical Treatment of Acute Pancreatic Injuries. By Dr. B. E. Hadra.

Some Experiments on the Formation of Bile Pigments and Bile Acids; a Contribution to Our Knowledge of Icterus. By Dr. Alfred C. Croftan.

Journal of the American Medical Association,
January 18, 1902.

The Ponto-bulbar Heat Centre. By Dr. Edward T. Reichert.

Pernicious Anæmia: The Statistics of a Series of Forty Cases. By Dr. Thomas McCrae.—Death occurred in the hospital or shortly after discharge in seventeen of the cases. The average duration of these was practically twelve months. Eight of them, however, ran the whole course in less than six months. Fourteen patients were discharged improved; one of these apparently recovered completely; one was followed for four years; one is alive nearly six years afterward. Seven were discharged unimproved, and two were not treated. The average duration of the non-fatal cases was sixteen months at the time of their admission. Twelve of these patients made substantial gains in weight. The nervous symptoms showed varying results; some progressed while under observation, and others showed gain. There was no uniformity in their course. The treatment consisted generally of absolute rest in bed, fresh air, abundant good food, and arsenic. Attention was paid to the condition of the mouth, especially in the later cases. Conditions arising in the course of the disease were treated symptomatically.

The Pharmacology of the Suprarenal Gland and a Method of Assaying Its Products. By Dr. E. M. Houghton.

The Blood-pressure Raising Principle of the Suprarenal Gland. By Dr. Jokichi Takamine.

Neglected but Valuable Therapeutic Measures. By Dr. George F. Butler.—Hydrotherapy, compound prescriptions, copper as a nervine, and massage, are mentioned by the author as not being tried sufficiently at the present day, and instances are given where each of the procedures mentioned has been profitably applied.

Tuberculosis in State Institutions. By Dr. H. M. Bracken.

Public Sanitaria. By Dr. C. P. Ambler.—The author has collected data from forty-three States. In most of these States there are pest houses where are confined those persons having acutely contagious diseases, and hospitals are endowed for the epileptic, the blind, the insane, the crippled, by the States, and by private individuals, but this great plague (tuberculosis) which annually kills one out of every ten persons dying in the country, has received practically but little attention on the part of the State or the philanthropist.

Consideration of some Important Subjects Connected with the Treatment of Pneumonia. By Dr. Edward F. Wells.—The author is hopeful that a useful antipneumococcic serum may be

produced in the future. One of the most remarkable of the pneumonic phenomena is the great diminution of, or disappearance from the urine, of the chlorides, and, in his practice, the author directs that all foods, including especially milk, shall be well salted, and that the saline enemata shall be given as freely and as frequently as they can be retained and absorbed. Oxygen should be used, along with strychnine, caffeine, camphor, morphine, etc., each of which agents, properly employed, is of the greatest value. The attending physician should be prepared for the great rapidity of the clinical changes characteristic of pneumonia, and pneumonic patients should receive careful, intelligent, observant, and unremitting attention. The state of the heart and capillaries, the urine, the blood, and the nervous reflexes should all receive especial attention.

Cases of Sarcoma and of Hodgkin's Disease Treated by Exposures to X Rays; a Preliminary Report. By Dr. William Allen Pusey.

Surgical Correction of Malformation and Speech Defects Due to or Associated with Harelip and Cleft Palate. By Dr. George V. I. Brown.

Traumatic Arterio-venous Aneurysms of the Subclavian Vessels, with an Analytical Study of Fifteen Reported Cases, Including One Operated upon. By Dr. Rudolph Matas.

Medical Record, January 18, 1902.

Prognosis: Its Therapeutic Value. By Dr. Henry Freeman Walker.—According to the author, prognosis should be regarded as a part of treatment. The most favorable prognosis possible should be given the patient, first, because we cannot be absolute in our own knowledge, and, secondly, positively for the patient's good. Two large classes ought never to be given up, even in the physician's own mind—the very young and the very old. The laws of life do not apply to them as they do to those in active life; so little is needed to preserve life in the infant, while the vitality of the very old has already proved so tenacious. We have no right to shorten life an iota by adverse judgment.

The Pathological and Therapeutic Aspects of the Effects of the Röntgen Rays. By Dr. Carl Beck.—The main difference between an ordinary burn and the changes of tissue caused by Röntgen rays consists in the slower development of the process in the latter case. The treatment of the inflammation caused by the Röntgen rays is virtually the same as that of ordinary burns. In simple dermatosis, applications of Burow's solution are most comfortable for the patient. For the bullous form, an antiseptic gauze-dressing, after the blisters are opened and removed, is indicated for the first few days. The necrotic form requires speedy removal of the mortified tissues, the after-treatment being conducted after the principles of wound treatment.

Suprapubic Cystotomy in Operations upon the Prostate. By Dr. Howard Lilienthal.—The author records some cases to demonstrate the value of the suprapubic vesical incision in removal of

the prostate. While admitting that this particular operation does not fit all cases equally well, he argues that, as a general rule with few exceptions, the first step in the operative cure of any form of prostatic obstruction should be a suprapubic cystotomy, even if it should later become evident that the disease itself must be attacked from another quarter.

Alcoholic Amaurosis. By Dr. Frank Van Fleet.—This article demonstrates to the physician two plain duties: First, to point out to the public the fact that wood alcohol is a positively dangerous substance to take internally, and may even produce permanent blindness; secondly, to point out to the health authorities that some dealers in alcohol and alcoholic preparations substitute methyl alcohol for the ordinary alcohol of commerce, and thus work injury to consumers.

British Medical Journal, January 4, 1902.

Epilepsy. By Sir W. Broadbent.—Epilepsy is characterized by recurrent attacks of general convulsion, attended with or preceded by loss of consciousness, usually sudden. In the intervals the patient enjoys such health as is natural to his constitution. The author describes the typical epileptic attack in detail, calling attention to the fact that the attacks rarely come on during excitement or exertion; indeed they are most common during the night. In the causation of epilepsy the most important element is undoubtedly an inherent tendency in the nervous system. Epilepsy runs in families with other neuroses. Sufficient importance has not been assigned to the sensory nerves in the causation of epilepsy; nothing can be more clearly established than the relation between painful dentition and convulsions in childhood. While the tendency to epilepsy must be looked on as chiefly inherited, it is not very commonly manifested in infancy or childhood. Very frequently the fits begin to occur at puberty or during adolescence. When epileptiform convulsions set in suddenly and frequently at any period of life peripheral irritation of some sort may be suspected. Little or nothing is known as to the pathology of epilepsy. A convulsion represents an explosion of nerve matter—that is, a more or less general discharge of the explosive material accumulated in the grey substance of the cortex of the cerebrum or cerebellum or of the central ganglia.

The prognosis in a case of epilepsy turns mainly on the question how far it is due to a tendency inherent in the nervous system. If the fits have begun in childhood and have recurred regularly, or if there are evidences of a low type of nervous organization (idiocy, etc.), there is practically no chance of the cessation of the attacks. If, on the other hand, the patient has the look of bodily and mental vigor, if some serious exciting cause has preceded each attack, if the fits have begun relatively late in life, it may be presumed that the inherent tendency to epilepsy is not strong, and that it may possibly be held in abeyance. The state of the pulse is important; low tension is characteristic of the disease, and a pulse of unduly high tension for the age of the patient is a ground for hope of recovery.

The treatment of epilepsy, for the most part, resolves itself into the routine administration of bro-

mides. The use of the bromides is to diminish the frequency and severity of the fits, while the cure of the disease, the removal of the instability of the nervous system, is to be sought by other means. In "long-distance" epilepsies, in which the intervals are six weeks or over, the bromides should not be given continuously unless there is some other indication for their employment. When the fits are frequent the bromides must be given in such amount as may be necessary. When the attacks come on at night, a dose should always be given at bedtime. The patient's habits and mode of life must be carefully inquired into, and regulated. Discipline is of the greatest value, as the genuine epileptic is usually deficient in will power. A thorough physical examination of the chest and abdomen should always be made, and digestive irregularities corrected. Disorders of menstruation may play an important part in epilepsy. For the generally lowered vitality of epileptics the author prescribes phosphorus and the hypophosphites, or arsenic with strychnine and iron. The arsenic, so often given with bromides to prevent the rash, may have a considerable share in the production of good results.

A Brief History of the Operations Practised for Cancer of the Breast. By Sir W. M. Banks.

Oophorectomy in the Treatment of Cancer of the Breast. By H. T. Butlin, F. R. C. S.—The author's attitude on the question of oophorectomy in the treatment of cancer of the breast, as opposed to operation, is as follows: We have three objects in our operations for cancer of the breast: 1. The hope which we can hold out to a goodly number of women nowadays that operation may be quite successful. 2. If the disease still kills the patient, it may do so by occurring in some distant organ, and with much less pain and suffering. 3. If it recurs *in situ* in the form of nodules, the patients generally suffer far less than if no operation had been performed. We are asked to replace all this by an operation for removal of the ovaries and the administration of thyroid extract. The author does not know of a single cure by means of oophorectomy. When the disease comes back, as it generally does within six months or a year, it does so exactly in the same form and in the same place as before. The manner of her death and the distress of it are not in the least changed by the operation of oophorectomy. Lastly, a very large number of women on whom oophorectomy has been performed, and who have been soaked in thyroid extract, have not received the smallest benefit therefrom.

Accidental Removal of Auricle by Midwifery Forceps, and Successful Application of Artificial Auricle. By J. Erskine, M. B.—The author reports the case of a boy, the whole of whose right auricle had been accidentally removed at birth by the slipping of the obstetric forceps. The tragus alone remained, along with part of the antihelix bounding the concha inferiorly and superiorly, extending superiorly to meet a small remnant of the helix and its crest above the orifice of the external meatus, and enclosing a depression corresponding to the situation of the cyma conchæ. The hearing was perfectly normal. A plaster cast was made of the left ear, and from this an artificial right ear was modelled in wax, and finally made of Vela rubber

vulcanized. It was kept in position by means of a process inserted into the external meatus, of which it was a cast. The whole artificial auricle was then colored so as to resemble the normal ear, and it has proved entirely satisfactory.

Theories of Inheritance. By C. Mercier, M. B.

January 11, 1902.

Maternities and Pre-maternities. By Dr. J. W. Ballantyne.

Early Extra-uterine Pregnancy. By T. Carwardine, F. R. C. S.—Tubal pregnancies are classified by the author as follows:

	Primary displacements.	Secondary displacements.
1. Ampulla.....	tubo pelvic.....	tubo-abdominal.
	tubo-abdominal.	
2. Isthmus.....	tubo-pelvic.....	tubo-abdominal.
	tubo-ligamentary.....	retro-peritoneal abdominal.
		pre-peritoneal abdominal.
3. Interstitial	tubo-abdominal.	
	tubo-uterine.	

Early tubal pregnancy may be said to comprise cases up to the fourth month, before which time rupture usually takes place. The earlier cases, those during the first six weeks, are characterized by suddenness of onset, often an absence of palpable signs, and gravity of the issue. The rupture commonly takes place at the uterine end of the tube into the peritonæum. It has been known to occur within three weeks of impregnation, and, unrecognized, usually causes death in from eight hours to two days. It is not likely that premonitory signs will have been recognized, for the detection of an early enlarged tube behind the uterus of a healthy female is a matter of good luck. But there are, as a rule, three prominent facts: A history—that of an unusual delay of menstruation in a married woman, followed by an irregular bleeding of some sort a week or two later; a symptom—that of sudden acute abdominal pain and tenderness, with sickness and collapse; a sign—that of internal hæmorrhage. Given the above three facts, the diagnosis becomes almost a certainty. The first two facts speak for themselves; but what is almost pathognomonic is their association with the third fact, that of internal hæmorrhage. The aspect and the pulse are the true clues to progressing hæmorrhage. The lips, gums, and conjunctivæ are almost as white as the surrounding skin. The pulse tension is low and the artery expands with a little jump, and as quickly subsides again. Given these facts in a married woman whose uterus is not particularly enlarged, they are sufficient to warrant immediate operation. But other conditions which may give similar symptoms must be carefully distinguished; among these are gastric hæmorrhage and perforated gastric ulcer, peritonitis from perforations of the intestine, strangulation, various forms of colic, and tumors with twisted pedicles.

In cases of later rupture of the pregnant tube, we have the characteristics of the early rupture with the addition of the presence of a tumor.

Having diagnosticated early extra-uterine pregnancy, there is only one thing to do—operate. Surgery can now save over 95 per cent. of

these cases. Of 279 cases operated upon, 269 recovered and 10 died—a mortality of 3.6 per cent. Operation for tubal pregnancy is as safe as delay is dangerous. If the diagnosis of ruptured tubal pregnancy is doubtful, a very small exploratory incision will be sufficient to make it certain. Indeed, the peritonæum may not have to be opened of necessity, for any blood beneath it is usually apparent through it.

Tubal Gestation with Rupture and Hæmorrhage into the Peritoneal Cavity. By Dr. J. N. Marshall.—The author reports a case of ruptured tubal pregnancy occurring in a multipara, aged twenty-six years. The patient had missed one menstrual period, and had a sudden attack of abdominal pain, and exhibited all the signs and symptoms of internal hæmorrhage. An operation was performed on the following day, and the enlarged left tube and ovary were removed. The tube had, near its fimbriated extremity, a small sac about the size of a pigeon's egg, ruptured in its whole length toward the free border of the broad ligament. The embryo was not found. There was considerable collapse after the operation, but intracellular saline injections proved of great benefit. The patient eventually made a perfect recovery.

Hysterectomy for a Soft Fibromyoma Weighing Fifty-three Pounds. By F. C. Madden, M. B.—The main points of interest in the case here reported are the size and weight of the tumor, the fact that it was quite solid and yet gave perfect fluctuation, the absence of pressure-symptoms and urgent respiratory obstruction, and the good general condition of the patient before operation. In all cases of severe abdominal operation, the author is in the habit of almost filling the peritoneal cavity with normal saline solution before closing the abdominal incision, and with most satisfactory results.

The Treatment of Puerperal Eclampsia. By L. A. Francis, M. R. C. S.—The author reports five cases of puerperal eclampsia treated by morphia injections. Of these, three patients recovered and two died. Of the two fatal cases, death in one was due to acute bronchitis; the other fatal case was hopeless from the first, and was possibly apoplectic in nature. In severe cases the author is inclined to inject morphia at first, but to bring on labor if the convulsions are not quickly subdued.

A Suggestion for the Treatment of Enuresis in Females. By G. C. Parnell, M. R. C. S.—The treatment for enuresis in females, recommended by the author, is the swabbing out of the urethra and neck of the bladder with a solution of nitrate of silver (ten grains to the ounce). To facilitate the operation he uses a specially designed urethral dilator. He reports several instance in which such treatment brought about marked improvement; he has no theory to account for such result, beyond the fact that there is a mechanical action caused by the slightly swollen condition of the mucous membrane of the urethra after treatment. The real value is in the breaking down of the bad habit for a week or longer period.

Hydroa Gestation is Due to Staphylococcus Albus. By N. W. Holmes, L. R. C. P., and Dr. W. Bulloch.—The authors report the case of a woman who, at three consecutive confinements, had attacks of hydroa gestations. There was redness of the palms of the hands and soles of the feet, and a thick, elevated, papular and confluent rash the size of peas on the backs of the hands, wrists, forearms, and knees. A bacteriological examination of the fluid from the recent bullæ showed the presence of *Staphylococcus albus* in pure culture.

Note on a Method of Quantitatively Estimating the Phagocytic Power of the Leucocytes of the Blood. By W. B. Leishman, M. B.

Epidemic Catarrhal Jaundice. By E. Curwen, M. B.

Enteric Fever in the Inoculated. By C. Burt, R. A. M. C.—Of 947 uninoculated individuals who had typhoid fever in Harrismith, South Africa, 135 died—a mortality of 14.25 per cent. Of 263 persons who had been inoculated with typhoid vaccine, for the most part 6 to 18 months previously, contracted the disease. Eighteen of these patients died, a death-rate of 6.8 per cent. The average duration of pyrexia was in the uninoculated 28 days, in the inoculated 15 days. Relapses occurred in 24 per cent. of the uninoculated, but in only 6 per cent. of the inoculated. In all the fatal inoculated cases an interval of eight or more months had elapsed between vaccination and the onset of the illness. In eight necropsies the cause of death was found to be toxæmia in 4, pneumonia in 3, perforation in 1.

Tortuosity of both Internal Carotid Arteries. By R. P. Rowlands, F. R. C. S., and R. H. J. Swan, M. B.

Presse médicale, December 7, 1901.

Ulcerating Pyloric Cancer.—M. Hayem, narrating a case in detail, says that the diagnosis is always difficult. When a patient, known to have an ulcer of the stomach, begins to vomit coffee-ground material and manifests the other well-known signs of gastric cancer, cancerization of the ulcer should be suspected. The blood examination cannot always be relied on. Ulcerocarcinoma is always fatal unless an early diagnosis leads to a timely operation, pylorotomy being the operation of choice.

Borrel's Parasitic Theory of Cancer. By M. Griffon.

Gazette hebdomadaire de médecine et de chirurgie, December 12, 1901.

Two Cases of Splenectomy.—M. Blanquinque records two cases, one of splenomegaly, the other of splenic leucæmia. He removed the spleen in both cases, the former patient surviving, the latter succumbing to the operation. The author draws attention to this often proved fact, that it is not advisable to remove the spleen in cases of leucæmia, whereas it is advisable to do so in cases of splenomegaly when the enlargement of the organ is not accompanied by ascites or jaundice (Banti's disease).

Centralblatt für Gynäkologie, December 7, 1901.

Premature Fœtal Death Due to Separation of the Placenta.—Professor Schultze points out that by a separation of the placenta, the fœtus does not lose a single drop of blood through the umbilical cord. He demonstrates this by a simple experiment which consists in injecting milk into the umbilical vein of the cord still attached to child and placenta. Not a particle of milk appears on the maternal surface of the placenta. The death of the child—which, under these circumstances, is always born very pale, is not due to hæmorrhage, but to anæmia.

Treatment of Dysmenorrhœa.—Dr. A. Theilhaber describes a knife for the purpose of making into the cervix incisions of a correct depth when operating for dysmenorrhœa.

Pessaries in Uterine and Vaginal Prolapse. By Dr. W. Rosenfeld.

Twins with Long Intervals between Births.—Dr. S. Chazan points out the danger of uterine atony and of possible sepsis by allowing the second child to remain for a great length of time in the uterus after the birth of the first of the twins. He advises emptying the uterus when the interval is longer than usual.

Münchener medicinische Wochenschrift, December 10, 1901.

Early Pulmonary Tuberculosis. By Dr. Schmorl.

Medical Treatment of Fever in Pulmonary Tuberculosis.—Dr. F. Köhler says that there is no case in which drugs will always and positively control the fever in phthisis. He advocates the use of no particular drug for this symptom, but praises regular exercise in the open air, the elimination of toxines, and abundant and nourishing food.

Temperature after Light Exertion in Pulmonary Tuberculosis.—Dr. A. Ott says that a rise of temperature in tuberculous persons after slight exertion is always accompanied by the presence of albumose in the urine, and should therefore be regarded as fever.

Early Diagnosis of Tuberculosis.—Dr. A. Möller has tried the Arloing-Courmont agglutination method of making an early diagnosis of tuberculosis in patients with all types of the disease and in healthy persons. He failed to obtain the reaction in all of the diseased persons and had a positive reaction in some of the healthy individuals. He regards the test as unreliable.

Pulmonary Hæmorrhage Treated by Subcutaneous Gelatine Injections.—Dr. A. Hammelbacher and Dr. O. Pischinger report favorably on this method in four cases. The solution must be aseptic and must be carefully injected. No bad results follow its use. From sixty to eighty cubic centimetres are injected, depending upon the severity of the hæmoptysis.

Purpura Hæmorrhagica in Pulmonary Tuberculosis. By Dr. E. Cohn.

New Hæmoglobinometer. By Dr. G. Gärtner.

Riforma medica, October 16 and 17, 1901.

The Thermo-regulating Functions in Infectious Fevers. By Dr. Benedetto de Luca.—The author reviews the various theories concerning the thermo-regulating functions of the nervous system in health and febrile states, and discusses the relationship of these functions to the phenomena of infectious fevers. In his opinion the chill of an infectious fever is explained as follows: In health the temperature is about 37° C. Exertion or other causes may raise it to 38° C. without disturbing the balance of health. When, however, the organism is attacked by toxins or bacteria, and the biochemical processes are so altered as to raise the temperature to 40° C., but yet the patient shows a temperature of only 38° C., the patient will have a chill because the temperature of 38° C. represents in this case what, for example, 35° C. would be to the normal 37° C., *i. e.*, two degrees lower than the temperature corresponding to the amount of heat developed in the body by the chemical processes. If the temperature of the body is reduced from 37° C. to 35° C., a chill ensues, after which the temperature rapidly returns to normal. Hence in infectious fevers there may be a chill while the temperature is rapidly rising from 38° C. to 40° C. When the period of chill has passed, the thermo-regulating centres soon find themselves in a state corresponding to the altered chemical condition of the cells of the body, and enter into a condition of thermotactic paresis, which is manifested by the paresis of the cutaneous vasomotor system. In this manner it is explained how a patient with fever radiates more heat in a cool bath than a healthy person of the same size and weight. After a time, as a result of this increased radiation of heat, the body again finds itself in a state of lower temperature than that indicated by the chemical conditions, and a new contraction of the superficial vessels, followed or accompanied by a new chill, leaves the patient again with a higher external temperature. The circle of events thus continues throughout the course of the disease until the conditions of chemical change are no longer the same. The period of defervescence ensues when, after a particularly marked vascular dilatation, no more extra heat is generated by the infectious process, when the centres are, in other words, no longer affected by the fever. The defervescence is critical when this cessation of the stimulus upon the centres is sudden; it is slow when the stimulus gradually diminishes in force. The author believes that this theory explains the phenomena of infectious fevers.

October 18 and 19, 1901.

Digitalis Leucocytosis and Its Importance in Experimental Diplococcæmia. By Dr. Alessandro Gazza.—The author's experiments are intended to show that the administration of digitaline in pneumococcus infection tends to prolong life by promoting leucocytosis. It may be concluded, therefore, that in pneumococcus infection remedies that promote leucocytosis are of therapeutic value.

Vratch, December 8 (New Style, December 20), 1901.

On the Treatment of Pleurisy with Exudation by the Method of Professor Levaschoff. By Dr. P. I. Taiflieff.—This method was described eleven years ago, and consists in the displacement of the exudate by a solution of sodium chloride, but in spite of this fact, there are few articles on the subject in medical literature, and very few cases of pleurisy treated with this method have been reported. With the exception of Demtchenko, all the authors who have reported such cases agree that the method of Levaschoff is very efficient in serous pleurisy. The originator of the method himself does not allege that the use of salt solution will cure purulent pleurisies, but advises that, in all cases of empyema, this treatment be tried at first, and if found inefficient, operative procedures should be adopted. The author believes that the accumulated clinical evidence shows that mild cases of empyema are curable with Levaschoff's method. He reports the results obtained in nine cases of pleurisy, of which five had serous exudates, two serofibrinous and two hæmorrhagic. In order to test the value of the method, the author selected the most severe cases, with the largest amounts of exudate, and, before resorting to the treatment with salt solution, administered large doses of sodium salicylate and applied counterirritants for ten days, so as to absorb the exudate if possible. A physiological solution of sodium chloride was used, and the solution injected into the pleural cavity by means of Potain's apparatus, taking care not to allow any air bubbles to penetrate into the sac. (*To be continued.*)

Graphic Methods of Determining the Variations in the Blood Pressure in Man. By Dr. I. M. Levaschoff.—The author has modified Franc's sphygmograph so as to enable this apparatus to record the blood pressure from a tracing of the radial pulse. He found that during quiet inspiration the blood pressure was slightly raised, the pulse waves were more ample, and the secondary waves more clearly defined; the opposite took place in expiration. On deep inspiration this lowering of the blood pressure was more marked, and in deep expiration the normal status of the pressure was gradually restored. Breathing through one nostril, with the other closed and the mouth shut, raised the blood pressure on account of the accumulation of carbon dioxide in the lungs. During mental exertion the blood pressure slowly fell in zigzag fashion, although the pulse waves became higher. This showed that, in spite of the fact that there was an increased flow of blood to the periphery, there was an increased force of the cardiac systole during mental exertion. The injection of an ethereal tincture of valerian subcutaneously was followed by an increase in the amplitude of the waves, and a rise of the blood-pressure curve. The pressure then remained the same, until it began to fall again after eight minutes.

On the Question of the Rôle of the Spleen in Infectious Diseases. By Dr. A. A. Koudriasscheff.—The author considers the question

whether the increase in size of the spleen represents a necessary event in the struggle of the organism against infection, or whether it is produced by the poisoning of the spleen by the toxins developed by germs. He injected cultures of cholera bacilli into animals, counted the leucocytes in their blood, and killed them after varying intervals of observation, so as to see the microscopic lesions that had developed in the spleen as a result of the infection. He found that the microscopic appearances of splenic tissue varied according to the degree of infection. The Malpighian bodies became enlarged, their boundaries became less distinct, and even entirely obliterated. The author believes that the boundaries between the Malpighian bodies and the rest of the splenic pulp are artificial, and that they disappear when the work of the spleen is increased by infection under favorable conditions. As the result of his research he states that no conflict between the bacteria and the spleen takes place in that organ, and that during an infectious process, the spleen continues in the rôle which it takes on in normal states of health, namely, that of a laboratory for the manufacture of white blood cells. Its work, however, is increased in the presence of infection, and the stimuli for the elaboration of more leucocytes than usual are the toxins of the bacteria causing the infection. Inasmuch as the lymph-nodes, and the bone marrow may take the place of the spleen, individuals without a spleen can resist infection.

Attention is called to the connection between the spleen and the liver. If it be true that the spleen is the factory for white blood cells, then the leucocytes can travel toward the liver through the splenic and portal veins. In the liver there take place constant conflicts between the organism and the various micro-organisms that come in through the intestine. Therefore white blood cells are always needed in the liver. The activity of the spleen, under the stimulus of the toxins, is increased under favorable conditions in the presence of infection; and, therefore, under these conditions an increased amount of white blood cells is supplied to the liver.

On Acute Primary Osteomyelitis of the Spine. By Dr. E. K. Weber.—This disease is a comparatively rare one, as Hahn collected only forty-one cases from all the literature at his command. In this case there was an involvement of the whole right arch of the second dorsal vertebra, together with the spinous and transverse processes, and the pus travelled some distance under the skin, and along the vertebral column down into the pelvis, and thence outward through the sciatic foramen.

Myoma of the Round Ligament Situated Extraperitoneally. By Dr. I. M. Lvoff.—The patient was a woman, aged twenty-four years, who noticed a growth near the umbilicus during the third month of her pregnancy. This growth was painless, immovable, and of the size of a walnut. It reached the size of a hen's egg. It did not disappear after the labor, but increased in size, and gave rise to increasing pain in the abdomen and loins. The growth was found to lie on the outer

surface of the internal oblique muscle, along the inguinal canal.

The Morbidity of Students in the St. Petersburg Institute of Mines. By Dr. D. P. Nikolsky.

The Treatment of Inflammatory Trachoma with Ichthargan. By Dr. V. F. Gortaloff.

The Present Status of the Kumyss Treatment and Its Immediate Needs in the Contest against Tuberculosis. By Dr. N. A. Zolotavine (*continued*).—The author's observations show that patients in the initial stage of pulmonary tuberculosis are benefited by kumyss to a greater extent than those who are further advanced, for example, the anæmic ones. The benefits of the kumyss treatment also depend more or less upon the state of the digestive organs, especially that of the intestines. Of 369 patients, 14.3 per cent. recovered, 36.8 per cent. were improved, after repeated courses of three months each during the summer. The author recommends the establishment of public sanatoria where the kumyss treatment could be given along with the other methods in use.

Miscellaneous.

The Treatment of Pelvic and Abdominal Tumors Complicating Pregnancy.—Dr. Rufus B. Hall (*American Gynecological and Obstetrical Journal*, December, 1901) concludes a paper read before the Southern Surgical and Gynecological Association at Richmond as follows:

Using the cases reported as illustrations, the conclusions which may be arrived at may be summarized briefly as follows:

In the very small percentage of cases in which malignant tumors are the cause of the obstruction, they should be dealt with according to the well-established principles of modern surgery. The operation should be done at once without any reference to the child if by so doing there is an additional chance of saving the life of the mother.

(a) If the ovarian tumor is thin-walled, of large size and rapid growth and the patient is not near her full term of gestation, an operation should be advised even if the uterus is below the tumor.

(b) If the tumor is thick-walled, of small size, and of slow growth, is not causing much if any inconvenience and rides above the enlarged uterus, an operation is not urgently demanded.

(c) If the tumor is small in size, is situated below the uterus, and is fixed either by adhesions or impaction an immediate operation is demanded.

(d) Tapping the tumor for temporary relief should not be done.

(e) In fibroid tumors of the uterus associated with pregnancy where there are but one or two large nodules and they are located in the upper half of the uterus an operation should be advised only in rare instances. These patients can be delivered safely and be operated upon later if necessary.

(f) If the tumor is below the pregnant uterus and a large nodule blocks up the passage an operation should be advised and performed early.

(g) Myomectomy is usually not to be considered in these cases on account of the increased blood supply. The writer would advise it only when an exceptionally favorable tumor for this method is encountered.

Book Notices.

Traité de médecine et de thérapeutique. Publié sous la direction de MM. P. BROUARDEL, Doyen de la Faculté de médecine de Paris, etc., et A. GILBERT, Professeur agrégé à la Faculté de médecine de Paris, etc. Tome huitième. Maladies des plèvres et du médiastin. Maladies de l'axe cérébro-spinal. Par MM. LANDOUZY, M. LABBE, GALLIARD, MENETRIER, BOINET, ACHARD, BALLE, P. MARIE, LEVI, KLIPPEL. Paris: J. B. Baillière et fils, 1901. Pp. 5 to 848.

This, the eighth volume of a treatise on medicine and therapeutics, deals with the diseases of the pleura, of the mediastinum, and of the cerebrospinal axis. The sections on the various forms of pleurisy are written by Landouzy and Labbé. It is needless to say that they represent the most modern and best views of French clinicians. Galliard's contribution on pneumothorax is equally deserving of notice.

Cancer of the lung and pleura are, as they ought to be, considered together; then each separately is dealt with. The article is written by Menetrier. Adenopathies and tumors of the mediastinum are next considered and very well treated by Boinet.

The chapters on nervous diseases begin with the discussion of symptoms common to various diseases of the nervous system; thus, the subject of aphasia is dealt with by Gilbert and Ballet, that of hemiplegia by Pierre Marie, convulsions by Achard and Leopold Levi, vertigo by Achard, and so on.

The volume is on a par of excellence with the previous ones, as was to be expected when the renown of the collaborators was considered.

The Mental Functions of the Brain. An Investigation into their Localization and their Manifestation in Health and Disease. By BERNARD HOLLENDER, M. D. (Freiburg i. B.), M. R. C. S., L. R. C. P. Lond. Illustrated with the Clinical Records of Eight Hundred Cases of Localized Brain Derangements and with Several Plates. New York and London: G. P. Putnam's Sons, 1901. Pp. xvi-507.

The author professes to have furnished a key to many of the mysterious problems of mental science. Our modern lunacy specialists are without any key whatever to unlock the vast problems connected with the correlation of mind and brain. The key offered may be rough indeed and with some strange twists in it, but a key, nevertheless, which, despite its defectiveness, may correspond with many of the wards of locks hitherto left unopened by science and philosophy. In such fashion Dr. Hollender, in the conclusion of this volume, expresses his satisfaction with his work. An apostle of Gall, the father of phrenology, he attempts to enroll Gall among the prophets; and he seems to think that he himself has established the cerebral localization of most mental functions and of many diseases affecting the mind. He has gone about his task by gathering from literature the results of post-mortem brain lesions, of experiments on animals, and of cases. By such means he has been able to satisfy himself that melancholia is an affection of the supramarginal and angular gyri and kleptomania of the anterior parts of the

temporal lobes. It is only a step further to the diagnosis of these diseases by examination of the overlying skull—phrenology once more.

The book has certain merits. The author has exercised great diligence in his literary researches and has amassed an enormous amount of material. The printing, cuts, and paper are excellent. But the generalizations from the data are paretic in their expansiveness, and there throughout a lack of appreciation of what is necessary for the establishment of even a scientific hypothesis. In a race with Dr. Hollender, Lombroso would be left at the post. It is rather difficult to foresee to what class of readers the book will appeal. It is too technical for the laity, and few medical men with scientific habits of thought would care to take the time to go through its five hundred pages.

Physikalisch-diätetische Behandlung der Magenkrankheiten in der Praxis. Mit Anhang; Kochrecepte. Von Dr. ALBERT WITTGENSTEIN, CasseL. Leipzig: C. G. Naumann, 1901. Pp. vi-127.

This little brochure is a modest and at the same time a valuable addition to the literature of gastric diseases. It deals with the dietetic and physical treatment of diseases of the stomach, concerning itself only with hydrotherapeutics, electrotherapeutics, and gymnastic measures. Massage, treatment by the stomach-tube, and an appendix on cooking of permissible articles of food in these diseases make up the rest of this little book. The special part of the book reviews the various diseases of the stomach and applies the principles of treatment propounded in the general part. The work is worth perusal and study.

On Paralysis Agitans; with an Account of the Clinical Features of other Forms of Tremor. By R. T. WILLIAMSON, M. D. (Lond.), F. R. C. P., Physician to the Ancoats Hospital, Manchester, etc. With Ten Illustrations. Manchester: Sherratt & Hughes, 1901. Pp. 7 to 70.

Several years ago Dr. Williamson issued a monograph on syphilis of the spinal cord, which was a very creditable production. It contained much that was new, and presented old facts in an attractive way. We regret that we cannot say as much for the present book. It contains nothing new, it is incomplete, and what it has to say is better said elsewhere. It will not be needed by anyone who possesses a reliable text-book on nervous diseases.

Diseases of the Upper Respiratory Tract, the Nose, Pharynx, and Larynx. By P. WATSON WILLIAMS, M. D., Lond., Physician in charge of the Throat Department at the British Royal Infirmary, etc. Fourth Edition. Illustrated. New York, London, and Bombay: Longmans, Green, & Company, 1901. Pp. xxiv-436.

In the present edition the text has been revised, largely rewritten, and brought up to date, "without departing," says the author, "from the original design, viz: a simple, concise, and thoroughly practical text-book on a scientific basis, affording information on every point likely to come within the needs of the practitioner and student of laryngology." Four editions of any work attest the fact

that it has found its place in literature, and speak more for it than anything else can. Dr. William's treatise shows that he has read much, has thought much, and has carried the results of his mental processes into clinical reality, so that the extract quoted above from his preface is a very modest statement of actual fact.

The arrangement of the chapters follows the usual order and calls for no special comment. Such maladies as syphilis, tuberculosis, lupus, rhinoscleroma, etc., of the various regions are spoken of as "chronic infective diseases." Another chapter is headed Throat Complications of Infectious Fevers, Gout, Rheumatism, and Skin Complaints; another, Foreign Bodies in the Upper Respiratory and Alimentary Tracts. An appendix contains formulæ and therapeutic methods, together with some valuable suggestions upon the proper technics of performing post-mortem examinations with reference to the anatomical regions under special consideration.

A unique feature of the illustrations (many of which are of unusual clearness) is that some of them detailing special regions are arranged on the stereoscope principle, that is, double pictures are presented, portraying the parts as seen by the right and left eyes respectively. In a pocket on the inside of the front cover of the volume is a pair of stereoscopic lenses set in a neat cardboard frame. This method of illustration is, we believe, unusual in medical works of this class. It brings out the pictures with a vividness which imparts to them extraordinary value.

The author's reputation as a clear writer and a careful clinical observer is enhanced by the present edition of his treatise. Rarely have we seen so much information contained in so compact a form. The very latest ideas in laryngology receive full recognition, and, while it may be said that there is no dearth of text-books in this department of medical science, the work of Dr. Williams is a welcome addition to the already long list.

Die Gichttherapie in Karlsbad. Nach neueren Grundsätzen. Dargestellt für die Aertzliche Praxis. Von Dr. RICHARD SACHS, Brunnenarzt, Kurarzt des oesterr. und deutschen Eisenbahnbeamtenverbands in Karlsbad. Berlin: S. Karger, 1901. Pp. 48.

This pamphlet deals with the therapeutics of gout as conducted at Karlsbad. It is based on the newer conceptions of the nature of gout.

Letter to the Editor.

THE TERMINATION -ITIS.

NEW YORK, January 13, 1902.

To the Editor of the New York Medical Journal:

SIR: The editorial in your esteemed *Journal* of January 11th, on The Termination -Itis, is a most timely one. All you say corresponds with the explanation given by Dr. H. Zimmerer, professor of philosophy, in his introduction to Roth's *Klinische Terminologie*, on the sixth edition of which work your humble servant was permitted to cooperate.

You are right, the suffix *i-tis* is, in the first place, nothing but the ordinary termination of the feminine form of nouns the masculine form of which terminates in *-της*; for instance, *ἐργάτης*, the he laborer; *ἐργάτις*, the she laborer. It is also the termination of the feminine form of adjectives the masculine form of which terminates in *-της*, *ε-της*, *ι-της*, *ω-της*, like *νεφρίτης*, kidney-like (feminine, *νεφρίτις*). Zimmerer says the number of words terminating with *-ίτης*—without the genders—which designate an origin or inhabitants of cities is about 400. These words are formed by a secondary suffix *ι-της*. The largest contingent of words terminating in *-itis* comes from the natural kingdom, especially for stones, for wines, and for diseases, most of all for inflammations, because this suffix marks an increased participation of the conception given by the primitive word. That it does not mean inflammation can best be demonstrated by the word *phrenitis* (*φρήν*, or *φρενός* - *φρενίτις*). It may be well, for some special reason, to call attention to this word. When our neurologists speak of psychosis, they should say *phrenitis*, for psychosis (*ψύχωση*) means animation or infatuation, and not what our neurologists want us to understand by this term *Phrenitis* is not inflammation of the mind, but an abnormal function of the mind, delirium, alienation of the mind.

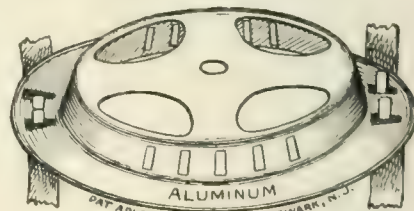
Since the horrid expression "*per orem*" is mentioned in the editorial, allow me to call your attention to a similar blunder in which I have noticed in some medical journals. In one and the same article there was repeatedly spoken of "*post partem*" hæmorrhage, but from the context it was plain that not *behind the part* hæmorrhage, but *post-partum* hæmorrhage was meant. In the same journal I saw the word *ektrophy*, while from the context it was plain that *ektropy* or *ekstrophy* was intended. *Ektrophy*, as we well know, means feeding or bringing up (a child, for instance).

A. ROSE, M. D.

New Inventions.

A NEW VACCINATION SHIELD.

The Oliver vaccination shield, which is illustrated herewith, possesses several special points of excellence which will undoubtedly commend it to the medical profession. The shield is made of aluminum and is therefore very light, but at the same time

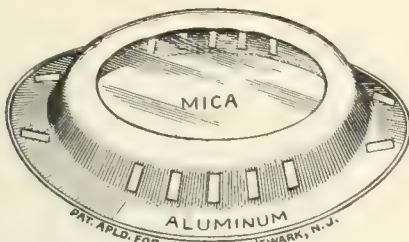


The Oliver vaccination shield, Fig. 1.

strong and durable. It is so adjusted as to insure perfect ventilation and still to afford complete protection from the irritating contact of clothing, etc.

The above illustration (Fig. 1) shows the all aluminum form of the Oliver shield. The shield is

affixed to the arm by means of strips of adhesive plaster, to which the shield is attached by means of flexible strips of aluminum, which pass up through slots in the shield and are then bent down. To remove the shield, the metal strips are unbent, and the shield thus removed without disturbing the strips of plaster.



The Oliver vaccination shield, Fig. 2.

Fig. 2 shows a form of the shield in which the top of the shield is of mica. The facts that the shield and dressing can be so accurately adjusted that they can be removed, the shield sterilized and fresh dressings substituted for the old with so little trouble, are undoubtedly of great advantage.

Miscellany.

Corns.—In an exhaustive article, full of close observation, Mr. E. Harding Freeland, F. R. C. S. (*Edinburgh Medical Journal*, November, 1901), considers the pathology, anatomical, histological, and physiological, of these insignificant yet none the less distressing little tumors, and goes thoroughly into the subject of treatment. So little is said on this subject in the text-books, that we make no excuse for reproducing a considerable portion of the article.

The anatomy of a corn can be best studied by examining a series of sections cut vertically through the centre of the growth. The surface so produced usually presents a smooth, glistening, waxy appearance, not unlike cartilage; but it sometimes appears fibrous and asbestos-like. On close inspection, the cut surface is seen to be marked by numerous parallel vertical striations which traverse the corn from top to bottom. On more minute examination, in the majority of cases, three distinct layers, differing in color and degree of opacity, can be seen. These are arranged horizontally in a wavy manner throughout the entire substance of the growth. Thin sections mounted in glycerin on a microscope slide, and examined by transmitted light, show the vertical striations and horizontal layers well. The deepest horizontal layer is usually pearly white in color, and opalescent. The intermediate layer is yellowish in tint and semi-transparent. The most superficial is also yellowish in color, but darker, semi-opaque, and of much firmer consistence than the other layers. These layers vary greatly in relative thickness in different specimens. The most superficial layer is always the thickest, except in cases of soft corns, where the surface epithelium is rapidly shed. The intermediate layer is usually the thinnest; it is sometimes indistinct, but more usually well defined. The deep layer, the thickness of which varies greatly, is thickest in actively growing

corns of moderate age. When a corn is allowed to macerate for some days in a saturated solution of sodium salicylate, it separates into two parts, the line of cleavage being at the level of junction of the superficial and intermediate layers just described. This is an important fact to bear in mind, and has a distinct bearing on the question of treatment.

Histology.—Microscopically, the normal epidermis is seen to consist of four distinct cellular strata. These, enumerated from within outward, are—(1) the stratum mucosum; (2) the stratum granulosum; (3) the stratum lucidum; and (4) the stratum corneum. Thus, the epidermis may be said to consist of—(1) an actively growing layer, the constituents of which exhibit all the phenomena of life; and (2) a grown layer, the cells of which, having fulfilled their destined rôle, are dead and ready to be cast off. In the living layer must be included the stratum mucosum, the stratum granulosum, and the stratum lucidum, in all of which, changes, having for their object the conversion of protoplasm into keratin, are in progress; and in the dead layer the stratum corneum, in which the keratinizing process is complete and the cells are waiting their turn to be shed. This matter has a very direct bearing on the pathology and treatment of corns.

What strikes one most on examining a thinly cut, well-stained section of a corn under a low power is the enormous thickening of the stratum corneum, often many times thicker than the whole substance of the skin. Next one sees that there is a considerable and marked increase in the thickness of the stratum mucosum. In actively growing corns, where proliferation is going on apace, this change is especially well marked. The stratum lucidum is always increased in thickness, sometimes not abundantly but distinctly, at other times not so distinctly but more abundantly. The epithelial cells of the stratum corneum are seen to be arranged in vertical columns, which traverse the entire thickness of the layer, and correspond to the papillæ of the true skin on which they are superimposed. These vertical columns are intersected at intervals by horizontal segments, which represent successive periods of growth. In actively growing corns the cells of the stratum mucosum which cap the papillæ are large and numerous, and appear to shoot up finger-like processes into the stratum above. In addition to the changes which take place in the epithelium, certain changes in the true skin are also observed. The papillæ, wherever active growth is going on, whether at the centre or periphery, are elongated; but beneath the central portion of old corns which have reached their zenith they tend to become flattened, and present a squat, stunted appearance. The true skin is atrophied and thin, and often bears distinct evidence of compression, but the blood vessels of the skin and subcutaneous tissue are always numerous and conspicuous in the vicinity of the growth.

One is now in a position to interpret most of the naked-eye appearances of the sections which have been previously described. The vertical striations clearly represent columns of epithelial cells passing gradually toward the surface. The pale horizontal line of variable thickness, traversing the corn in a sinuous manner longitudinally, represents the stratum lucidum, while the layer below and deeper

than this line corresponds to the stratum mucosum, and the layer above and superficial to it to the stratum corneum. It is further seen that, when a corn is made to separate into its constituent parts by maceration in a suitable medium, the separation takes place at the junction of the stratum lucidum with the stratum corneum—that is to say, at the junction of the living and dead layers of the epidermis. If this separation be made to take place while the corn is *in situ*, it is manifest that the living, growing part of the corn is left behind, ready to grow again on the slightest provocation.

Physiology.—The mode of growth of a corn can only be determined by studying a series of microscopic sections which represent collectively the various phases of its individual development. Among the first changes observed is a proliferation of the cells of the stratum mucosum over a limited area, brought about, probably, by nervous influence, and the result of a stimulus directly applied from without to the nerve terminals governing the nutrition of the part affected. This proliferation of the epithelial cells surrounding the papillæ causes these latter to become compressed and elongated; and these changes, together with the great increase in thickness of the layer of epithelial cells capping the papillæ, give to the stratum mucosum the semblance of finger-like processes shooting up into the layer above. This appearance is characteristic of an actively growing corn. The cells of the stratum corneum being directly derived from the cells of the stratum mucosum, any increased production of cells in the latter naturally causes increase in the number of cell elements throughout the entire thickness of the epidermis; and, as successive layers of cells are added from below more quickly than they are shed on the surface, the superficial cells become heaped up into a mound-like eminence which projects above the normal level of the skin—a budding corn is produced. As the summit of the mound is the oldest, most highly keratinized, and consequently most brittle part of the embryo corn, and, owing to the fact that from its exposed position it is more liable to attrition, this part of the corn very soon becomes detached, breaking off short just below the level of the surrounding tissue, and leaving a shallow, cup-like depression with a roughened surface. The result of this change is that the chief pressure is shifted from the centre of the corn to the margin of the cup-like depression. This, in turn, has the effect of stimulating into activity and causing proliferation of the cells covering a group of papillæ which surrounds the original group. Thus a sheet of hypertrophied epithelium grows up around the central portion of the corn, and the superficial layers, in time, become broken off as were those of the central portion before them. The maximum pressure is thus shifted to a ring of tissue still further removed from the central core; and the process is repeated, again and again. This concentric method of growth is rendered apparent by the vertical striations previously described. But the corn grows vertically as well as circumferentially; and, as its growth toward the surface is soon checked by the dense, unyielding structure of the epidermis, it tends to spread in a downward direction—that is, in the direction of least resistance. Hence the stratum mucosum, the thickness of which is being continually augmented,

becomes depressed, pushing before it the true skin and invading the subcutaneous tissue.

The so-called “soft” corn is found in positions where it is continually subjected to the combined effects of heat and moisture, consequently the surface layers are removed almost as quickly as they are formed; whence they always appear stunted on the surface, and do not tend to invade the underlying tissue to any great extent.

There is practically no limit to the spread of a corn deeply except the underlying bone, but the formation of a little fluid-containing bursa in the subcutaneous tissue, interposes a buffer between the deep surface of the corn and the bone beneath. A bursa is not, however, a constant phenomenon in the development of a corn; its formation seems to be dependent on the relative thickness of the layer of subcutaneous tissue which exists between the corn and bone. Where the subcutaneous tissue is thin, as is usually the case in positions where soft corns are common, a bursa makes its appearance early; but where the subcutaneous tissue is comparatively thick a bursa forms late or not at all. In some instances, however, the formation of the corn is secondary to that of the bursa, as is frequently observed over the inner aspect of the metatarso-phalangeal joint of the great toe. But, at times, the bursa, from a source of safety becomes a source of danger; for inflammation and suppuration of it is by no mean unknown, and, when this occurs, there is danger of the inflammatory process spreading to surrounding structures. The formation of the bursa and the part which it plays in the life history of the corn are points which are too frequently overlooked.

Treatment.—If appropriate measures are adopted, any corn may be speedily and permanently cured without risk of recurrence. The various methods of treatment are preventive, palliative, and curative.

Preventive treatment consists in securing freedom from pressure and friction for the parts most liable to corns. Well-fitting footgear is essential. These should be neither too tight nor too loose, but should sit comfortably on the feet, be made of well-seasoned leather, soft and elastic, and be cut to a proper model. The length, width, and height should be sufficient to give full play to the toes, and not to cramp them unduly, either laterally, longitudinally, or vertically. Shoes should be made to measure, or better, to a last modelled from an actual cast of the foot. If there is a tendency to flat foot or any other slight deformity, this should be considered in constructing the foot covering, and appropriate means adopted for its rectification.

Palliative treatment includes all measures which stop short of the removal of the entire morbid growth, i. e., of the living and dead layers of the corn, together with the bursa, if it exists. Among the older remedies silver nitrate is probably the best; among the more modern, salicylic acid. These remedies cause desiccation and shrinkage of the horny layer of the growth, which is thus made to shell out from the bed in which it lies. Repeated applications are necessary, and the process is tedious. Unna's method is briefly as follows: A ring of glycerin jelly is painted round the circumference of the corn so as to form a raised rampart. A

piece of salicylic plaster mull is then cut to the size and shape of the central depression, and applied to the surface of the corn. This is then covered with a layer of glycerin jelly, and, before it sets, a pad of cotton-wool is applied to the surface. This process is repeated as often as necessary, until the horny layer of the corn is cast off.

The point of a sharp thin-bladed knife, introduced at the groove which runs round the margin of the corn and made to penetrate toward its central axis, enables the corn to be easily separated from the parts beneath. This method is much in favor with chiropodists. When separation of the horny layer is thus brought about, the deep surface of the part removed usually presents an irregular, jagged appearance. This is often triumphantly shown to the patient as a proof that the corn has been extracted "by the roots." The true explanation, of course, is that the vertical columns of cells, previously described, have been irregularly fractured at the level of cleavage. As a matter of fact, a corn has no roots in the ordinarily accepted sense of the word; but if by root is meant the part from which it grows, that is left behind.

Curative treatment.—All palliative measures have the common defect that they leave the stratum mucosum—the living, growing layer of the corn—untouched and therefore liable to recur. This can be destroyed by the application of caustics to the depression left after the horny layer has been removed; but this method has objections, being always painful and uncertain. For the deeper layers of the stratum mucosum and papillæ are very sensitive, and there is no means of gauging the thickness of the strata to be destroyed; nor whether the destruction is complete. Furthermore, the bursa, if existent, is left behind, and may influence and give trouble subsequently, even if not at the time as the result of irritation by the caustic.

Any treatment, then, to be curative must remove the entire corn, together with the underlying bursa. The removal of the latter is important, for it is mainly in connection with it that complications are liable to arise. The author has practised the complete excision of corns in upward of sixty cases, and confidently recommends it as efficient.

Such an operation is naturally painful, but a local anæsthetic gives uniformly satisfactory results.

Having taken every aseptic precaution, a spot is selected for the injection of the anæsthetic. The skin is rendered insensitive by the application of ethyl chloride, and by the use of some local anæsthetic which should be injected into the subcutaneous tissue beneath the corn. After a few minutes, the superficial parts at the site of the incision are rendered insensitive by ethyl chloride. When anæsthesia is complete two hemi-elliptical incisions meeting at their extremities are made through the skin around the circumference of the growth, care being taken that they penetrate well into the subcutaneous tissue. Seizing with a dissecting forceps the parts included in the incision, a wedge-shaped piece of tissue—including the corn, a layer of skin and subcutaneous tissue, and the bursa, if present—is dissected out. The oozing is pretty free, and it is sometimes necessary to twist a small vessel; but hæmorrhage is never severe. The edges of the wound are brought together by one or two

fine sutures; an antiseptic dressing is applied, and the wound left to heal—primary union in a few days being the rule. It might be thought, perhaps, that the formation of a scar on an exposed position, where it was liable to be subjected to pressure and friction, would lead to untoward results; but in practice such is not the case. In the case of corns dependent on deformity the appropriate treatment of the corns is the treatment of deformity which has called them into existence.

Even such every-day objects as common corns may be made a study of considerable interest, and if practitioners of medicine would take a more intelligent interest in these little tumors, which are as troublesome as they are common, an ever-increasing stream of sufferers would find their way to the surgeon, rather than, as at present, to the chiropodist; and the treatment of a disease, which legitimately belongs to the domain of surgery, would be lifted from the depths of charlatanism.

Tapping and the Introduction of Aseptic Air in Chronic Hydrocephalus.—Dr. William Ewart and Dr. Lee Dickinson, both of London (*Pædiatrics*, October 15th), say that the induction of "artificial pneumocephalus," which was resorted to by them in the cases reported, may lead to further developments in the treatment of chronic hydrocephalus. At any rate, the method is worth putting on record in connection with the relief which it afforded to some of the symptoms, and with the considerable reduction in the size of the head which was obtained temporary benefit. The intracranial pressure is relieved by the escape of a certain amount of fluid but, as the flow must stop so soon as the membranous portions of the cranium have ceased to be overstretched, any further reduction of the cranial capacity can only be effected by some external pressure, such as that of an elastic bandage, which has practical objections. As a fact, the bulk of the fluid remains within the ventricles.

Tapping the ventricles by means of a fine trocar has been carried out by various observers and many years ago by one of them, but only with partial and in one of the cases.

They therefore determined to modify the old operation in such a way as to obtain a complete evacuation of the fluid by allowing aseptic air to take its place. For this purpose, in addition to the Southey's cannula and India-rubber tube acting as drain, a second Southey's cannula was provided with a sterilized India-rubber tube, the free end of which was connected with the nozzle of a small glass syringe from which the piston had been removed, and the broad end of which was plugged with cotton-wool after sterilization. The two trochars were then ready for introduction into the fontanelle with all aseptic precautions and with careful avoidance of the vicinity of the sinus, the site for the outflow puncture being selected at a short distance below that for the air supply, and too great a rapidity of outflow being guarded against by a regulating small screw-clip such as is used for feeding bottles.

The operation planned on these lines was successfully carried out, with the results expected—namely, a considerable output of fluid, a considerable reduction in the size of the head, and the cessation of

the pressure symptoms for the relief of which the tapping had been undertaken.

The authors record two cases. The first was subjected to eight tapplings between January 25th and July 15th. The largest amount collected was fifty ounces. There were no septic complications, and after three of the tapplings, no pyrexia. After the other tapplings transitory pyrexia, rising to 104° F. as the maximum, occurred. After that there was some oscillation before the normal was attained. Transitory left facial paralysis and right external squint also occurred. The authors state that, in the first case, the infant's present condition after eight tapplings and the removal from the ventricles of an aggregate of about eleven pints of fluid must be described, on the whole, as satisfactory. Mechanical relief from pressure has for corresponding periods been afforded to the brain substance, which, as the child lies, must be subjected to great pressure in the dependent parts from the weight of the effusion and to considerable tension in other parts as well. The comfort derived from the operation is manifest and such as any untrained observer can perceive. If the brain is to be allowed to grow and develop this relief should be made continuous. Although the advantage has been only temporary and partial, nevertheless it has, in our estimation, been worth securing. They call attention to the satisfactory state of the functions and of the general nutrition and body weight and to the normal though delayed cutting of the first tooth. It was observed after the first tapping that the hydrocephalic cry had given place to the normal "baby wail," and this was specially noticed after the last operation. Looking back for the adverse consequences, the collapse which was mentioned in connection with the first operation was clearly preventable and would have been avoided if the fluid had not been inadvertently allowed to escape with too great a rush. The temporary symptoms of ocular and of facial paralysis and of increased rigidity are, in their opinion, consistent with the view that some transient irritation of the meninges had been set up. The muscular rigidity and tenderness, although now much less, still constitute the most troublesome feature as they preclude the advantage of movement. How far the case may continue to improve under this treatment, or some modified form of it, they cannot yet foretell.

The following provisional conclusions are formulated by the authors:

1. With due precautions, the fluid of chronic hydrocephalus may be completely evacuated from the yet unclosed skull of infants, and aseptic air may be allowed to take its place. This operation may be repeated without detriment and with scarcely more risk than belongs to the usual method of paracentesis.

2. In favorable cases of moderate effusion, such as Case II, a single operation may suffice. Continued oozing from the puncture for a few days after the removal of the tubes is not unfavorable.

3. In cases of considerable effusion an obvious indication is to relieve the brain from the weight and from the pressure of the fluid. The evacuation is facilitated by the introduction of aseptic air. In Case I, this treatment has proved to be of decided advantage. By a timely repetition of the operation, a hydrocephalic infant might be enabled to carry

the weight of the head, and, if the treatment were begun sufficiently early, permanent damage to the brain tissue might be averted and a normal development might perhaps ensue.

4. In large heads, while hydrocephalus persists, a considerable splashing sound is readily obtained. There is obvious risk in eliciting this sound by forcible succussion, and for the same reason any abrupt movement of the head should be avoided.

Herodotus on "the Woman's" Disease.—Herodotus, in his History, I. cv. says: "But when they [the Scythians] on their return journey, were in the Syrian city of Askalon, though very many of the Scythians passed through doing no harm, some few of them, being left behind, pillaged the temple of the heavenly Aphrodite. * * * But upon those of the Scythians who had plundered the temple in Askalon, and upon their posterity, the goddess sent the female disease." [The expression *θήλειαν νόσον*, translated "female disease," is very obscure, and many interpretations have been placed on it. *θήλυς* is womanly, female, from *θηλή*, the nipple of the breast. Among other things, it has been variously taken to signify effeminacy, impotence or weakness, sexual perversion, bleeding hæmorrhoids mistaken for menstruation, and finally, venereal disease. Heyne, with some show of reason, on the other hand, has suggested that some hysterical condition is referred to, which is rendered likely by the fact that such manifestations, as well as those of epilepsy, etc., were especially considered to be inflictions of the gods. However, an expression of Hippocrates, *τα γυναικῶν ἐργάζονται*, suggests a mimicry of women, which in addition to effeminacy of manners, and possibly of attire, might include a sexual perversion, also.]

A New Embalming Fluid.—The Memphis (Tenn.) Medical College has for several weeks been experimenting with a new embalming fluid. The new fluid is asserted to be superior to the embalming preparations used by the ancient Egyptians, for, while the infusion will preserve the subject for all time, as did that of the ancients, it prevents the shrivelling that was inseparable from the Egyptian embalming, and it does not call for the bandages in which all Egyptian mummies were encased. Tests of the fluid have been made by the demonstrator of anatomy at the college, who is so sure of its practical utility that he will use it for the preservation of all the cadavers used in the college. The fluid petrifies the body. Neither arsenic nor strychnine is used in the preparation.

Aristotle on the Inadequacy of General Directions.—Aristotle (*Nicomachean Ethics*, VI. i) speaking of the limitations of what is "reasonable," says: "For in other pursuits, also, in regard to which skill is [called for] it is indeed true to say that one should toil or relax neither too much nor too little, but moderately and as right reason [dictates]; but having only these directions, one would be none the wiser, as, for instance, what applications should be made to the body, if some one should say 'whatever the healing art prescribes and according to the directions of [the physician] practising it.'"

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Prize Essays.

THE MANAGEMENT OF THE TENDENCY OF THE UPPER FRAGMENT TO TILT FORWARD IN FRACTURES OF THE UPPER THIRD OF THE FEMUR.*

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The most successful management of the tendency of the upper fragment to tilt forward in fractures of the upper third of the femur depends primarily upon

The second condition necessary to securing union in such position is that of immobilization, and this is accomplished by two means: 1. Extension, or traction. 2. Coaptation splints.

Since the chief cause of displacement is muscular contraction, and as the most efficient means of controlling the action of the muscles is extension, it becomes of the greatest importance in securing immobilization, and its success will be measured as much by its constancy as by its degree. However successfully extension may be applied by means of Buck's extension apparatus for fractures of this bone at its middle or lower third, treated as they are with the limb fully extended, it becomes less so when the limb is flexed at 135° , as it should be in the cases under discussion.

The long traction hip splint, such as is used in the

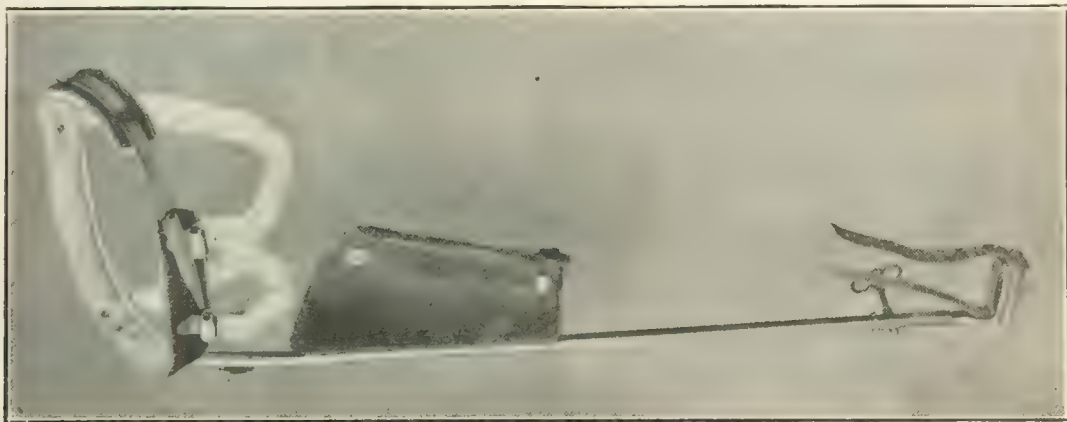


FIG. 1. Webbing straps omitted; may be seen in Fig. 3.

the perfectly clear recognition of the fact that it cannot be prevented. Therefore the only way to correct the displacement caused by the tilting forward of the upper fragment and secure coaptation of the fractured ends of the bone in a straight line is by placing the lower fragment in the line indicated by the position of the upper fragment, that is, by placing the limb in a flexed position; and, as the upper fragment is usually displaced outward also to some extent, the limb should be slightly abducted. By this means the tilting forward of the upper fragment ceases to be a displacement in its relation to the lower, and thus the first condition necessary to securing union in good position is attained.

treatment of hip-joint disease, offers a means of applying extension in such cases which is direct and constant, is always in the same line, and may be made to a degree that will absolutely control muscular contraction. It is direct and constant because it is not affected by changes in the position of the patient or dependent for its force upon the weight of the body, and the degree is absolutely under the control of the surgeon. These are distinct advantages over Buck's extension apparatus, which depends for its efficiency upon so many conditions not under the control of the surgeon, the position and weight of the patient's body and the relation of the limb to the roller on the foot of the bed over which the weight swings, that the force is necessarily inconstant both in degree and direction.

*The essay for which the prize is awarded in Series VIII of Our Subscribers' Discussions.

While it is more efficient with the limb fully extended, as it is used in the treatment of fractures of the shaft of this bone lower down, than when the

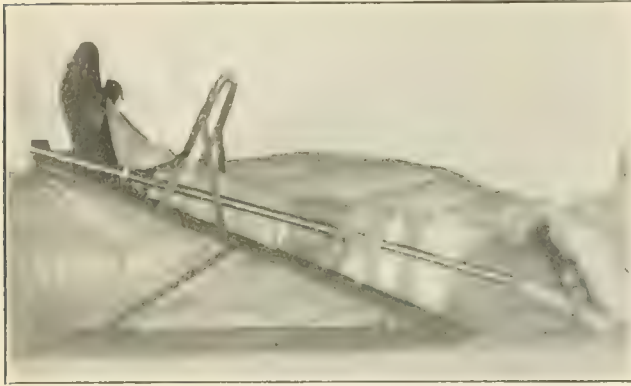


FIG. 2.

limb is flexed, even in these cases it is less so than in the case of the hip-splint extension.

The question of coaptation splints is a matter of small importance, as, by the attachment of two steel bands to the sheath of the splint, one running posteriorly half round the thigh near the groin, taking the direction of the glutæo-fimoral increase, and another at the middle point of the thigh, with a felt or leather backing resting upon them, completed by two webbing bands anteriorly, the sagging backward of the thigh is prevented when the patient's pelvis is elevated in the use of the bed-pan, etc., and it is all that is needed. Fig. 1 shows such a splint with these attachments.

This splint is applied as is done in a case of hip-joint disease, with the adhesive plaster extending to the point of fracture, and the patient should be anesthetized. The anæsthetic is important, not only because it saves the patient suffering, but because it relieves muscular spasm entirely, and it never recurs to the same degree afterward, because its cause is removed, the irritation from mobility at the point of fracture. Those who have used it in the treatment of hip-joint disease are familiar with its efficiency as a traction apparatus and know with what comfort the counter-pressure made upon the perinæum by the perineal straps is borne. These perineal straps should be removed daily and the parts bathed and powdered, which will prevent any excoriation. In removing the straps for this purpose, it is important to remove one at a time and adjust it before the other is touched, in order that the traction may not be interrupted.

This instrument is as efficient as a splint as it is as a traction apparatus, because the strong steel band, with the perineal straps passing over the tuberischii, grasping the pelvis, with the upright extending along the side of the limb to below the foot, when extension is applied, immobilizes the limb in its re-

lation to the pelvis, making both to move as one bone. Securing such control of the pelvis without limiting the mobility of the lumbar spine allows the patient such freedom of movement that he may sit up at any time without disturbing in the least the efficiency of the apparatus or the point of fracture.

A greater amount of force in extension will be required during the first few days than afterward, because the muscular spasm diminishes in proportion to the amount and constancy of the control exerted over it until it finally disappears, necessitating only a sufficient amount of extension to prevent motion at the point of fracture.

The adjustment of this apparatus is not difficult, its construction is simple, and it will not be found necessary to have one for each individual case, as a sufficient amount of freedom in adjustment is permitted to make one instrument efficient for a number of patients.

The inclined position of the limb is maintained by means of an inclined plane, which should extend from the foot to the buttocks, and should hold the limb at about 135° .

Fig. 2 is a photograph of a patient under treatment by this method. While in this case the fracture was at the middle of the shaft, the detail in the method of treatment here suggested was practically the same, and will serve as an illustration of it.

Miss O., age twenty-six, sustained a fracture at the middle of the shaft of the left femur in September, 1897. On the day following she was anesthetized and the fracture reduced. While she was under ether adhesive plaster was applied to the limb, extending up on the thigh to the point of fracture. A plaster-of-Paris splint extending from the groin to the knee was used as a coaptation splint, a long traction hip splint adjusted, and the limb placed upon an inclined plane. Strong extension was made, and this force, applied constantly as it was, was not uncomfortable to the patient, and controlled absolutely muscular contraction, as is evinced by the



FIG. 3.

fact that her recovery was uninterrupted and without shortening or deformity. The photograph here shown is somewhat inaccurate because it was taken

just before the splint was removed, and the felt which was being used as a coaptation splint at that time had slipped downward slightly.

I have since treated two cases of fracture at the upper third, both occurring in patients who were under treatment for hip-joint disease. Their ages were twenty and twenty-four respectively, and the splint used in each case was similar to the one shown in Fig. 1. The recovery of both these patients was uneventful and the results were most satisfactory. Neither of them felt any discomfort from the apparatus, and they were able to sit up in bed at any time. Since I have not a photograph of either of these patients under treatment, I have applied the splint shown in Fig. 1 as it was used in their cases to a healthy adult and photographed him. (Fig. 3.) A bandage was not applied to the limb, in order that the adhesive plaster might be seen.

With this instrument the management of the tendency of the upper fragment to tilt forward in fractures of the upper third of the femur ceases to be a difficulty, and with it the treatment of such cases should be as successful as when the fracture occurs at a point lower down.

136 MADISON AVENUE, January 9, 1902.

Original Communications.

MECKEL'S DIVERTICULUM AND ITS RELATION TO ILEUS, WITH REPORT OF A CASE.*

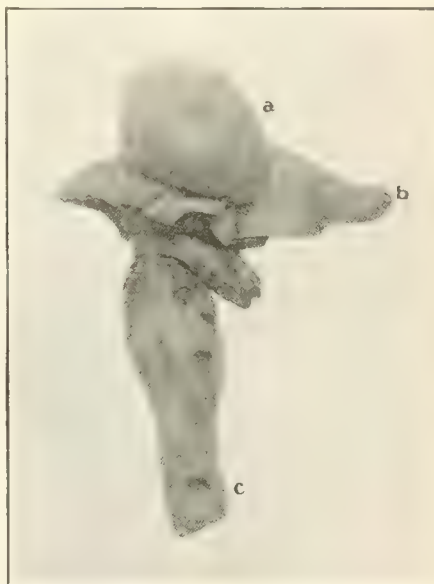
By C. O. THEINHAUS, M. D.,

MILWAUKEE, WIS.

Gentlemen: When I take the liberty of showing you this patient, on whom I had the opportunity of operating fourteen days ago by the kindness of Dr. Wagner, it is my intention, first, to point out to-day a few things concerning the diagnosis of ileus in general, as well as specially of ileus caused by Meckel's diverticulum, and, secondly, to make a few remarks concerning its treatment.

The anamnesis in the case of our patient, seventeen years of age, reveals that from his birth a reddish looking mucus-secreting tumor of the size of a walnut has been lying on the outer side of his abdomen, and has resisted several attempts at removal by cauterization with different chemicals. Five days before operation he was suddenly taken sick in the night with sharp pains in his abdomen and constant vomiting, which became stercoraceous on the second day after the onset. Dr. Wagner made the diagnosis of ileus, and, after several attempts to overcome the strangulation by high enemata and by small doses of opium given in suppositories, pointed out on the

first day the absolute necessity of surgical intervention. The parents, however, could not be induced to consent to the operation until after the fifth day, when the patient came here with that much dreaded *facies hippocratica* or *choleric*, temperature 100° F., pulse 100 to 110 and constant vomiting of fecal matter. Two hours later I operated after having made, from the tumor on the outside of the abdomen shown in the figure, the diagnosis that the ileus was produced by Meckel's diverticulum. After opening the abdomen, a string of about the size of a little finger, extending from the umbilicus to a part of the ileum, was encountered, over which was hanging a large coil of small intestines. The tumor on the navel, together with the skin and the band, was dissected out, and the stump, where the string entered the ileum, was sutured with Czerny-Lembert sutures and inverted into the bowel. The boy made, as you see, a splendid recovery, his highest temperature after operation having been 100° F., pulse 110.



Meckel's diverticulum forming a tumor on the outside of the abdomen, of the size of a walnut. a, Tumor; b, skin; c, lumen of diverticulum.

When a case of ileus comes under the care of the practitioner, it is his first duty to examine all regions where a possibility exists of external hernia. We must, therefore, make a thorough examination of the inguinal and femoral regions, to exclude inguinal and femoral hernias; we must inspect and examine carefully the linea alba, the regiones lumbalis and perinaealis, the region of the triangulum Petiti and of the foramen ischiadicum, and in women the labia majora and the vagina, to exclude hernia epigastrica or umbilicalis, hernia lineae semicircularis Spigelii, hernia lumbalis, ischiadica, perinaealis, hernia of the triangulum Petiti, and, in women, hernia labii majoris posterior and hernia vaginalis. If we find pain on pressure over the region of the crural nerve, extending perhaps down to the knee,

*Part of a surgical clinic held in the Post-graduate Hospital, Milwaukee, October 11, 1901.

we must bear in mind the possibility of strangulation of gut in the foramen obturatorium, which is, unfortunately, oftentimes overlooked. If no trace of strangulation can be found in these places, the causes of ileus in the inside of the abdomen have to be taken into consideration. Fritsch once expressed himself thus: "Never make a prescription in any disease without thinking." In the same manner the surgeon must, when he has a case of ileus produced by internal causes, never open the abdomen without making beforehand, if possible, an exact diagnosis of the probable cause of internal obstruction or strangulation; and he should remember, in using the knife, the proverb, *Quidquid agis, prudenter agas et respice finem* (What you do, do with foresight, and bear in mind what will be the outcome). In our case the congenital tumor on the outside of the abdomen gave us a clue to the situation, and led us into the field of congenital malformations of the umbilicus. You know from embryology that, up to the end of the fourth week of foetal life, the small intestine is in communication with the yolk-sack through the ductus omphalomesentericus. When, from the beginning of the second month, the plates forming the abdominal wall close together, this duct, with the omphalomesenteric vessels, disappears entirely. Under certain circumstances either or both of them remain (Senn asserts, in his excellent article on Anatomicopathological Forms of Intestinal Obstruction, in two per cent. of individuals) and may then be a cause of much annoyance to the bearer and oftentimes of death by strangulation.

Though I have not yet made a microscopical examination of the string and the tumor on the outside of the abdomen in this case, I should like to mention here briefly, by way of anticipation, that one has in some cases found mucous membrane of the stomach (pseudopyloric mucous membrane) in the remnants of that part of the duct which is lying in the region of the navel. This has lately aroused considerable discussion and difference of opinion concerning its origin. Tillmanns believed that in such cases one had to deal with a diverticulum of the stomach; but Siegenbeck and lately Lexer have shown that these residues of mucous membrane do not originate from diverticula of the stomach, but from diverticula of the bowel.

Let me here warn you against mistaking a mucous membrane on the outside of the navel of a new-born infant, after the umbilical cord has fallen off, for a granuloma, and resorting to cauterization, to remove what is thought to be granulation tissue. I think that in many a case not cited in literature this error has caused the death of the child in consequence of peritonitis produced by the cauterization of the mucous membrane of a Meckel's

diverticulum, or even of a portion of gut evaginated through this diverticulum.

The mortality in operations for ileus caused by Meckel's diverticulum is as high as seventy to eighty per cent., and the fact that in our case the patient could be saved even five days after the onset of the first symptoms of strangulation, must be attributed to the character of the strangulation, which saved the bowel from becoming gangrenous and causing septic peritonitis. We found, after opening the abdomen, a portion of ileum hanging over the diverticulum like a shawl over an arm, as Treves has expressed it in his classical work on *Intestinal Obstruction*. As in this case, the string over which the gut was hanging was as thick as an India rubber catheter of the size of the fifth finger of an adult, the pressure was somewhat limited and gangrene thereby prohibited. The thinner and sharper a band is, over which a part of the bowel is hanging, the greater is the danger of early necrosis and gangrene. In other cases it has been found that, by traction of the diverticulum on that part of the gut where it is attached, gangrene has been produced. This, I think, was avoided in our case in part by Dr. Wagner's careful treatment previous to the operation. As the patient did not consent to immediate surgical intervention on the first day, Dr. Wagner discontinued the administration of food by the mouth as much as possible, washed out the stomach, and gave nutrient and high enemata by way of the rectum, together with small doses of opium in suppositories. If he had allowed food by the mouth or had even given cathartics, more bowel contents would probably have been pressed forward into that part of the gut which was hanging over the band or into the proximal part of the gut, thereby augmenting the traction and exaggerating the danger of gangrene by extension. This internal treatment, as done here, together with opium in small doses, or perhaps with injections of atropine, which is nowadays recommended from different sources, is, in my opinion, the only justifiable *internal* treatment of ileus, and cases of dynamic ileus, or perhaps ileus caused by obturation, will sometimes be benefited by this procedure. More seldom will this treatment be crowned with success in cases of ileus caused by invagination, and very seldom, if at all, in cases of volvulus or strangulation by peritoneal bands and Meckel's diverticulum.

More often than at the umbilicus, Meckel's diverticulum may be attached to the mesentery (Ketteler found it 34 times in 89 cases), which finds its natural explanation in a persistence of the mesenteric artery or remnants of this vessel running from the tip of the diverticulum to the radix of the mesentery. Other places of insertion may be the parietal peritonæum, a part of the small or large intestine,

the pelvis; in short, every organ in the abdominal cavity and even in the hernial sac.

It is remarkable, and is pointed out in many articles and monographs written on Meckel's diverticulum—I will here only mention the names of Senn, Leichtenstern, Treves, Boldt, Hofmann, Kammerer, and Fitz—that chiefly males in the prime of life between the ages of fifteen and thirty-five years are subjects of strangulation caused by Meckel's diverticulum. Ketteler collected recently 109 cases, of which 91 were in males, and 18 in females.

The alterations caused in the abdomen by Meckel's diverticulum may be manifold and oftentimes resemble in their clinical picture those found in the appendix. Ketteler, who collected all cases up to 1900, found: Strangulation, 52 times; bending, 12 times; volvulus, 6 times; knot formation, 7 times; abscess in the diverticulum, 5 times; diverticulum in the hernia, 6 times; pocket formation of the diverticulum, twice; and communication with the bladder, once. That, in operations on Meckel's diverticulum, the stump at the point of attachment to the bowel must be treated in the same manner as

whatsoever can come into question. Immediate operation is the only justifiable treatment for this class of cases.

Second. If a positive diagnosis concerning the nature of ileus cannot be made and the internal treatment, as advocated above, does not relieve the symptoms of ileus within five hours from the onset, advise immediate surgical intervention.

Third. Do not obscure the picture in a case of ileus by *large* doses of morphine or opium, thereby rocking the patient and yourself into a state of euphoria which is only apparent, and looks like the calm before the storm—I mean the catastrophe of death.

Note.—The microscopical examination of the tumor revealed an adenoma.

POST-GRADUATE HOSPITAL, 219 MASON STREET.

A CASE OF HYDRENCEPHALOCELE.

By DAVID E. WHEELER, M. D.,

BUFFALO.

The case of which the following is a history was admitted to the Nursery and Child's Hospital, New



FIG. 1. Dr. Wheeler's case of hydrancephalocele.

the stump of the appendix, and when it is larger must be sutured with Czerny-Lembert sutures, is so well recognized that it is beyond dispute.

In closing, I may be allowed to make a few remarks concerning the surgical treatment of ileus in general. According to Roser, there die in Germany every year 4,000 people from ileus caused by intra-abdominal strangulation. Naunyn has collected statistics of 288 cases of ileus in which operation has been performed, and has found that, of persons with ileus operated upon on the first or second day, 75 per cent. recovered, while of those operated upon on the third day only 35 to 40 per cent. recovered.

These figures, gentlemen, teach a lesson and need no explanation to any one who can see and has ears to hear, and I may be allowed to close with the plea to the practitioner who sees the cases early, when surgical intervention can save almost every life:

First. When you can make the diagnosis that you have to deal with a case of ileus caused by intra-abdominal strangulation, no internal treatment

York, June 2, 1901. She was then one day old. The family stated that the head was born first and, following it, a large tumor connected with the head.

Physical Examination on Admission.—Vigorous female child, with the cord still on and moist. There is no abnormality, except a large tumor protruding from the posterior fontanelle. This tumor is twelve inches in circumference and is covered with skin, which is hairy near its attachment to the head. The tumor is translucent and markedly fluctuating. Fluctuation is not communicated to the anterior fontanelle. Weight of the child, eight pounds.

Progress of the Case.—The child steadily lost weight. The tumor in the mean time increased in size and became more tense. There were no symptoms of digestive disturbance nor any convulsions, even when the tumor was compressed. At the end of twenty-five days the child had become very weak and weighed only six pounds and two ounces. On the twenty-fifth day after admission, it collapsed suddenly and died with dyspnea and cyanosis.

Autopsy.—Body of a female infant twenty-one inches long. Some loss of subcutaneous fat.

Lanugo hair on the shoulders. Anterior fontanelle open, cranial bones soft and showing numerous small islands of membranous bone-formation, mingled with areas where there is no calcification. This condition is best seen in the parietal bones, on inner surfaces of which are small concavities corresponding to the uncalcified areas.

The sinuses and brain tissue appear normal.

From the posterior fontanelle there is a large cystic growth, which is fluctuating, but fluctuation is not communicated to the anterior fontanelle. This cyst is seventeen inches in circumference, translucent, and contains clear serum. Pressure forces the cyst contents into the posterior cornu of the left lateral ventricle. The tumor is covered with skin, which is hairless, except at its attachment. The interior of the cyst shows vascular membrane with patches of white gelatinous tissue, cerebral in character, scattered in islands over it.

The organs of the body appear normal, except for collapse and congestion of the posterior border of both lungs.

THE INFLUENCE OF ELECTRIC OZONATION UPON DISEASE.

By G. LENOX CURTIS, M. D.,

MEMBER OF THE AMERICAN MEDICAL ASSOCIATION; NEW YORK STATE MEDICAL ASSOCIATION; MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK; HARLEM MEDICAL ASSOCIATION, ETC.

(Concluded from page 94.)

Suppurations and other Inflammations.—I have used electric ozonation in several cases of suppurative inflammation, including external wounds and inflammations of sinuses, such as mastoiditis. In some of these cases operative procedure had been declared imperative, and the temperature rose as high as from 104° to 105° F. The effect of the electrical treatment was little short of marvellous. The patients improved so manifestly that the subject of surgical interference was forever dismissed,



FIG. 2 Dr. Wheeler's case of hydrancephalocele.

The chief points noted on autopsy were as follows: 1. Osteoporosis of cranial bones. 2. Pedicle entering the skull in the median line to connect with the left lateral ventricle.

This case is published with the kind permission of Dr. J. J. Hull, during whose service as visiting physician it occurred.

564 DELAWARE AVENUE.

A Tooth Sixteen Inches in Length.—Relics of prehistoric times, says the *Ohio Dental Journal* for December, have been unearthed in a bog at what is known as White Sulphur Springs, two miles north of Afton, I. T., by Professor W. H. Holmes, head of the bureau of ethnology of the Smithsonian Institution in Washington, and W. A. Gill, a government photographer. The find includes several large teeth and bones, together with many arrow points and heads. One tooth, that of a mastodon, measured sixteen inches in length and four inches across the top. This is said to be the largest tooth of these extinct animals ever seen by man.

and complete restoration to health eventually followed. In one case of mastoiditis the hearing, which was temporarily lost, was fully restored. The relief from pain in cases of this kind is almost immediate, and it may not be amiss to add that a similar result is often obtained in tic douloureux, migraine, and dysmenorrhœa.

The pain following surgical operations may be assuaged by electric ozonation; the same is true of painful bruises and inflamed bursæ. In a case of synovitis of the elbow, in which there was considerable swelling of the whole forearm, a single treatment gave very great relief within twenty-four hours. It would seem as if the principal effects of electric ozonation were a reestablishment of the circulation and the restoration of nerve force.

Meningitis.—I have treated several cases of chronic pachymeningitis traumatica by this method.

One very striking case was that of Mr. P., who, a year ago, sustained a severe injury of the skull

caused by violent contact with the sharp point of an incandescent lamp, which was attached to a chan-delier. The history of this case includes much pain and loss of time, and a severe ocular complication involving long-continued treatment. The application of electric ozonation completely cured this patient, whom I have kept under close surveillance for six months. He shows not the least sign of his former illness and, so far as I am able to determine, he is perfectly well.

Paralysis.—Just what may be accomplished by electric ozonation in the treatment of paralysis I am at this time unable to state definitely. From my experience I am inclined to look for splendid results. I have treated a case of paralysis agitans of fifteen years' standing, with the following result:

Mrs. G., sixty-two years of age, had been under the care of the most eminent neurologists in this State for eight years. During that time her condition steadily grew worse and all hope of even checking the progress of the disease had been abandoned. Irritability, despondency, and loss of memory were very prominent symptoms of her mental condition. I examined this patient on February 15, 1901, when she stated that her trouble began fifteen years before. In 1889 her health rapidly declined and loss of muscular control became evident. In 1893 several well-known neurologists were consulted, yet, in spite of all treatment, the patient progressively grew more helpless.

Status Praesens.—A woman with a careworn, anxious expression, wrinkled skin, and flabby flesh. She cannot walk in the street without assistance, or stand erect without considerable risk of falling. In walking, the feet are imperfectly extended, and the left hand and arm are nearly powerless; the left eye is closed with difficulty. There is a very marked tremor of the head, right arm, and right lower extremity. When endeavoring to sit down she falls into the chair, and several unsuccessful attempts are usually made before rising from the sitting posture, followed by a notable increase of the muscular agitation. The left patellar reflex is absent, while the right is barely noticeable. Slight pressure over the upper cervical region of the spinal column, and over the last two dorsal and the first two lumbar vertebræ causes the patient to cry out with pain. The same symptom is elicited by pressure upon the coccyx and the knees, in which the patient says she has constant distress.

Further examination of this case revealed slight abdominal symptoms such as sub-hepatic tenderness and tympanites. She also had "rheumatic" finger-nails. The urine contained neither albumin nor sugar, nor were casts found; its specific gravity, however, was 1028. The result of the blood examination was as follows:

Hæmoglobin, 90 per cent.; number of red cells, 3,000,000; number of leucocytes, 20,000 (?); tuberculous matter (?), slight; rheumatic fibrin, slight; agglomeration (?), slight; microcytes, many; bile-pigment, slight; uric acid (crystals), slight; red cells of degeneration, marked.

Several prominent physicians saw this case with me, corroborating the results of my examination,

and followed its subsequent progress through the treatment which I carried out.

Treatment by electric ozonation was begun on February 16th and continued until April 10, 1901, and included, in all, thirty-eight applications. During this period the patient received tablespoonful doses of liquor ferro-manganatis, three times daily. Soon after treatment was instituted she began to enjoy restful sleep and there was a perceptible reduction of the former high nerve-tension, while an increase in muscular power was apparent to such a degree that ten days after her first treatment the patient walked without assistance to my office, a distance of thirteen blocks. This exercise was now taken daily, with the result that at the expiration of her course of treatment the patient could walk a mile and a half, through the windy weather of March, without fatigue.

A second examination of the blood on March 21st showed:

Red cells, 4,000,000; leucocytes, 12,000 (?); microcytes, very few; red cells of degeneration, few.

On April 11th a blood examination revealed:

Hæmoglobin, 90 per cent.; red corpuscles, 5,000,000; leucocytes, 8,000; tuberculous matter (?), trace; microcytes, few; bile pigment, none; cells of degeneration, none.

The patient's mental and physical condition at this time was very noticeably improved. The spinal tenderness and soreness in the knee-joints had disappeared; the patellar reflexes were about normal—the knee jerk being seven inches. The muscular tremor, though much less constant and violent, still persisted. Subsequent reports from this patient and her family indicate that the benefit derived from the treatment has been permanent, and that she is in a much better general condition of health than formerly.

Locomotor Ataxia.—In one case a very great improvement followed two months' treatment. The patient, who was unable to walk unattended, had been under treatment for a long time, and had the classic symptoms of tabes dorsalis. In two months he was able to walk with comfort to and from my office, a distance of twenty-five blocks, with but a slight unsteadiness of gait. He resumed business, and in three months abandoned the use of his cane.

Melancholia.—Very happy results have followed the application of electric ozonation in this malady. One of these patients, who had been in an asylum for some time, had diabetes, the proportion of sugar being about four per cent. After two months' treatment this patient recovered his health sufficiently to return to an active business life. Two years have since elapsed and so far there has been no recurrence of the mental disturbance.

Diabetes.—I have treated, in all, ten cases of diabetes mellitus with very gratifying results. In these cases the proportion of sugar varied from $\frac{1}{2}$ to $4\frac{1}{2}$ per cent. and two of them were incapable of mental or physical exertion. Under treatment the percentage of sugar decreased to from $\frac{1}{2}$ of 1 per

cent. to a mere trace in some of the cases, and in all of them the chain of untoward conditions disappeared. Indeed my results in this disease have been sufficiently definite to inspire me with the hope that we may soon possess an actual means of cure.

Alcoholism.—The effects of electric ozonation in alcoholism are most brilliant. Consciousness may be fully restored in cases of acute alcoholism, and in chronic cases a month's treatment does wonders in assisting to break up the habit and restore bodily tone and vigor.

Torticollis.—CASE. In 1897, Mr. F., thirty-two years of age, noticed what were soon afterward recognized as the early symptoms of torticollis. These symptoms gradually became intensified until the man was compelled to abandon his business and confine himself to the house. The best medical treatment failed to produce satisfactory results, and finally a surgical procedure was determined upon, but this decision was not sustained by counsel.

When he came into my hands the man was practically helpless. An examination showed him to be anæmic and emaciated and there was a double spinal curvature; the head was rotated to the right and upward, so that, for more than a year, the patient had been unable to see where he was stepping. No reasonable amount of force could alter the position of the head. The heart, lungs, and kidneys were in a normal state. The appetite was poor, there was marked indigestion, the skin was dry and the extremities cold. The temperature was slightly subnormal. A blood examination showed: Hæmoglobin, 60 per cent.; red corpuscles, 2,500,000; leucocytes, 15,000.

Treatment by electric ozonation was inaugurated, and within one week a general improvement was noticeable, which continued under the daily applications. In less than two months the circulation was well reestablished and a general condition of *bien être* had supervened. The patient was now able to turn his face to the left, he could see where he was stepping, and, at times, could stand erect, though he could not hold the head straight. The improvement continued, with increase in weight and physical strength, until he could control his movements fairly well and without attracting attention except when conscious of being observed.

The hæmoglobin had increased twenty per cent.; red corpuscles, 1,000,000, and the leucocytes had diminished 6,000.

Cancer.—I have had an opportunity to study the effect of this treatment in cancer cases, and, so far as my observations go, I am thoroughly of the belief that in electric ozonation we have a powerful remedy for malignant disease, especially in accessible situations. As a rule, pain, odor, and general discomfort are diminished, and in one case of carcinoma of the breast complete restoration was accomplished in a few months. In a case of facial epithelioma suppuration ceased and the ulcer considerably diminished in size and filled in with apparently healthy tissue. In fact, in this case my results com-

pare very favorably with those of Finsen with the chemical light rays in the treatment of lupus. The use of morphine was discontinued after the first treatment and there was no subsequent occasion to return to its use.

I noted that the general health of cancer patients was greatly benefited as manifested by increased powers of digestion and assimilation of food.

Rheumatism.—I have utilized this method of treatment in twenty-five cases of muscular rheumatism, with, I may say, perfect success. In several cases but two treatments were given. One of these patients, who had suffered for twenty years, told me, at the time of her first treatment, that for the six weeks previous she had been unable to move about without severe pain. Six weeks afterward she reported, and her report was corroborated by her physician, that she had been absolutely free from pain and was evidently entirely well. In rheumatoid arthritis the results, though slower, were very reassuring. Some patients were improved to the extent of being able to walk without pain. While I realize that a cure is hardly to be expected in a well-marked case of rheumatoid arthritis, yet I am convinced that more can be accomplished for the relief of that condition by electric ozonation than by any other single therapeutic measure heretofore employed.

Gout.—I will report one of several cases of gout that have passed through my hands:

CASE.—Mrs. S., fifty years of age, a pianist by occupation, had almost completely lost the use of her hands by gout. The joints were enlarged and stiff and the slightest pressure upon them caused severe pain. For an entire year the patient had been unable either to play the piano or to fasten her clothing. The disease was not limited to the hands, but the woman was generally afflicted with the malady. The nervous system was affected and each day the patient became more irritable. Sleep was much disturbed and there was inability to lie upon the right side.

Soon after treatment by electric ozonation was instituted sleep became natural and the general nervous symptoms and arthritic pains ceased, except in one joint. All the joints became mobile and within two months the improvement was so great that the patient was able to resume her piano-playing with satisfaction, and her general health was very much better than it had been formerly.

In several cases of gout affecting a single joint, I have observed a complete cessation of pain and increased flexibility of the joint after the application of the electrode for five minutes. I found the pain had not returned one year after such treatment in all these cases.

Bright's Disease.—My notebook contains the histories of six cases of Bright's disease, in which albumin and casts, granular and hyaline, were de-

tected in the urine; in one case waxy casts were observed. The result of treatment by electric ozonation was a general amelioration of the symptoms, including a rapid reduction in the amount of albumin and the disappearance of the tube-casts. One of these patients, though eighty-seven years of age, is now in apparently robust health and engaged in business.

Lupus.—In two cases of lupus I have had an opportunity to study the effect of electric ozonation.

In one case the ulcer, which was located high up on the face and covered a space of about two square inches in area, was increasing in size when the patient came under my care. Remarkable results were secured with six weeks' treatment. The solution of continuity eventually healed completely without a disfiguring cicatrix. This patient was sixty years of age.

The second patient, who was ninety years old, had been under treatment of various kinds for nine years. The lupus had nearly destroyed the contour of the nose upon the right side, the erosive process extending down to the mucous lining of the ala nasi. Upon the left side it had extended about half as deeply. For two years there had been complete anæsthesia of the nasal region. After a month of treatment, sensation and circulation were restored in the affected part, and in three months the healing process had proceeded so favorably that the organ now bids fair to be restored with almost no disfigurement.

I cite the histories of these cases because I realize that they are unusual, owing to the advanced age of the patients, and because of the fact that, in the first case stated, six months after treatment had been discontinued there was no evidence of a recurrence of the malady.

Prostatitis.—Several cases of enlargement of the prostate in elderly persons have come under my observation, in the treatment of which a rectal electrode was employed. The results have been very favorable and include a reduction of the hypertrophy with consequent restoration of the vesical function.

I have also had the most gratifying results in the treatment of symptomatic, psychic, and atonic impotence, in individuals of various ages, physical states, and occupations. I regret that I am not able to present complete data upon this very important subject, which I hope to do in a separate paper, and at some future time. I can say this, however: My observations upon the use of electric ozonation in this class of cases lead me to believe that this agent is the most efficient means we have for the relief of this distressing condition. This remark applies, not only to cases of a purely functional character, as psychic impotence, but to many cases dependent upon definite organic lesions. A number of women in whom the sexual desire had disappeared were completely restored to a normal state. In several in

whom the orgasm had never been completely experienced it was established. In addition to the above diseases, I have observed excellent results in neurasthenic cases, even in the stage of nervous prostration, neuralgia, neuritis, hæmorrhoids, grippe, anæmia, leucæmia, dysmenorrhœa, hysteria, paresis, and dyspepsia.

Many of the cases passing through my hands had organic disease of the heart. In no case was an unpleasant effect of the treatment complained of, or observed. On the contrary the treatment was usually followed by a marked improvement in the general condition and in the force and rhythm of the heart action. In two cases in which there was a slight systolic murmur at the apex it disappeared while the patients were under treatment.

THE ACTION OF ELECTRIC OZONATION UPON THE BLOOD.

The observation of these effects is very interesting and instructive. I have collected a mass of statistics, which show that the action of electric ozonation upon the blood is most beneficial and rapid. In anæmic individuals the number of red blood discs per cubic millimetre is increased, frequently at the rate of one million a month; during the same period the number of leucocytes will be reduced about 8,000. The percentage of hæmoglobin also increases, but not in such rapid proportion as the red blood cells. The *Plasmodium malariae*, microcytes, bile salts, uric acid, tuberculous debris, fat, and fibrin, disappear. In the syphilitic subject the spores and emboli are greatly reduced in number and size, and in several instances the syphilitic spore apparently has been destroyed. The process of assimilation is actively reestablished and the digestion of food becomes more nearly perfect. Another interesting fact is that medicines which previously had not been tolerated were now retained, and therapeutic results followed their administration.

The oxidizing influence of electric ozonation seems to be indicated by the disappearance of odor from suppurating wounds and cavities after its use. I have observed this effect in cases of cancer, tuberculosis, and syphilis; a similar change was observed in persons suffering from diabetes mellitus, Bright's disease, and septicæmia, from whom the odor peculiar to the respective disease entirely disappeared. These facts lead me to presume that electric ozonation has an antisepticizing action on the blood.

The most rapid improvement occurs in neurasthenic patients. Melancholia or despondency and irritability of temper, are soon observed to be under control while the impairment of the mental powers, so frequently met with in certain chronic diseases, is checked, and the mind evidently becomes as capable of action as formerly. The advancement

toward improvement is invariably gradual, but so progressive that two months' treatment is often sufficient to perfect a cure and restore the patient to his station in life. Incidentally, I will state that I have observed a reduction of the quantity of sugar in the urine of from $4\frac{1}{2}$ per cent. to a mere trace, while the patient was under electric ozonation. I have seen the same effect upon the albumin of several nephritic cases, after from five to six weeks' treatment.

SUPPLEMENTARY CASES.

Dr. B., of Daytona, Fla., for several years suffered from cramps in his right leg, which was constantly swollen and required a bandage for support. Chloral hydrate was used at night to induce sleep, and anodynes during the day to allay the almost constant pain. The pain ceased after a few treatments, so that the use of drugs was discontinued. Within two weeks the bandage was discarded and the patient began taking long walks. Not only did the swelling gradually disappear, but the patient's general health was evidently much benefited by the course of treatment.

Dr. R., a practising physician of New York, had an attack of pneumonia. The disease failed to resolve and the patient was advised to go South, to take up his permanent residence. I saw him April 19, 1901. An examination showed a considerable area of induration involving the upper lobe of the right lung. The pulse rate was 100, respiration 24, and the temperature 99.8° F. There was a hacking cough and slight expectoration, but no *Bacilli tuberculosis* were found in the sputum. The patient was weak and languid and his vitality was at a low ebb.

The stimulating effect of electric ozonation was very noticeable in this case. Full treatment was administered, the region over the affected lobe and the spine being massaged with the electrode. The patient expressed a sense of great relief almost immediately after the treatment, although pain was complained of when the electrode was passed over the right thorax. When he reported for treatment, on April 22d, my patient stated that he had had eight hours' sleep daily, and seemed much improved.

The improvement was progressive in this case, for there never was the slightest tendency to a recurrence. On May 15th, a physical examination of the chest revealed a complete restoration of the affected lobe, and the patient in good health and ready to resume his practice.

Mrs. P., who had had an attack of pneumonia involving the upper lobes of the right lung, complicating a tuberculous affection at the left apex, was placed under treatment. Her temperature was 104° F., pulse 130, respiration 36, and the general weakness was extreme. Treatments were given every twelve hours. Improvement was observed after the second application, and, in five days, resolution was thoroughly established, and the pulse rate and temperature were normal. This patient made a good recovery and remains well. Her attending physician, Dr. Stillwell, was surprised as well as delighted with the results.

A case of peripheral paralysis of the anterior crural nerve was brought to me in May, 1901. The

patient, Miss M., received a blow upon the right thigh, just above the knee, in November, 1900, which was followed by cutaneous anæsthesia of the anterior and outer aspects of the thigh, attended with a constant feeling of discomfort and some pain.

The electrode was applied to the affected area for fifteen minutes, upon the day of examination, and on the following day the patient received a full treatment. Within a short time all untoward symptoms disappeared and an uneventful recovery ensued.

SUMMARY.

In conclusion I would commend electric ozonation to the thoughtful consideration of my confrères, for a number of reasons:

1. The device is not complicated and the cost of the apparatus is not prohibitive, and its maintenance amounts to practically nothing. A nurse can be easily taught to operate the machine.
2. The high tension and the low ampérage of the current eliminate all danger from shock.
3. The high-tension current and the great quantities of ozone liberated are productive of rapid therapeutic results.
4. The efficiency of the machine is not impaired by damp weather, and it is, therefore, always ready for use.
5. The machine is portable and well adapted for use in the sick-room.
6. It generates pure ozone and, for that reason, it is superior to any oxygen apparatus.
7. Chronic and acute cases are alike amenable to the curative effect of electric ozonation.
8. This appliance is a valuable diagnostic aid.

7 WEST FIFTY-EIGHTH STREET, NEW YORK.

The Importance of the Study of Medical History appears to be gaining recognition. The *Canadian Journal of Medicine and Surgery* for January cites the *British Medical Journal* for November 9, 1901, to the effect that "the Royal College of Physicians of London has accepted the gift of £2,000 (\$10,000) from Mrs. FitzPatrick to found a lectureship on the history of medicine. This benefaction is intended to perpetuate the memory of Dr. FitzPatrick, her husband, a distinguished member of the College, who was born at Virginia, Cavan, Ireland, in the year 1832. The gift seems to have come in good time, as British medical colleges are not equipped with chairs and lectureships for the study of the history of medicine. It appears that lecturers on the history of medicine have been appointed at several centres in the United States, and particularly good work of this kind is done by the Johns Hopkins Hospital Historical Club, the papers being subsequently published in the *Johns Hopkins Hospital Bulletin*. An *Epitome of the History of Medicine*, by Dr. Roswell Park, Professor of Surgery in the medical department of the University of Buffalo, has been received with favor in America, a second edition having been called for within a year after the appearance of the first edition."

THE TREATMENT OF DEFECTIVES.

By MAXIMILIAN P. E. GROSZMANN, Ph. D.,

NEW YORK.

There is a class of children who for many ages past have been the object of much misdirected indignation and condemnation, who have not seldom been considered as incarnations of the devil, when they were largely the product of the vices of their ancestors, of the injustice practised in our yet rather unenlightened society, and of a generally unhealthy environment, at any rate, of conditions for which they were not responsible. It is a sad chapter in the history of our race in which the treatment of defectives is written—cruel, vindictive, reckless as it often has been. And where these unfortunates were not subjected to barbaric measures which were intended to drive out the evil spirits supposedly possessing them, they suffered from neglect or were made the butt of ridicule. The poor simpleton hooted at by the ragamuffins in the street, the “fool” hung over with gilded bells and abused to please the drunken guests at some king’s court, the blind beggar in the public thoroughfare—they all testified to the crudeness of an age when the thought that these unhappy persons ought to be the subjects of sympathetic care, and that much might be done to alleviate their suffering and restore them to approximately normal conditions, had not yet dawned upon men. Luckily, we are now living in a more enlightened age, and many burdens have already been lifted from the shoulders of our ill-fated brethren and sisters. We have asylums for our insane and institutions for defectives of all kinds, for the deaf and dumb and blind and crippled, and many are redeemed from apparent degeneracy to enter upon a useful life.

And yet, there are still many who do not receive the attention and care and ready sympathy they stand so much in need of. The most pronounced cases are recognized and, as a rule, properly handled; but our schools and homes are full of such as are dragging along an unlucky existence because their conditions are not understood.

In order to arrive at an intelligent appreciation of the subject under discussion, it may be well to review the different classes of defectives which may be met with. It is hardly necessary to mention those afflicted children whose senses are so badly impaired that they are readily recognized as defectives. We may, however, remember that some, while not really blind or deaf, have such defective vision or hearing that they are prevented from doing normal work. Leaving out this class for the present, we may distinguish two great groups of defectives. First, there are those suffering from genuine *psychoses*, *i. e.*, mental disease. Here, again, we have several

subdivisions, *viz.*: Those in whom we can observe *insanity* proper, then *idiots*, and finally *criminals*. On the other hand, we have the group of what German psychologists have called “*psychopathische Minderwerthigkeiten*,” a term not easily translated into English. We may designate them, following Van Liew’s translation of the term, as “*minor mental abnormalities*.”

Both groups are characterized by abnormal development from either congenital causes (*i. e.*, those working upon the child before birth), or in consequence of pathological influences of some kind after birth, or from both causes. There is noticeable an underdeveloped state of body and mind, which represents either arrested development or pathological aberration of organ and function. Oftentimes the source of arrest or aberration was an accidental one, and the consequences could have been obviated had there been an early recognition. Certain periods in a child’s life are particularly fertile in causes for temporary derangements which need careful and wise attention. Let us be reminded of the fatigue period at eight or nine, when undue forcing of the child may produce lasting debility which may injure not only his physical, but his spiritual growth. Particularly fraught with perils are the periods of pubescence and adolescence, when our boys and girls represent the adventurous stage in the development of race and nation, when their actions bear a striking resemblance, not only to the habits of pioneer and frontier life, but also to the life of those strata of society which even in our present civilization must be considered as residual of past historical stages of race development. The migratory impulse, which is so largely the basis and explanation of truancy at this age, is very characteristic for the spirit of our adolescents no more than for the reckless life-habits of a certain portion of our population. In his study of *The Migratory Impulse vs. the Love of Home*,¹ Mr. L. W. Kline shows that many “have an insatiable desire for conjuring with that unknown factor that lurks in the untried, to commit their fortunes to the play of the mysterious and unconscious forces of the universe which to so many lend an irresistible charm to a new game, new neighbors, a new house, a new farm, a new position, a new enterprise. In gambling it is the element of chance, in trading and barter it is termed luck. Hence it is that we find so many of these people doing a shiftless, bartering, and gambling business where the conditions of chance and luck have their fullest swing. In all probability these conditions were at their best during the life of the primitive hunter and trapper. Here the probability that labor will be proportionately rewarded is at a minimum.

¹*American Journal of Psychology*, x, 1.

The ratio of reward to labor becomes so infinitely small that he comes to regard his rewards and successes as due to chance rather than personal effort. One should not wonder, then, at barbarous and semicivilized people persistently and continually creating conditions in which chance is at a maximum. Trapping, hunting, and fishing are pursuits that reward more by chance than deliberate effort or certainty. Daily bread is the reward of *one lucky arrow*, spear, trap, or net out of a hundred of such instruments, and not by the sweat of the brow. The psychology of longing to be in some other place, for new conditions, for speculating, for gambling is a reassertion of the old associations between chance and reward formed when the welfare of man was largely dependent on the mysterious forces of chance."

This view of the psychology of these cases of lower humanity is corroborated by many other observations. Miss Jane Adams, of Hull House, Chicago, remarks² that a very little familiarity with the poor districts of any city is sufficient to show how primitive and frontier-like are the neighborly relations among this class of people. Later she points out the impossibility of substituting a higher ethical standard for a lower one without the intermediate stages of growth. And, again, she speaks of the ethical epochs to which the different types of defectives and paupers belong. "We are," she says, "singularly slow to apply the evolutionary principle to human affairs in general."

It requires but little reflection to understand how in our own adolescents, by neglect of their particular needs, we may cause such an arrest of their normal development that they will never grow beyond this primitive stage and thus become permanently defective—from the point of view of progressive civilization.

They will never grow beyond this stage? That would designate them as hopeless cases. Strong as this statement may appear, and although it may not apply generally, provided the symptoms of defectiveness are early recognized and adequately treated, we must not blind ourselves against the sad fact that there is indeed a percentage of defectives which we are forced to pronounce as *unredeemable*. Cretinism, *e. g.*, is well known to be an incurable malady in which bodily deformity and mental imbecility combine. Cretinism as well as idiocy admits of no complete restoration, although we may mitigate it to a certain extent. The feeble-minded and also the morally abnormal ought never to be allowed to re-enter human society or propagate their kind after their own free will, as far as they have any. Among the many causes producing these unredeemable de-

fects are hereditary influences, defects and vices in the parents, malnutrition, the giving of alcohol to infants, epilepsy, etc. Darwin states that idiots who resemble the lower species of primates, mentally and physically, are often much more hairy than normal persons. "In idiots," says Professor Quantz³, "the higher volitional functions are absent, and their restraining hand—which is heavy upon all of us, but unfelt because of its continual presence—is lifted from these unfortunates, and they often show by action and expression a forcible likeness to apes. The most hopeless cases, which have much less intelligence than apes, show such atavistic characteristics as the vacant stare, gluttonous appetite, thick, everted lips, ill-formed, large ears, fingers long and slender."

Referring to Dr. Hamarberg's studies, Dr. Frederick Burk⁴ reports: "In all cases, the brains of defectives showed marked deficiencies. The developed cells were far fewer in number and of irregular and retarded development. His study leads to the conclusion that the idiot brain is one which has suffered arrest of development in some particular, involving larger or smaller areas of the brain, at some early period. * * *

"Dr. Down some years ago contributed a classification of congenital idiots according to ethnic types—Negroids, Malays, Indians, Mongols. He asserts that more than ten per cent. of the congenital feeble-minded children are typical Mongols."

A curious class of idiots are those who exhibit some peculiar excellency along a special line of activity. To this class belong the negro idiot, "Blind Tom," who is a musical prodigy, and Inaudi, the mathematical prodigy, whose lightning calculations have been the wonder of the world. Dr. Frederick Peterson has made a careful study of these cases and has reported on it in an article published in the *Popular Science Monthly* for December, 1896. He says:

"We may deduce from a study of such cases several facts which are noteworthy. First, the mathematical aptitude in idiocy is never of a high order. The faculty consists entirely of excessive powers in mental arithmetic—in simple calculation, which is a better term to apply to it. Secondly, it is instinctive and congenital. It is observed only in the congenital variety of idiots, imbeciles, and degenerates; and on careful examination we shall find anatomical and physiological as well as psychological stigmata of degeneration in such cases. Thirdly, much of the faculty is due to the increased power of visualization—to great development of certain parts of the

²The Subtle Problems of Charity, *Atlantic Monthly*, February, 1899.

³Dendro-psychoses, *American Journal of Psychology*, ix, 4.

⁴Development of the Nervous System, *Pedagogical Seminary*, vi, 1.

sight centres. Most of us, in mental arithmetic, compute by means of visual images."

These are his conclusions: "The aptitudes of various kinds described above as not infrequently encountered in idiots are all of rather low order. They are never found in any but the congenitally defective, who usually present the stigmata of degeneration. They consist chiefly of great powers of memory, visual or auditory, and of facility in imitation. There is no spontaneous invention. The *idiots savants* are mere copyists in music, modeling, designing, or painting; yet at the same time their talents stand out in strong contrast to their general feeble-mindedness. As a rule, the aptitudes are precociously developed, and are frequently lost before reaching adult life."

Let us also be clear about one thing: Idiots are absolutely incapable of what we call choice—they possess no conscious individuality—their mental activity is automatic and essentially irrational. In this respect they resemble very closely that class of criminals which we may call "born criminals." Reference may here be made to the writer's article on Criminality in Children,⁵ in which an argument of some length is devoted to the development of criminal propensities in children. Only this may be said here, that criminality is either a pathological, *i. e.*, diseased condition, or the result of what has been called degeneration. "By degeneration," says Féré, "should be understood the loss of the hereditary qualities that have determined and fixed the characteristics of the race."

The last class of psychoses to which attention must be called is insanity. It may be supposed that it is unnecessary to speak of insanity in a paper especially devoted to the educational treatment of *children*. But this would imply an erroneous conception. Even children have not infrequently been known to be subject to mental derangements which must be classed as genuine insanity. The critical periods in the life of a child to which reference has before been made are often conducive to mental disturbances of this kind, again particularly the period of sexual development. And then insanity not only occurs in a form more or less permanent, but is much more frequently a transitory aberration, lasting some times not longer than an hour. Physical irritations, depressive influences (melancholia), fits of despondency, fright, etc., will produce temporary dementia. These phenomena must be recognized and properly handled, lest they lead to permanent derangements which, as has been indicated in the early part of this article, will defy curative treatment. Many a case of discipline will be understood in its true causality if we remember these facts.

Further, nervous troubles of all kinds, neurotic conditions, neurasthenia in its manifold forms, sometimes border very closely upon true mental aberrations. The prevalence of nervous disorders in our times has led many to believe that they are becoming an increasing menace to our civilization and should be stamped out.

There may be a difference of opinion on this point. Referring to a paper by Dr. Harry Campbell, in the *Lancet*, on The Marriage of the Unfit, the *Medical Record* for October 8, 1898, says: "To the majority of the cases cited by him as unfit (to marry), such as pulmonary consumption, organic heart disease, epilepsy, insanity, chronic Bright's disease, no exception can be taken; but it will be generally thought that, as regards one class of disorders at least, he is certainly inclined to be too emphatic in his opinion. We refer to functional disorders of the nervous system. He says: 'The highly sensitive are not suited to this hard world. Its strenuous conditions call for men of iron nerve and stout heart. I fear that it must be acknowledged that, as regards happiness—which, at any rate from the purely physical point of view, may perhaps be fairly looked upon as our being's end and aim—the fine animal with little imagination and a good thick skin has the best time of it here—is the most truly fit.'"

"In short, the advice given to those afflicted with 'nerves' is, 'Remain single.' There can be no doubt that if the 'neurotics' never married, in the course of time diseases of the nervous system would greatly lessen and probably die out; and it may also be true that a world peopled with phlegmatic, thick-skinned mediocrities would be happier, in a sense. But the question may here be asked: Do we want to be without our 'neurotics,' or can we get along without them? If history be ransacked, it will be found that most of the great deeds of the world have been performed by individuals of a highly sensitive, nervous temperament. The contention, too, that the thick-skinned mediocrities are the happiest persons is open to doubt. If a more or less animal life is the end to be gained, then they may be; but at the same time the fact ought to be borne in mind that, while they never descend into the depths of misery, like the being with the ill-strung nervous system, yet, on the other hand, they are incapable of experiencing many of the delightful emotions and of ascending into the heavens of joy, as are the neurotics."

Insanity proper is a disease which befalls its victims after periods of health. In this and in the following point does it differ essentially from idiocy, which is largely congenital. Idiocy is an all-around mental imbecility, the *idiots savants* notwithstanding, while insanity unbalances the mind without necessarily destroying the mental faculty. Many

⁵*Arena*, October and November, 1899.

inmates of our asylums will astonish us by their rational mentality within the limits imposed upon them by their disease; some exhibit a really remarkable genius, and, indeed, the relation of insanity to genius has often occupied and puzzled the mind of many a psychologist. On the other hand, it is often difficult to determine where rational mentality ends and insanity begins.

Some have maintained that all those children who are classed among the "minor mental abnormalities" and, in fact, all persons who deviate in any manner from the normal type have a touch of insanity in their mental or moral constitution. Certainly they represent the borderland of mental health and psychosis, and call for the most earnest attention and consideration of parents, teachers, and physicians. There are a large number of "exceptional" children, those who are peculiar or defective in some way, and require conscientious observation and adequate handling. "No other question in pedagogy," says E. W. Bohannon,⁶ "manifests such a crying need for intelligent, sympathetic, patient study. Scores of thousands could testify to the truth of this out of their own bitter, even tragic experiences. Many are they who have been needlessly, almost criminally misunderstood by those from whom they had a natural right to be properly appreciated."

A very thorough study of these cases and their history and philosophy will be amply repaid by the resultant greater facility in solving problems of discipline. Details cannot here be given. Generally a distinction is made between *moral*, *mental*, and *physical* defects. This is, however, an artificial distinction; mental and moral abnormalities go hand in hand with, and are essentially conditioned by, disturbances in the higher associations which lead to organized thinking and self-control; and not infrequently physical defects lead to apparent mental and moral derangements. Captain Charles E. Woodruff, assistant surgeon, United States army, has a most instructive article in the *Philadelphia Medical Journal* for April 7, 1900, on the use of alcohol by our soldiers in the tropics, in the course of which he mentions the terrible nervous exhaustion that results from long exposure to heat and moisture; this exhaustion of the nervous tissue, he asserts, produces a temporary craving for alcohol precisely similar to that of many periodical or chronic drunkards or to the craving of certain degenerates among tramps, beggars, and criminals, *who are in a condition of congenital nervous exhaustion unfitting them for work*, and whose periodical orgies are proverbial.

Lying, disorder, disobedience, sexual aberrations, etc., may often be traced to bodily causes. Truants of the degenerate type are found to be defec-

tive in sight, hearing, growth, etc. In Edgar J. Swift's *Some Causes of Reflex Neuroses in Children*, it is shown that eye defects of various kinds, nasal troubles, catarrhs, adenoid vegetations, etc., are frequent causes of mental and moral derangements, epilepsy, neurasthenia, and similar disturbances. "It is rarely the case that central derangement, which manifests itself in functional disease, is fundamental. It is the result of continued peripheral irritation and can be checked or cured by the removal of the exciting cause. Teachers should understand that unwillingness to study and a decided preference for mischievousness do not necessarily mean that the child is the incarnation of original sin or that he is possessed of the devil. The devil may be cast out by correcting the child's hyperopia."

Troubles of digestion are a frequent source, in children, of what is called persistent ideas, of anxiety, fear, irritation, bordering on temporary insanity. The child does not really know or understand what is the matter with him, but is obstinate and ugly. Mistaken strictness in such cases will produce very deplorable results. We may also be reminded of the night-terrors of many children, which have their origin generally in digestive disturbances. Even temporary ailments in boys and girls, in the case of the latter particularly the monthly periods will occasionally lead to mental and moral disorders.

In a discussion on the troublesome child in school, Superintendent Lowther made these remarks: "One day a boy came to my office with a note from his teacher saying that the bearer had become so obnoxious that it was impossible to allow him to remain in the room. He was idle, noisy, inattentive, obstinate, impudent, and perhaps a score of other misdemeanors could be charged to his account. My investigation developed the surprising facts that he was subject to violent fits of headache, that he had some form of catarrh, that he was almost blind in one eye, and that his hearing in one ear was defective. He admitted that at times he felt perfectly miserable. Poor, afflicted boy! No wonder he grew discouraged as he saw his inability to measure up with his classmates! His teacher, ignorant of his defects, held him responsible for all the work. He became despondent, morose, distrustful of his teacher, finally disliking her and charging maltreatment as a *cause for his misconduct*. Evidently the first duty of a teacher, on observing a peculiarity in a child, is to study the cause."

That ignorant and vicious methods of education at home and in school will "spoil" children, morally and mentally, is too well known to require special mention. Many a home, not only in the poorer classes by any means, forms the worst imaginable environment for a child. The only child in families

⁶A Study of Peculiar and Exceptional Children, *Pedagogical Seminary*, iv., 1.

where there are over-refinement and undue nervous tension offers a fruitful field of investigation. But there are cases of genuine defectiveness. Says Professor M. Allen Starr:⁷ "There is an inherent activity in the brain of a child which leads to thought and soon to actions and speech; yet there are children who never get to the point of definite purposeful activity. Such children are usually in constant motion, but their movements have no object. * * * Another type of child far less defective is not uncommonly seen, who has nevertheless failed to reach that point of development which is evidenced by the power of self-control, * * * lapsing into a state of apathy and mental inertia, * * * incapable of arousing (itself) to effort. This is not laziness—it is an inherent mental defect. * * * That self-control is the highest quality of mind is evident from the fact that the first evidence of mental deterioration is seen in a beginning failure of this power."

Lack of veracity in children may sometimes be due to defective associations—a defectiveness which leads to illusions and hallucinations. It has been shown that there is a physical basis of precocity and dulness. Dulness may be only apparent and, as has been indicated elsewhere, an effect of a slower rate of development or a longer reaction time. "Dull and backward children," says F. M. Powell,⁸ "varying in degrees of mental torpidity, * * * are subjects requiring distinct methods of stimulation to unfold intellects hidden within their tardy cell structure. There are many factors, both psychical and physical, causing the semblance of mental dullness; in the former the cell structure of the brain tissue develops slowly during the plastic period, maturing later than the average, but when fully developed, under favorable environment, they often rank with the strongest minds. It has been so in the past and will be so in the future. * * * Webster, Beecher, and Fröbel were of this class. Also I may mention Linnæus, Volta, Burns, Balzac, Edison, and Scott as dullards in youth. * * * This class of individuals is not deficient, but ripen late in life." The same author states that a commission appointed by the British government to investigate the condition of 100,000 school children in Great Britain report seven per cent. as being mentally dull.

Real stupidity is a great affliction deserving of our most ready sympathy. "Natural stupidity is some form of mental weakness, or the child's mind may grow very slowly, or its growth may be temporarily arrested, or there may be great disproportion in the development of its various faculties, or it may inherit the induced or natural stupidity of its

parents. It may be the stupidity of the poor drudge, prematurely deprived of its right to grow and play in freedom by the needs of life, stupid descendant of down-trodden human beings who, age after age, have had but one hope and one aim, to keep body and soul together by unremitting toil; or, again, the stupid child of gifted parents, sad and strange stupidity, where the parents seem to have exhausted all their intellectual force in themselves and have nothing left to bequeath; or what is called natural stupidity may be nothing of the kind—only in nine cases out of ten a misinterpretation of some outward signs misinterpreted by the stupidity of the people who deal with it. * * * The natural tendency of schoolmasters is to condemn as stupid the child who is dull in things scholastic. Life often reverses the schoolmaster's verdict, and shows that the so-called dullness was intelligence which had not yet found its proper channel."⁹

If we are to deal intelligently with all these cases of seeming or real mental defectiveness, we must first of all resist all promptings toward impatience and vindictiveness, and assume the attitude of sympathetic investigators and rational friends and helpers. Truly says Dr. W. Xavier Sudduth:¹⁰ "The old ideas of viciousness still obtain in regard to the milder forms of mental perversion. Lying, stealing, and kleptomania, from a biological standpoint, are the outcropping of purely natural instincts, commendable in a pure state of nature (? G.), but greatly to be deplored in our present state of civilization. If my premise is correct it seems to me that the rationale of treatment does not lie in harsh, unsympathetic measures of condemnation, in which the motives of the individual are impugned, but in a careful system of education looking toward the moral, intellectual, and physical upbuilding of a child."

It is impossible, of course, to give here detailed prescriptions for the treatment of these cases. Individual adjustment is the prime virtue in respect to it. In many instances it is merely a question of right nutrition, cleanliness, and fresh air. A very telling example is told by Miss Jane Adams, in the *Annual of the American Academy of Political and Social Science*, as follows: "Permit me to illustrate from a group of Italian women who bring their underdeveloped children several times a week to Hull House for sanitary treatment, under the direction of a physician. It has been possible to teach some of these women to feed their children oatmeal instead of tea-soaked bread, but it has been done, not by statement at all, but by a series of gay little Sunday morning breakfasts given to a group of them in the

⁷Some Curiosities of Thinking, *Popular Science Monthly*, April, 1895.

⁸Backward and Mentally Deficient Children, *Child Study Monthly*, i, 9.

⁹Emily Miall, The Stupid Child, *Educational Foundations*, December, 1897.

¹⁰Nervous and Backward Children, *Child Study Monthly*, 1898.

Hull House nursery. A nutritious diet was thus substituted for an inferior one by a social method. At the same time it was found that certain of the women hung bags of salt about their children's necks, to keep off the evil eye, which was supposed to give the children crooked legs at first, and in the end to cause them to waste away. The salt bags gradually disappeared under the influence of baths and cod-liver oil. In short, rhachitis was skilfully arrested, and without mention that disease was caused not by the evil eye, but by lack of cleanliness and nutrition, and without passing through the intermediate belief that disease was sent by Providence, the women form a little centre for the intelligent care of children, which is making itself felt in the Italian colony. Knowledge was applied in both cases, but scarcely as the statistician would have applied it."

A rational method of life and tonic treatment in general will do much toward redeeming deficient children. The stimulus of wholesome and interesting work through which a concentration of attention can be effected will do wonders. Sense-training and manual work have been shown to be particularly helpful in this direction; in fact, they have been the only means in many cases to effect a regeneration. Dr. Seguin says physiological training advocates that "the education of the senses must precede the education of the mind," and the true physiological methods of instruction for those whose nervous system is imperfectly developed are "to exercise the imperfect organs so as to develop the functions"; and, second, "to train the functions so as to develop the imperfect organs." Dr. Fernald says: "As compared with the education of normal children, it is a difference of degree and not of kind."

Hypnotic suggestion has also been applied with much success in the case of perverse mentality, persistent ideas, moral aberrations, etc. Individual methods, of course, are the only ones that promise satisfactory results. It is therefore, and also for the sake of the normal children, absolutely necessary that the defectives be, at least temporarily, if you will, removed from the regular classes and educated in special classes and special schools.

Professor Monroe, of Stanford University, obtained data relating to 10,000 pupils in California schools, finding ten per cent. mentally dull and three per cent. feeble-minded. He states that there are many children in public schools who could be more economically and wisely trained in schools adapted to their special needs, and remarks: "There are many more who, although not positively feeble-minded, skirt the borderland of abnormality, and because of their large numbers—nearly ten per cent. of the whole public school enrolment—should re-

ceive the thoughtful attention of teachers and specialists."¹¹

Very valuable and instructive is Mr. George E. Dawson's Study in Youthful Degeneracy.¹² He found that, compared with the normal standard, the general health of the delinquent children he studied was poor. In height, weight, girth of chest, strength of grip, they were also inferior to the normal type. Later, the author speaks of "the neurotic character of many of the delinquents. * * * The fact that the prevailing criminal face is unusually broad suggests that the typical delinquent may either not have outgrown the infantile characteristics of his own race, or that he may tend to revert to a lower race altogether." He mentions many physical anomalies as indicating degeneration. "They are out of harmony with their environments; and are, far more than is usually appreciated, *incapable* of meeting the demands of a civilization that exists only by assimilating the good and eliminating the bad." And with regard to the unredeemable portion of these unfortunates, Dawson remarks: "The curative method, however sure and satisfactory it may be in many cases, falls far short of meeting all the requirements. There is a residuum of bad cases that cannot be gotten rid of through physical, intellectual, or moral discipline. The fate of an evil destiny is upon them. * * * Society has not yet learned to supplement cure with prevention. It quarantines its communities or families infected by disease; it takes advantage of every known prophylactic to prevent the onslaught or advancement of small-pox or yellow fever; but it throws no quarantines about its plague-spots of vice and crime; it destroys no germs of immorality through disinfection. * * * Like the man in the allegory, it is chained to a corpse whose dissolution must make civilization itself sick unto death."

Isolation—permanent isolation—is the only measure possible in these cases. It goes without saying that in classes or schools for defectives only such teachers should be employed as have made a particular and conscientious study of their peculiarities and needs. But there are so many different grades of defectiveness—such a fine shading into degeneracy proper on one hand, and into normal mental health on the other—and so many will never be recognized in their true condition without intelligent and sympathetic observation in the regular school classes that every teacher of children should make it his duty to keep eyes and hearts open to reach out to these unhappy creatures and to lift them up to higher levels of mentality and morality if possible.

Professor Josiah Royce, the eminent Harvard philosopher, published a contribution to the knowl-

¹¹Quoted in *Child Study Monthly*, March, 1896.

¹²*Pedagogical Seminary*, iv., 2.

edge of mental disorders and defects, from the teacher's point of view, in the *Educational Review* for October and December, 1893, from which these helpful and inspiring passages are cited: "There is no mental disease that is not also a nervous disease. * * * Your ideal must be here to get a real, or close, a truly psychological insight into this possibly deranged mental mechanism. You must come not now any longer as disciplinarian, but quite sincerely as friend, as humane man offering help to a younger brother in distress. * * * You must be a true naturalist, and study this live creature, as a biologist would study cell growth under the microscope, or as a pathologist would minutely examine diseased tissues. In order to study you must, of course, love. Minds and their processes must be delightful things in your eyes. * * * Intolerance and impatience have absolutely no place in such a scrutiny. You must fear nothing. You will be very tender with the sanctities of youthful feeling; but if, in the course of your scrutiny, a poor heart gets open to you, and you find it a very evil heart indeed, you will never show—yes, if you are wise, you will very seldom feel any contempt."

The words of Principal E. H. Russell, of the Worcester (Mass.) Normal School, will fitly close this article:

"It is a wholesome and helpful thing for a teacher to feel that all her pupils are exceptional children—which, indeed, in a deep sense is always true."

To the physician, in conclusion, the advice should be given to seek in all cases of this description the counsel and cooperation of the educator and psychologist, who, in his turn, will act wisely by combining his efforts with those of the physician so as to establish perfect harmony between the various curative forces whose help is needed in the treatment of defectives.

Aristotle's Views on Illicit Prescribing.—Aristotle (*Nikomachæan Ethics*, V. xiii), in considering what constitutes Justness, enforces the fact that the "how" and the "why," as well as the "what," must enter into the consideration, by the following analogy: "But these things [certain instanced actions previously referred to] are not just, otherwise than according to circumstances; the way in which they are done and their proper apportionment constitute them just. This is a greater matter than to recognize their wholesomeness, since in this respect it is easy to attain to a knowledge of honey and wine and hellebore and the [use of] the cautery and the knife, but [to know] in what way it is proper to employ them, as regards health, and on whom, and when—that is practically to be a physician."

TYPHOID PERFORATION, ITS FREQUENCY, PROGNOSIS, DIAG- NOSIS, AND TREATMENT.*

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VIRGINIA HOSPITAL, ETC.

If the statistics herewithin are even approximately correct, they will sustain the conclusion that, in the surgical treatment of typhoid perforation, we have a field but little less in extent and importance than that of localized tuberculosis, appendicitis, or even cancer.

Frequency of Perforation.—In the United States census report for 1896, typhoid fever is credited directly and indirectly with an annual death rate of 75,000. In the United States Marine-Hospital Report for 1896, page 1008, it is asserted that there are 500,000 cases of typhoid fever each year in the United States, and 50,000 deaths.

If I am not mistaken, the usual death rate from typhoid fever has been from 10 to 15 per cent. It is true, the census for 1900 reports a decreased death rate from typhoid fever, but, recently, I have seen a statement credited to Dr. Hare in which he states that, the world over, the deaths from typhoid fever will amount to 15 per cent. Numerous reports with a very much smaller death rate are frequently published but not unfrequently it is in connection with, and to support the efficacy of, some special plan of treatment.

Ten per cent. of 500,000 is 50,000, while 15 per cent is 75,000. Think of it. Seventy-five thousand deaths from typhoid fever in the United States alone each year.

The United States Census Report and that of the Marine-Hospital Service, represent more accurately the death rates in the cities and large towns. To a large extent, reports from the rural districts are not available. Are these statistics correct? They are the very best we have, and must be our guide until better information can be obtained. If we recall the fact that so many cases of atypical typhoid fever are diagnosticated as typho-malarial, bilious, gastric, and malarial fever, as intestinal indigestion, appendicitis, etc., it is reasonable to conclude that the estimate as to the frequency of typhoid fever is an under estimate rather than excessive. The estimated mortality in typhoid fever is based upon a study of the statistics from cities and large towns. In view of the fact that trained nursing is not so frequently available in the rural sections and frequent daily visits by the attending physician are often impracticable, is it not logical to suppose that the death

*Read before the Medical Society of Virginia, November 7, 1901.

rate in the rural districts is larger, and hence that the death rate credited to typhoid fever is larger than special statistics would indicate?

Frequency of Perforation.—Dr. Osler, in a paper published in the *Philadelphia Medical Journal*, January 19, 1901, affirms that 33 1-3 per cent. of the deaths from typhoid fever are due to perforation, and 20 per cent. to hæmorrhage.

In an editorial in the *Philadelphia Medical News* of November 11, 1899, again we find it emphasized that one-third of the deaths from typhoid fever are due to perforation and 20 per cent. to hæmorrhage. If we grant that we have 75,000 deaths from typhoid fever each year in the United States, and further that 33 1/3 per cent. are due to perforation, we have the startling fact that 25,000 people die annually in the United States from typhoid perforation. Grant that 10 per cent. is the maximum death rate from typhoid fever the world over, 50,000 would be approximately the number of deaths each year in the United States, and one-third, or 16,666, the number of deaths from perforation.

Is it an error to assert that one-third of the deaths from typhoid fever are due to perforation? If it is, it is one that has been given marked publicity, and, so far as I know, the assertion has passed unchallenged. In discussing the frequency of typhoid fever and the frequency of perforation with my professional colleagues, so invariably has the comment been: "Doctor, those statistics are not correct," that I confess, when I first viewed them as I have them grouped, I was myself astonished and skeptical. Shall we accept them? We must if we cannot correct them. "No such experience has been met with in my practice," a number of good men have assured me. Is it not more likely that the cases were met with, but were not recognized? If, fifteen years ago, I had been asked as to the frequency of appendicitis, gastric ulcer, gall stones, etc., I should at that time have given a very different reply from that which my experience and study would now warrant me in giving.

My honored kinsman, Dr. Hunter McGuire, was once asked how he found so many cases of stone in the bladder. "I look for them," was his laconic reply. We are likely to find what we are looking for. At a time when I treated more cases of typhoid fever than I do now, I can recall cases that I am convinced had perforation, but such a condition was not suspected at the time. Curiously enough, two of the cases operated upon by me were promptly diagnosed by young men who had just graduated, and who had but recently had this subject impressed upon them.

Prognosis.—What has been done? What can be done? We need not stop to consider the medical treatment of perforation; if there is any such, it is

beyond the limitations of our present knowledge. Even if we grant the possibility of prompt localized peritonitis and walling in of the perforation, it is so exceedingly improbable that it should not be considered.

The difference between the bowel lesion in a bullet wound and a typhoid ulcer is marked in this—the mucosa and muscularis in the latter case are destroyed over a much wider area than is the peritoneal tunic, and there is no possibility of plugging the hole by a prolapsed mucosa. Of course, it is possible to have local peritonitis and adhesions prior to perforation, and in this way, not infrequently, the serous sac is protracted. In complete perforation we should recall that in a vast majority of instances its site is in the small bowel near the ileo-cæcal junction, and, further, that only fluid contents are found in the small intestine. There is often distention of the bowel, and the active peristalsis lessens the probability of adhesions. So far as we know, such cases, i. e., complete perforation, treated medically, can do no better than give us a mortality of 100 per cent. The few cases of recovery reported were, in our opinion, cases of local peritonitis and incomplete perforation.

From this gloomy picture of the medical treatment, let us turn to the brighter view afforded by the surgical treatment of perforations. Dr. Keen, in one of his masterly papers on the surgery of typhoid fever, urges that the profession needs to be aroused to a due appreciation of what surgery has done and can do in this new field, and concludes a paper before the New York State Medical Association, October, 1899, as follows: "The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked."

Dr. Cushing, *Annals of Surgery*, 1901, says: "The analogy between this condition and that encountered in appendicitis is very striking. Here, the earlier the operation, the better the results so far as life goes. Watching all typhoid fever patients for any abdominal signs, the attending physician will be able to call in the surgeon early enough to make statistics of those saved among all fully fifty per cent. by early exploration."

Dr. E. C. Register, of Charlotte, N. C., reports that in a hospital in Japan, the chief surgeon has done seven laparotomies for typhoid perforation and has saved three patients.

It is possible to save the patient in one-half of the cases of perforation if the severe cases are watched carefully for symptoms of perforation and are operated upon early, says Dr. Osler. Twenty-five per cent. of good and bad cases have been saved, many of them eleventh-hour and forlorn-hope operations, as were some of my own. Thirty-seven per cent.

of a series of cases operated upon at the Johns Hopkins Hospital have been saved, and such men as Osler, Cushing, etc., look for fifty per cent. of recoveries.

Twenty-five thousand deaths from typhoid perforation in the United States and a probability of saving from 30 to 50 per cent! Thirty per cent. of 25,000 is 7,500; that number, 7,500 cases of typhoid perforation, should be saved in the United States alone each year, and if the promises are fulfilled and we are able to save fifty per cent. of 25,000, we shall have a grand achievement, 12,500 lives saved. In Philadelphia, in 1898, there were between 5,000 and 6,000 cases of typhoid fever reported; many so-called bilious, malarial, typho-malarial, etc., were atypical typhoid. Ten per cent. death rate of 6,000 is 600 deaths. One-third due to perforation is 200 deaths from perforation. Think of two hundred cases in one year occurring right under the nose of Dr. Price, demanding an operation, 37 per cent. of which he could probably have saved. In 1897 there were 2,000 deaths in the State of New York from typhoid fever; one third of them, or 666, were cases of perforation. No diversity of opinion can exist as to the duty indicated in such cases. The diagnosis having been made, masterly inactivity is criminal, and an intelligent profession should hold us *particeps criminis* if we fail to impress the fact that surgical intervention alone can save the patient, and that by it, a fair prospect is afforded.

Diagnosis.—It has been duly impressed upon us that more mistakes are made in diagnosis than in practice, and that the mistakes in practice are commonly due to errors in diagnosis. It is conceded that, in this, as in so many phases of abdominal surgery, we need greater proficiency in diagnosis far more than we do an improved operative technique. It is a serious matter to propose to open the abdomen of a patient depressed by typhoid fever, but it is a much more serious matter not to open it if there is perforation. Good men assure us that the tissues of such patients heal readily, and that these patients are in no worse condition than so many with appendicitis, bullet wounds of the intestines, etc. The patients are inevitably doomed without it, probably one half will be saved by it. In this, as in all lesions entailing perforation peritonitis, it holds that success largely depends upon getting into the abdomen early, and out of it as quickly as is consistent with complete work.

The diagnosis of perforation, on the one hand, may be exceedingly obscure, and, on the other, the clinical picture may be easily interpreted. The symptoms of typhoid fever are so variable. In a large number of fever cases the patients are perfectly clear mentally, they can warn us intelligently of the sudden onset of pain and can help us to decide

when it is localized or diffused. In many, the thermic changes are gradual and no sudden rises or falls occur, and the same is true of the pulse. In many, abdominal pain is absent and there may be no distention or rigidity. In this class of patients, and they are by no means a minority of cases, such a group of symptoms as vomiting, pain, shock, increased and increasing pulse rate, abdominal rigidity, distention and abolished peristalsis and gaseous movement, together with, perhaps, a reduced temperature incident to shock, should enable us to make about as positive a diagnosis as is possible in a majority of acute intra-abdominal troubles. On the other hand, in another group of cases, in which there is mental apathy, not infrequent vomiting from impaired stomach digestion, distention from nerve exhaustion and intestinal indigestion, rapid pulse, high temperature, frequent paroxysms or persistent pain from peritoneal involvement without perforation—in such cases the diagnosis must call for an acute reading of symptoms manifested.

I recall a recent experience of one of my colleagues. I regard him as a skilled diagnostician. He said to me, "I have a bad case of typhoid fever in the hospital; if perforation occurs, do you want to operate?" I replied, "certainly." A few days later, one of the internes said to me, "Doctor, that patient died; I opened the abdomen and such a quantity of pea-soup like stuff poured out, I shut it up again." Obviously the pea-soup material was small bowel contents and perforation was evident. A very short time after this, another patient died from typhoid fever in the service of my good friend. A complete post-mortem in this case showed two perforations and several ulcers with only the peritoneal coat intact. I mention these cases as evidence of the fact that exceptionally clever diagnosticians, even while on the lookout for perforation, may fail to detect its occurrence.

Dr. Senn has timely emphasized the idea that one of the dangers of the hour is too much specialism. Doctors, he thinks, are too exclusively doctors, and surgeons too exclusively surgeons. We should adhere to the idea that a surgeon is nothing more or less than a doctor who operates. As a diagnosis in such cases must as a rule first be made by the attending physician, the injunction of Dr. Keen, that the interest of the profession in this subject needs to be aroused, holds with especial force to the family physician.

We should remember that the perforation is more common in the third week, that it is not uncommon in mild cases, and that the perforative stage is noted by undue persistent local pain. In any case, the occurrence of pain is a danger signal which should at once attract attention.

Dr. Osler, in dealing with the diagnosis of perforation, lays stress on the importance of more careful watching of the patient to detect the earliest indication of perforation. His instructions are so specific and clear that I feel warranted in reproducing them.

"I. Instructions should be specific and definite to the superintendent or head nurse to notify the house-physician of any complaint of abdominal pain by the patient, of hiccough or vomiting, of a special rise of pulse or respiration, of sweating, or of signs of collapse.

"II. The house-physician should note the character of the pain, as to (a) onset, whether only an aggravation of slight abdominal pain such as is common with both constipation and diarrhoea, or whether it was a sudden intense pain which caused the patient to call out, and which, though relieved by stupes and ordinary measures, soon recurred in paroxysms and grew worse. (b) The locality, whether diffused or localized in the hypogastric or right iliac regions, or radiating, as to the penis. It is to be borne in mind that abdominal pain of severe character may be associated with an acute pleurisy, with distended bladder, with cholecystitis, and with a packed rectum or may follow an enema.

"III. State of the abdomen. The condition to be noted in writing, at once, as to the following particulars: (a) Whether flat or scaphoid or distended; whether, if distended, it is uniform or chiefly hypogastric. (b) Respiratory movements—whether present; if uniform and seen both below and above the navel. (c) Palpation—as to the tenderness and pain, locality and extent and degree of pressure necessary to elicit muscle rigidity and spasm, whether present or not, and in what special locality, and noting particularly its absence or presence in the hypogastric region and the right iliac fossa. (d) Percussion—Character of note in front of abdomen and in flanks. Liver—flatness extent, in middle, nipple, and in mid-axillary lines. Note specifically every third hour. Remember, too, that obliteration may occur in a flat, as well as in a distended abdomen. Auscultatory percussion may be helpful. (e) Auscultation—obliteration of signs of peristalsis; presence of friction. (f) Examination of rectum and bladder. (g) Stools—character, frequency, presence of blood or slough.

"IV. General condition of patient. (a) Facies—whether changed in expression; risus, slight or marked; pallor, sweating, etc. (b) Pulse change—in rhythm, rate, and force. (c) Temperature—whether a drop or not, whether after a tub or not. (d) Respiration—sudden increase, not infrequent, whether shallow or sighing. (e) Sweating, if subject to during attack, if onset with pain; whether local or diffuse. (f) Vomiting—whether with on-

set of pain or not, character of vomiting. (g) Hiccough.

"V. Blood count—leucocytosis, stationary or rising—may be marked early. In a majority of well followed cases there is a rise. The constant leucopæmia in typhoid fever has to be taken into account, also a count of the red blood corpuscles and hæmoglobin, as a decided drop might suggest hæmorrhage."

Much of this useful advice given by Dr. Osler can be applied to the sick room outside of the well appointed hospital, but to a large extent it is only serviceable with a trained corps of assistants.

One of the most important papers of recent date is the report of Dr. Shattuck, Dr. Warren, and Dr. Cobb (*Progressive Medicine*, June, 1901) as a committee of the Boston Society for Medical Improvement. Seventeen cases of perforation were embraced in this report. Curiously enough, says the report, "the text-books still continue to describe the symptoms of perforation as though a sudden marked change in the picture took place, with severe abdominal pains, general collapse, and abdominal rigidity. This certainly is not the case in patients seen at the bedside, and the study of this series shows that only in seven out of twenty-one was there a sudden and severe onset of symptoms due to perforation, and from this series the authors conclude that the severe symptoms described in these text-books are due, not to the occurrence of perforation, but to the onset of septic peritonitis, resulting from the accident." Some of the conclusions arrived at are:

1. "In many very sick typhoids, perforation or peritoneal infection cannot be diagnosed until the results are already widespread and of fatal extent.

2. "In mild typhoids of fair general condition an abdominal operation is readily borne, provided no peritoneal infection is present." Dr. Rodman, of Philadelphia, has recently reported a successful case in which he did not operate until thirty-six hours after the onset of symptoms of perforation.

3. "Operations must be done at once, for general infection may become past relief in from one to five hours, and walling off of the perforation by protecting adhesions is so rare as not to be counted upon.

4. "In the majority of mild cases, beginning infection (whether from perforation or not) is marked by comparatively slight symptoms—local pain, tenderness, spasm, and leucocytosis. The severe following symptoms mean general peritonitis.

5. "These warning symptoms demand serious consideration and study, but in many cases are either not rightly understood or not acted upon.

6. "Complaint of abdominal pain in a case of typhoid should always lead to a suspicion of beginning peritoneal infection.

7. "Frequent leucocyte counts are needed in every case of typhoid. In the presence of abdominal pain, an hourly count is necessary.

8. "Pain associated with local tenderness, muscular spasm, and a rising white blood count, points in most cases to an operation; in all cases to a surgical consultation.

9. "In not a few of this series of cases operation was imperative a varying number of hours before it was done." It will be seen that in this report but little has been brought out which will help us in making a diagnosis at the bedside.

In bullet wounds of the intestines we have no reliable symptoms until the advent of peritoneal infection—the character and location of pain, the existence or absence of shock, an increased temperature, pulse rate, or hepatic area of resonance in place of flatness, etc., furnish guides of but little value. We can only know that there has been an intestinal wound by an exploratory incision.

Greig Smith, J. B. Murphy, and Osler have all laid stress on the idea that an abolished peristalsis and cessation of gaseous movement point to perforation. Murphy and Greig Smith notably regard this evidence as of great diagnostic value.

My experience prompts me to attach most importance to (a) pain, (b) muscular rigidity, (c) inhibited peristalsis. As we have outlined, we need greater proficiency in diagnosis far more than improved technique. When we operate and how to operate need not detain us.

If there is shock from perforation, a majority of operators will wait for reaction; others contend that every hour's delay means more extravasation of intestinal contents. If there is no shock or when the shock is not dangerously profound, immediate operative intervention is indicated. Dr. Keen's statistics show that a larger number of patients recovered when the operation was done in about twelve hours after perforation—presumably after reaction from primary shock but before the advent of shock of sepsis. The operative technique does not differ from that indicated in other acute peritoneal infections. We should bear in mind that the perforation is usually single, and is more frequently within the last eighteen inches of the small bowel.

In conclusion, let us reiterate that this is an extensive field, full of good fruit, which we trust will soon be classified by the busy pathfinders whom we are privileged to follow.

For the Anæmia of Adolescents.—*Progrès médical* for January 1st attributes this formula to G. Lyon:

R Powdered ferrous carbonate,
Powdered rhubarb,
Sugar, flavored with vanilla, } of each, 1½ grain.

M. For one powder, to be taken mixed with jam.

Therapeutical Notes.

For Pernicious Malarial Fever.—*Progrès médical* for January 1st ascribes the following to Laveran:

R Quinine hydrochloride. 45 grains;
Antipyrine. 30 "
Distilled water. 90 minims.

M.

One cubic centimetre (15 minims) contains 7½ grains of the quinine salt. For use by hypodermic injection.

The Treatment of Enlarged Bronchial Glands in Children.—Dr. D. McM. Officer (*Intercolonial Medical Journal of Australasia*, November 20, 1901) says that he usually recommends treating these individuals very much as one would treat a case of phthisis, by open air, forced feeding, careful attention to hygiene, and guaiacol and cod-liver oil internally. For the spasmodic jerky cough, which is almost totally without expectoration, and which is furthermore most irritating to the child and parents alike, he has lately been using thirty drops of creosote, with or without menthol, burnt on a hot shovel in the patient's room at night, with markedly beneficial results in many cases, though in a few with disappointing results; the relief in this trouble, by such treatment, not being so marked as in whooping-cough.

Trimethylamine in Acute Rheumatic Arthritis.—*Γατρική πρόβδος* for February, 1901, says that the mean dose of this drug is from 15 to 22 grains, and gives the two following prescriptions:

R Trimethylamine...from 7½ to 22½ minims;
Tilia flower water. 4 ounces;
Syrup of mint. 1 ounce.

M. A tablespoonful every two hours.

Or

R Trimethylamine hydrochloride,
from 7½ to 15 minims;
Distilled water. 4 ounces;
Balsam of Peru. 1 drachm;
Syrup of mint. 7 drachms.

M. A tablespoonful every two hours.

Care of the Breasts in Nursing Mothers.—George Barksdale (*Charleston Medical Journal*, September, 1901; *American Journal of Obstetrics*, January), when the nipples are tender, paints them with glycerite of tannin and alcohol for several days. If they become fissured they should be painted with tincture of benzoin or boric-acid solution. When the flow of milk is more than the child can consume, it is best to withdraw some of it to prevent pain to the mother. When symptoms of abscess develop, the breasts should have the milk withdrawn, and the tumors produced by the over-distended ducts should be massaged until they disappear. If this does not relieve the symptoms, the liquids should be withdrawn as much as possible and the breast anointed with an ointment composed of camphor, opium, atropine, and lanolin. Compound jalap powder should also be given to secure free movements of the bowels and as a diuretic. If the symptoms continue, use hot fomentations until the abscess forms, and then open.

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SANITATION IN THE ARMY.

In a previous issue we referred to a paper by Major and Surgeon W. O. Owen, of the army, on Preventable Diseases in the Army, and now call attention to the legislation it suggested, of which there is promise in a bill recently introduced into Congress "To define the duties of the medical department of the army." This bill has for its main object the establishment of a legal method whereby the presence of sanitary sins in the military service shall be investigated, the responsibility for their existence fixed, and the guilty party punished. This legislation is eminently proper; in fact, it is necessary for the protection of the lives of our soldiers from destruction by diseases that are preventable, and it is hoped that every member of the profession, actuated by his interest in the public health, will use his influence with his member of Congress to secure the passage of the bill.

There is a widespread but erroneous opinion that officers of the medical corps are responsible for the health of the army. As a matter of fact, they have nothing to do with it except to recommend methods for its maintenance, and, if ill-health appears, to minister to the necessities of its subjects. In the selection of camp sites, their water supply and sewerage system, and in the sanitation of public buildings, even hospitals, not only are they not consulted, but their recommendations, when made, are too often treated as impertinent interferences, and the over-zealous officer is "called down" by a more or less offensive snub. A noticeable example of recent neglect in sanitary counsel is in the composition of the board of generals to select sites for military camps, a duty in which the opinion of a sanitarian is peculiarly necessary, but the sanitary advisor to

this board is only conspicuous by his absence; surely, if any one lesson more than another should have been learned in the War Department from the terrible experiences of 1898 it is that in camp sanitation.

The medical profession owes to its colleagues in the army the protection of its powerful influence against a repetition of the unjust charges of neglect of duty, incompetence, etc., that were made against them in the Spanish-American war, and this protection can be made effective only by the enactment of a law which shall compel investigation as above indicated.

As has been shown in Major Owen's paper, the lives of too many of our soldiers have already been sacrificed through the ignorant obstinacy of some general and line officers, whose action has been condoned under an alleged "necessity of war," and it has been a source of surprise that an investigation of the matter was not urged by the medical department, since it is well known that there can be no "military necessity" in this twentieth century to justify the presence of preventable diseases in a permanent camp, and that there are but few conditions in active warfare to excuse it in a moving command. Let us as a profession put a stop to the possibility of such occurrences in future by insisting on the application of the remedy proposed in the bill now before Congress.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The array of important communications read at the ninety-sixth annual meeting, held in Albany this week, so soon after the experimental semiannual meeting of last autumn, sufficiently testifies to the continued vigor of the society. In his inaugural address, the president, Dr. Henry L. Elsner, of Syracuse, considered a number of matters, many of which are of interest to the profession in general as well as to the members of the society. One of the most important of them, as regards the society itself, was the question of continuing to hold semiannual meetings. The president suggested that one be held in New York in 1903, and that his successor, together with the comitia minora, should decide as to the expediency of holding one this year in some city of the State other than New York or Albany,

preferably Buffalo. The holding of such semi-annual meetings would probably result in their regular establishment, the meetings to take place alternately in New York and in some other city, exclusive of Albany, where the annual meetings are always held. It seems to us that this would be a very good arrangement, as it could hardly fail to bring the physicians of Buffalo, Rochester, Syracuse, and other large towns of the State into closer touch with the society than could be effected by always holding the semiannual meetings in New York.

Recently, and more particularly since the St. Paul meeting of the American Medical Association, there have been multiplying signs of an earnest desire on the part of the medical profession of the State of New York to do away with the anomaly of the simultaneous existence of two separate State organizations. A definite step in this direction was lately taken when the Medical Society of the County of New York (in affiliation with the Medical Society of the State of New York) made overtures to the New York County Medical Association (in affiliation with the New York State Medical Association) having for their object an adjustment by conference committee. But it was found that the organic law of the New York State Medical Association made it impossible for its affiliated county organizations to act independently in such matters. However, the county association showed its appreciation of the overtures by passing a resolution in favor of professional unity in the State and by recommending to the State association the appointment of a committee of conference in case the State society should appoint a similar committee.

"Therefore," said Dr. Elsner in his address, "I recommend that the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association for the purpose of formulating a plan which shall have for its object the reorganization of the regular profession of this State, which body shall be in affiliation with the American Medical Association, and that the committee report the result of its labors at the next meeting of the Medical Society of the State of New York." Here the olive branch is fairly held out. We hope it will be received in

the fraternal spirit which the many friends of both organizations cherish. But, in case it is not, Dr. Elsner would have the society act as follows: "In the event of the failure of the New York State Medical Association to appoint such a committee, or if the committees should fail to agree upon a plan of reorganization, the committee appointed by the Medical Society of the State of New York shall have full power, if it deems it expedient, to represent this society before the American Medical Association, and the secretary of this society shall, if the majority of the committee desires, provide the individual members with credentials of delegates to the American Medical Association."

It is earnestly to be hoped that negotiations between the two State bodies will be carried forward to the unification of the profession in the State, and that the alternative will never become necessary—that of a number of men representing a disfranchised body appearing before the American Medical Association and demanding either to be seated or to be told the reason why the organization they represent has been treated so differently from the corresponding bodies of Massachusetts, Rhode Island, and Mississippi.

THE AMERICAN IN THE TROPICS.

The excellent work done in the Philippines by Colonel Charles R. Greenleaf, assistant surgeon-general of the army, who for a considerable period was the chief surgeon of that military division, has been shown in a number of official reports on which we have taken occasion to comment from time to time. His report for the year ending May 16, 1901, recently issued, deals with many important topics, and we regret that the space at our disposal will not admit of our referring to more than one of them at present, namely, the influence of a tropical climate on the health of Americans.

Colonel Greenleaf regards it as inevitable that the strength of the most robust American soldier should be undermined by tropical service. He says that after a year of service in the Philippines the most energetic and stalwart American loses energy, strength, and ambition. It is more or less half-heartedly, and with a draft on his vitality

that he actually feels at the time, that he performs what work his duty demands, and slight ailments, to which at home he would not give a second thought, he feels out of all proportion to their severity, so that the number of entries for trivial complaints on the sick report increases. We may gather from what Colonel Greenleaf says of the direct effect of the solar heat that something more than that is at the bottom of the enervation that he depicts; "men are often overcome on the march by heat," he says, "but real heatstroke and lasting heat exhaustion are remarkably rare." There seems to be, we should say, a general devitalizing influence exerted, much resembling in its effects that which so frequently accompanies influenza, but probably of greater duration.

Colonel Greenleaf's remarks apply more particularly to men in military life, of course, and the lessons to be learned from them, as regards the management of the army, are sufficiently obvious; still, there is the pressing necessity, we think, of establishing in connection with the army medical service some such teaching institution as the Liverpool School of Tropical Medicine, whose excellent work we have frequently mentioned. No one regiment, we take it, should be kept long in the Philippines, and perhaps none should be made to serve there twice during the average period that an enlisted man remains in the service. Above all, only men inured to military life should be sent there, men who have learned by experience that they must take good care of themselves or else suffer in health. It is hardly necessary to add that officers should not be ordered to the Philippines as a sort of punishment for acts distasteful to those high in authority, but not of a character to make a court-martial justifiable. These requirements, we are well aware, call for frequent rotation of the field of service and for the constant employment of many transport ships. As regards the first, duty within our own limits, in Alaska, in Hawaii, in Puerto Rico, and, as a not improbable field, in the Danish West Indies, appears to lend itself to the solution of the problem. As regards the second, we must simply stand the expense of more transports.

But it is not for the army alone that we have to concern ourselves. With the vast outlying possessions that we have acquired within the last

few years, it is inevitable that we should become a colonizing people like the British, who were almost the sole progenitors of our original civilized population. Numerous American civilians will betake themselves to the Philippines in quest of profit or adventure, and great numbers of them will make the islands their permanent home. There they will marry and have children, and the future inhabitants of the archipelago will be more and more of American origin. All the more, therefore, is it incumbent on us to provide for the instruction of the rising generation of physicians in tropical medicine, which of course includes hygiene, quite apart from the Army Medical School; it must have its place in the curricula of the great medical schools of the country.

A SUPPOSED WOUND OF THE OPTIC NERVE.

When a lesion cannot be demonstrated, it is legitimate to infer its existence from the signs and symptoms present; rarely, however, does inference so outweigh observation as in a case reported by M. Gayet at a recent meeting of the Lyons Society of Surgery (*Gazette hebdomadaire de médecine et de chirurgie*, January 9th). A bundle of straw came in violent contact with the region of a child's eye. Apparently there was only a very superficial wound of the lower lid, but complete blindness of that eye set in, with signs of optic atrophy, and it was then supposed that a long straw had traversed the lid, penetrated into the orbit, and punctured the optic nerve.

URETHRAL HÆMORRHAGE OF HEPATIC ORIGIN.

It is not difficult to concede that M. Nogues was justified in assigning an hepatic origin to a case of urethral hæmorrhage which he reported at the recent French Congress of Urologists (*Münchener medicinische Wochenschrift*, November 26th). The patient was a man, fifty-four years old, who had hypertrophic cirrhosis of the liver with chronic jaundice. The urethral hæmorrhage occurred suddenly, and its source was ascertained to be the anterior portion of the urethra, which had always before been healthy. Its dependence on the hepatic disease was inferred from the prompt occurrence of purpura and profuse hæmorrhages from the nose, the lungs, and the intestine. The urethral bleeding was stopped by the use of injections of a three-per-cent. solution of antipyrine.

SYPHILITIC MELÆNA.

It is not to be wondered at that congenital syphilis is sometimes the cause of melæna neonatorum. Esser, of Bonn (*Archiv für Kinderheilkunde*, xxxii; *Münchener medicinische Wochenschrift*, November 26th) reports the case of a child who died when it was ten days old, after hæmorrhages from the intestine and from a swelling on the back of the hand. Post mortem, the child was shown to be syphilitic, and thickenings of the intestine, some of them ulcerated, appeared to have been the source of the intestinal hæmorrhage. Microscopically, thickening of the middle coat of numerous blood-vessels was observed.

THE FLOATING TENTH RIB AS A STIGMA.

According to Dr. Stiller, of Ofen-Pest (*Archiv für Verdauungskrankheiten mit Einschluss der Stoffwechselpathologie und der Diätetik*, vii; *Münchener medicinische Wochenschrift*, November 26th), a floating tenth rib is a stigma of enteropositis, atony, neurasthenia, and nervous dyspepsia—in short, we should say, of general flabbiness, a condition readily enough detected, it would seem, without reference to the presence or absence of connection of the tenth or any other rib with a costal cartilage. All knowledge may be useful, of course, but we advise the dyspeptic not to despair because his tenth rib is not attached anteriorly.

A CHARMING BIT OF POPULAR NOMENCLATURE.

We have known buboes to be called "pigs," and that appellation is rather suggestive of a rich imagination, but we must admit that the French tanners take the lead in bestowing on disease names that smack decidedly of tenderness. According to Brocq and Landry (*Annales de dermatologie et de syphiligraphie*, 1901, 4; *Centralblatt für Chirurgie*, December 7th), a form of "occupational" ulcer, chiefly affecting the fingers, is frequently met with among the dyers of leather, attributed to the penetration of caustic fluids into fissures of the skin. The ulcers are described as extremely painful, as round as if cut out with a punch, surrounded with a reddish infiltrated wall, and often accompanied by surrounding redness and infiltration. The pain is so great that the workmen present themselves early for treatment; nevertheless, the healing of these ulcers is apt to linger. The disease must be a sore infliction; however, it is called by such endearing names as *pigeonneau* (the young pigeon), *rossignol* (the nightingale), and *tourtereau* (the young turtle-dove). Perhaps it is possible to mitigate one's sufferings by petting the lesions that give rise to them.

THE ALKALOID IBOGAINE.

In the Gaboon country the name of *iboga* is applied by the natives to an apocynaceous tree or shrub known to botanists as *Tabernamontana ventricosa*. Several other plants of the same genus are employed medicinally, and perhaps this one may prove available as a remedy; at all events, an alkaloid obtained from it seems to have decided physiological effects. At a recent meeting of the Paris Society of Biology (*Progrès médical*, December 21st) M. Phisalix reported that he had found that it acted on all the nervous centres, and in particular on the cerebrum. In a small dose it gives rise to mild intoxication, stimulates the circulation and respiration, heightens the blood pressure, and favors diuresis and secretion in general. The temperature is raised several degrees, and this effect must be set down as very remarkable. Larger doses produce hallucinatory drunkenness with muscular incoordination. In a still larger dose the drug embarrasses the breathing, paralyzes the muscles, lowers the temperature, and gives rise to such general depression that the animal dies algid and collapsed.

THE AMERICAN LEAGUE FOR CIVIC IMPROVEMENT.

From the October number of the *Home Florist*, which has wandered to our office, we should judge that the American League for Civic Improvement is a society which deserves the fullest support and influence of all physicians. It appears to be a league made up of a number of local societies, each of which is supposed to act under the general principles of civic improvement of the league, but in detail according to the particular requirements of the locality interested. Looking through the list of objects aimed at, including as it does such matters as county park systems, forestry, good roads and streets, athletic and out-door pastimes, open-air band concerts, open-air restaurants, public lavatories and closets, recreation piers, abatement of the smoke nuisance, garbage disposal for towns and villages, the proper care of streets and alleys, sanitary burial and cremation, the suppression of noise, sidewalk planting, sanitary and storm sewage system, etc., to say nothing of many purely æsthetic objects, which, however, have undoubtedly a beneficial influence upon the public health through the regulation of the nervous system, it is easy to see how closely its aims are in accord with those of the medical profession. The account of the proceedings of the annual convention for 1901, opened on August 12th at Buffalo, N. Y., gives one some idea of the magnitude of the good work that "silent and unbeknownst" has been going on among us in all parts of the United States, under the auspices of the society with headquarters at Springfield, Ohio.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 3d.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, February 4th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, February 5th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY February 6th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 7th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, February 8th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

A Health Officer Takes Small-pox.—Dr. Hamilton, medical health officer at Cornwall, Canada, has been attacked by small-pox.

Medical Inspectors for Atlanta Schools have been provided for by the Board of Education of Atlanta, Ga. There are three inspectors or visitors for each school and all serve without remuneration.

A Vivisection Bill in Congress.—Senator Gallinger has introduced in the Senate a bill prepared by the American Society for the Regulation of Vivisection, which has its headquarters in Brooklyn, for the regulation of vivisection.

Dr. Lachlan Tyler, who was connected with the Board of Health of this city, died Sunday night, after an illness of four days, from appendicitis. Dr. Tyler was a son of President John Tyler and a brother of Lyon G. Tyler, head of William and Mary College.

Smoke Nuisance Abated in St. Paul.—Dr. Justus Ohage, Health Commissioner of St. Paul, Minn., has, after an active and vigorous campaign of three months' duration, practically freed St. Paul from the smoke nuisance. Dr. Ohage has had a remarkably successful career as a public official.

The Savannah Medical Society has elected the following officers: President, Dr. Ralston Lattimore; vice-president, Dr. Marion X. Corbin; recording secretary, Dr. Ralph M. Thomson; treasurer, Dr. George R. White; corresponding secretary, Dr. J. Lawton Hiers; librarian, Dr. Elton S. Osborne.

Dr. Dominick G. Bodkin died at his home, in Brooklyn, on January 27th, at the age of sixty-nine. He was a native of Ireland, but came to the United States at an early age. He served during the civil war as an assistant surgeon and has practised medicine in Brooklyn for the past thirty-five years. He was a member of both the county and the State medical associations.

A Surgeon Exonerated in a Suit for Malpractice.—We are glad to learn that in Part IX of the New York Supreme Court, before Judge McLean, in the action brought by Mrs. Selina Schneider against Dr. Thomas H. Manley for alleged malpractice in the unnecessary removal of a joint of the thumb, the jury, after a five minutes' deliberation, brought in a verdict for the defendant.

Small-pox.—As will be seen by reference to the United States Marine-Hospital Service reports, small-pox continues to spread slowly. In Philadelphia, Boston, and Toronto the epidemic seems to be decreasing in severity. Brooklyn has had several new cases, and the disease seems quite prevalent among the Indians of Minnesota, but there have been no sensational developments during the past week.

Danger of Infection in Telephone Transmitters.—The San Francisco Board of Health has adopted resolutions to the effect that the transmitters of public telephones are "a very violent agent for the dissemination of disease" and inviting inventors and manufacturers of appliances with germicidal properties for attachment to telephones to submit such appliances to the board within the next sixty days.

Medical Society of the District of Columbia.—At a recent meeting of the Medical Society of the District of Columbia the following officers were elected for the present year: President, Dr. Samuel S. Adams; vice-presidents, Dr. J. W. Chappell and Dr. A. R. Shands; treasurer, Dr. C. W. Franzoni; corresponding secretary, Dr. Thomas C. Smith; recording secretary, Dr. Francis P. Morgan; librarian, Dr. Edwin L. Morgan.

Philadelphia Hospital.—Dr. H. M. Newbold and Dr. William Pickett have been appointed examiners of the insane, and Dr. D. J. McCarthy, neurological registrar, to succeed Dr. Pickett, who has resigned that post.

The report of the Bureau of Charities shows that on December 31st last there were 4,525 men and women in the Philadelphia Hospital and in the out-patient department, as against 4,326 at the beginning of the month, an increase of 199, and as against 4,144 on December 31, 1900, an increase of 381.

The Board of Medical Examiners of Michigan have, during the past two years, issued 4,585 certificates of registration. The total fees received were \$13,849.20. During the past year the fees received were \$4,819.20 and the disbursements \$5,414.56. Since October last the board has disbursed \$818.86. There was a total balance January 1, 1902, of \$2,055.73. It is estimated that the expenses for the ensuing year will be \$3,500 and the receipts \$4,900.

Richmond County Medical Society.—At the annual meeting of this society, held at New Brighton, Borough of Richmond, N. Y., January 8, 1902, the following officers were elected for the ensuing year: President, Dr. C. Wilmot Townsend; vice-president, Dr. William Bryan; secretary and treasurer, Dr. Horace W. Patterson; censors, Dr. Jefferson Scales, Dr. H. C. Johnston, and Dr. George P. Jessup; delegates to the State Medical Society for three years, Dr. William G. Van Vreedenberg, Dr. John T. Sprague, Dr. Jefferson Scales, and Dr. William Bryan. The next meeting of the society will be held on the second Thursday in February.

San Francisco Board of Health may be Removed.—The friction between the mayor of San Francisco and the Board of Health has reached such an acute stage that the daily press of San Francisco freely predicts the early removal of the board. The lack of harmony between the city and the State board of health is one of the causes of irritation, while the action of the city board of health in connection with the bubonic plague caused much ill feeling, as it was claimed by the merchants that the reports of the board did serious damage to the commercial interests of the city.

The Federation of Reciprocal State Medical and Examining Boards was formed recently at Chicago by representatives of boards from six different States. The prevention and cure of infectious diseases is the principal object for the combining of the different boards. Delegates representing Illinois, Michigan, Indiana, and Wisconsin appeared at the meeting held recently in the Great Northern Hotel and completed arrangements for the consolidation of the six boards. Ohio and Iowa are also included in the new organization.

The following officers were elected: Dr. J. R. Currens, president; Dr. James M. Dinnen, vice-president; B. D. Harrison, secretary; W. A. Spurgeon, treasurer.

The New York Academy of Medicine.—A stated meeting will be held on Thursday evening, February 6th, at 8 o'clock. The special order for the evening embraces a discussion of Resolutions on the Action of the Treasury Department declaring pulmonary tuberculosis a dangerous contagious disease, and debarring consumptive aliens, rich and poor alike, from entering the country; a paper On the Phenomenon of Inhibition, its Possibilities in Pathology, especially in its relations to the Diseases of Myxoedema and Exophthalmic Goitre, by S. J. Meltzer, M. D.,

which will be discussed by Dr. Charles L. Dana, Dr. I. Adler, Dr. M. Allen Starr, Dr. William H. Thomson, Dr. F. Peterson, and Dr. William Hirsch.

In Memory of Dr. Eskridge and Dr. Parkhill.—The members of the medical profession of Denver, Col., held a meeting on January 18th and passed resolutions of regret on the death of Dr. Eskridge and Dr. Parkhill, the resolution having been prepared by a committee composed of Dr. J. A. Maggard, Dr. N. G. Burnham, Dr. B. F. Wooding, and Dr. Henry Sewall. Similar resolutions were passed by the Denver and Arapahoe Medical Society, the medical and surgical staff and by the executive committee of St. Luke's Hospital, the Denver Clinical Society, and the medical department of the University of Denver. Dr. Parkhill was buried with full military honors by the National Guard, of which he was formerly surgeon-general.

The Lunacy Bill Likely to Pass.—The Judiciary Committee of the Senate of the Legislature of the State of New York has reported favorably Senator Brackett's bill abolishing the boards of managers of the State hospitals for the insane, and substituting for them boards of visitation, with the authority of administration of the hospitals transferred to the State Commission in Lunacy. The bill of Assemblyman Rogers on the same subject was substituted at the committee meeting for that of Senator Brackett.

The bill was reported favorably by a vote of 7 to 5. The Senators voting to report the bill favorably were Senators Brackett, Krum, Davis, Mills, Thornton, Ellsworth and McKinney, all Republicans. Those who dissented from the favorable report were Senators Elsberg and Slater, Republicans, and Senators McCarren, Grady and Dowling, Democrats. The vote indicates that the bill is likely to pass the Senate, despite the active opposition to the measure.

The Subway Explosion.—At noon of January 27th a quantity of dynamite exploded at Park Avenue and Forty-first Street, completely wrecking the front of the Murray Hill and the Grand Union hotels, killing seven people and wounding hundreds. The glass in the windows was broken for many blocks around the Hospital for Ruptured and Crippled Children, at Lexington Avenue and Forty-second Street, suffering considerably in this way, though no one was injured there. At the Manhattan Eye and Ear Hospital, on Park Avenue, practically all of the windows were destroyed, several of the inmates were injured by the falling glass, and, it being impossible to keep the rooms warm with all the windows broken, the patients were removed, pending repairs. The damage to the Eye and Ear Hospital is reckoned at \$25,000. The explosion was due to a fire of accidental origin, which occurred in one of the shacks along the subway in which dynamite is stored by the contractors, who use it in blasting. It is reported that the quantity stored at this particular spot was greatly in excess of that permitted by law.

The Austro-Hungarian Hospital Closed.—Owing to a lawsuit for the possession of the property, the Austro-Hungarian Hospital, in East Third Street, New York, was closed recently and the patients removed to other hospitals.

Vaccinators Needed.—To the surprise of the Health Department, the medical inspectors of schools, who were appointed public vaccinators, have refused to serve on account of certain restrictions imposed on vaccinators. Under the civil service rule new appointments cannot be made until the applicants have been examined by the civil service commission of the city and certified to, a process requiring some time.

The Orange County (N. Y.) Medical Association held its annual meeting and election of officers at Middletown, on January 15th. Preceding the business meeting a scientific session was held, at which Dr. Charles E. Quimby, of New York, gave a short address on the Physical Diagnosis of Pulmonary Diseases Based on Acoustics. The election resulted as follows: President, Dr. M. C. Conner; vice-president, Dr. F. W. Dennis; secretary and treasurer, Dr. C. I. Redfield; delegate to the American Medical Association meeting at Saratoga Springs in June, Dr. E. D. Woodhull, of Monroe.

The Jefferson County (N. Y.) Medical Society, at its annual meeting recently, elected the following officers: President, Dr. C. S. Drury, Natural Bridge; vice-president, Dr. John A. Barnette, Watertown; secretary, Dr. F. R. Calkins, Watertown; treasurer, Dr. C. M. Rexford, Watertown; censors, Dr. A. W. Goodale and Dr. J. F. McCaw, Watertown; Dr. D. C. Rodenhurst, Philadelphia; Dr. W. A. Vincent, Three-Mile Bay; Dr. E. A. Chapman, Watertown; delegates to the State Medical Society, Dr. G. D. Gregor, Dr. C. N. Bibbins, Dr. F. B. Smith, Dr. J. F. McCaw, Dr. E. E. Eddy, Redwood; Dr. H. C. Potter, Mannsville; Dr. G. E. Sylvester, Black River; Dr. C. B. Forsythe, Alexandria Bay.

Admiral Van Reypen Retires.—Rear Admiral William K. Van Reypen, chief of the Bureau of Medicine and Surgery, on January 25th closed an active career in the navy, extended over a period of forty years and including service in the Civil War and the Spanish-American War. He goes on the retired list at his own request, with the rank and pay of a senior rear admiral, corresponding to that of major-general in the army. He will be succeeded as surgeon-general by Medical Inspector P. M. Rixey, now in charge of the naval dispensary in Washington. The nomination of Dr. Rixey is pending before the Senate, but there appears to be no doubt of his confirmation. He will not be legally authorized to take charge of the bureau until confirmed and commissioned. In the interim Surgeon James D. Gatewood, assistant chief of the bureau, will be in charge. Dr. Rixey is a native of Culpepper, Va., and has been in the navy many years. He was acting as physician to the President when President McKinley was shot.

The American Congress of Tuberculosis.—The Third Annual Session of this Congress is announced to be held on the 14th, 15th, and 16th of May, 1902, in the city of New York, in Joint Session with the Medico-Legal Society. There will be two sessions each day and no evening session, except on the 15th, when the banquet will be given.

Arrangements will be made with railway companies for a reduced rate of fare, the details of which will be announced to the delegates.

There will be, aside from all papers of a miscellaneous nature, *four symposiums*, arranged each to occupy one session of the body, viz.: 1. Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis. 2. Tuberculosis in its Pathological and Bacteriological Aspects. 3. The Medical and Surgical Aspects of Tuberculosis. 4. The Veterinary Aspects of Tuberculosis.

A large number of the enrolled members have already announced the titles of their papers for the session of 1902, and a still larger number have sent their promise to contribute papers and send the titles later.

The Presidents of the Central and South American Republics, and all Governments on the American Continents, have been invited to send delegates and to name suitable persons to act as vice-presidents, and their men of science requested to enrol and contribute to the work of the Congress, many of whom are already represented by delegates.

Those who were named as delegates by the Governors of States, or medical or scientific bodies, for the session of 1901, are cordially invited to enrol for the Congress of 1902. The enrolling fee will be \$3, which will entitle the member to the Bulletin of the Congress of 1902.

All medical bodies, and scientific or legal associations, or associations of the bar, are invited to send delegates to the congress, who will be given the rights of the floor and a vote at the session.

The enrolment is open to members of both the legal and medical professions in every State, County or Province on the continents of America, in the western hemisphere, and in American waters, and papers are promised and will be solicited from all who are interested, in foreign countries.

For details, etc., address the secretary, Clark Bell, 39 Broadway, New York city.

Osteopaths' Bill Killed.—The joint committee on judiciary of the Legislature of the State of New York gave a hearing on January 29th and immediately thereafter the committee in executive session decided not to report the bill favorably. The opponents of the measure were introduced by Dr. Frank Van Fleet, of New York, president of the New York County Medical Society and chairman of the legislative committee of the New York State Medical Society. Dr. Arthur Guernsey Root, of Albany, for the New York State Medical Society; Dr. Abram Jacobi, of New York; Dr. Albert Vanderveer, of Albany; Dr. Hopkins, of Buffalo, and P. E. Jones,

attorney for the Associated Physicians of Long Island, spoke in opposition to the bill, each urging that the passage of the law would be a step backward and a danger to the community, which now is protected by laws based on experience. The Right Rev. Bishop William C. Doane was the only speaker against the bill not a physician or surgeon.

Hospital Buildings and Endowments.—Work is to be begun at once on the Guggenheim pavilion of the National Jewish Hospital, to be erected with the \$25,000 donated by Simon Guggenheim.—An association has been formed in Denver for the erection of an emergency hospital by popular subscription.—General William J. Palmer has announced his intention of giving 100 acres of land and \$50,000 to establish a semi-philanthropic sanitarium in Colorado Springs for consumptives. The institution will cost in all \$250,000. The remainder of the money is to be raised by subscription.—The Chicago Polyclinic and Hospital has purchased property for \$20,000 on which it is proposed to erect a hospital to cost \$250,000.—A new emergency hospital at Buffalo, N. Y., was formally opened on January 10th.—The home of the Manhattan Maternity Hospital and Dispensary, incorporated at Albany on March 18th last, will be on the plot now known as No. 327 to 333 East Sixtieth Street, New York. The property has been bought by the board of directors for \$33,000. The size is 100 by 100 feet. The hospital will not contain many beds, and these will be especially for the use of emergency cases. Most of the physicians and nurses connected with the hospital will live in the building, and it is thought the average number of workers having rooms there will exceed the number of patients. It is expected that ground for the hospital will be broken in the near future, and that the building, which will be small, will be ready for occupancy this year.—An additional building for demented female patients is to be added to the City Hospital of Cincinnati, O.—The will of Dr. William A. Pierrepont, of Brooklyn, bequeaths \$3,000 to the Brooklyn Hospital.—A movement is on foot at Denver, Col., to establish an emergency hospital.—Plans are being considered to alter and improve the Homœopathic Medical Dispensary, Boston, at an expense of about \$4,000.—The new hospital building of the Society of the Lying-in Hospital, at Second Avenue, Seventeenth and Eighteenth streets, was opened for public inspection on January 22d. The building is the gift of J. Pierpont Morgan and cost \$1,250,000.—Over \$6,000 has been raised for a modern hospital building to be erected at Port Huron, Mich., at a cost of \$10,000.—A contract has been awarded for the erection of a nurses' home on the grounds of the City and County Hospital at a cost of \$2,238.—The will of Lucretia Nelson, of Philadelphia, bequeaths \$3,000 to the German Hospital, of that city.—The German Poliklinik, of New York, has started a building fund of \$100,000 for the erection of a new building.—Ground is to be broken in the spring for a new hospital for Kalamazoo, Mich.—Building operations have begun on the large building for the out-patients of the Massachusetts General Hospital, in Boston.—Plans are in

preparation for a hospital for consumptives to be erected on the grounds of the Philadelphia Hospital by the Department of Charities and Correction. Neither the department nor the architect is prepared to give details at present.—Abraham Slimmer, of Waverly, Ia., has given \$25,000 as the nucleus of a fund for the establishment of a large non-sectarian hospital in Milwaukee, Wis.—The Methodists of Indiana, it is said, have undertaken the erection of a large free hospital, to be located at the State capital. It will cost \$200,000, and the endowment will be \$500,000.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 25, 1902:

DISEASES.	Week end'g Jan. 18		Week end'g Jan. 25	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	38	11	22	11
Scarlet fever.....	276	23	363	25
Cerebro-spinal meningitis.....	0	3	0	2
Measles.....	689	25	829	22
Diphtheria and croup.....	314	52	286	48
Small-pox.....	8	5	54	N
Tuberculosis.....	257	147	258	42

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending January 25, 1902:

- CALVERT, J. W., First Lieutenant and Assistant Surgeon, will supervise instruction in litter-bearer drill and first aid.
- CHURCH, JAMES R., First Lieutenant and Assistant Surgeon, will report to the commanding officer, United States General Hospital, Washington Barracks, D. C., for duty.
- COX, WALTER, First Lieutenant and Assistant Surgeon, will proceed to San Francisco for instructions.
- CRAMPTON, LOUIS W., Major and Surgeon, is granted leave of absence for two months, and upon expiration thereof, he will proceed to Fort Adams, Rhode Island.
- HALSELL, JOHN T., Contract Surgeon, is granted leave of absence for fourteen days.
- HARRIS, HERBERT L., Contract Surgeon, will proceed to Columbia Barracks, Cuba, for temporary duty.
- KIERSTED, HENRY S., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended ten days.
- MCCAW, WALTER D., is granted leave of absence for one month and upon expiration thereof, he will proceed to Fort Wadsworth, N. Y., for duty.
- PINKHAM, EDWARD W., First Lieutenant and Assistant Surgeon, is granted leave of absence for three months, to take effect when his services can be spared, with permission to go beyond sea.
- SANFORD, JOSEPH L., Contract Surgeon, will proceed from Clifton, Virginia, to San Francisco, for transportation to the Philippine Islands.
- SMITH, HERBERT M., First Lieutenant and Assistant Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.
- VAN KIRK, HARRY H., Contract Surgeon, will proceed to Fort Leavenworth, Kansas, for duty.
- WAHL, HUGO A., Contract Surgeon, Fort Strong, will, in addition to his present duties, perform the duties of surgeon at Fort Andrews.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 25, 1902:

Smallpox—United States.

California	Los Angeles	Jan. 4-11	11 cases.	
"	San Francisco	Dec. 29-Jan. 12	10 cases.	
Illinois	Belleville	Jan. 11-18	8 cases.	
"	Chicago	Jan. 4-18	14 cases.	1 death.
"	Freeport	Jan. 4-11	2 cases.	
"	Galesburg	Jan. 11-18	2 cases.	
Indiana	Evansville	Jan. 4-18	6 cases.	
Iowa	Clinton	Jan. 11-18	3 cases.	
"	Ottumwa	Nov. 30-Dec. 28	79 cases.	
Kansas	Wichita	Jan. 11-18	1 case.	
Kentucky	Lexington	Jan. 4-11	3 cases.	
Louisiana	New Orleans	Jan. 4-18	5 cases.	3 deaths.
Maine	Portland	Jan. 11-18	2 cases.	
Massachusetts	Boston	Jan. 4-18	76 cases.	9 deaths.
"	Brockton	Jan. 11-18	1 case.	
"	Brookline	Jan. 11-18	1 case.	
"	Cambridge	Jan. 4-11	3 cases.	1 death.
"	Clinton	Jan. 4-11	3 cases.	
"	Holyoke	Jan. 11-18	1 case.	
"	Lowell	Jan. 11-18	1 case.	
"	Marlboro	Jan. 4-11	1 case.	
"	Medford	Jan. 4-11	1 case.	
"	Quincy	Jan. 4-11	1 case.	
"	Somerville	Jan. 4-11	2 cases.	1 death.
"	Weymouth	Jan. 4-11	1 case.	
Michigan	Ann Arbor	Dec. 28-Jan. 4	2 cases.	
"	Detroit	Jan. 4-18	4 cases.	1 death.
"	Grand Rapids	Jan. 11-18	2 cases.	
Minnesota	Winona	Dec. 28-Jan. 4	1 case.	
Nebraska	Omaha	Jan. 4-11	41 cases.	
"	South Omaha	Dec. 1-Jan. 18	216 cases.	
N. Hampshire	Nashua	Jan. 4-18	2 cases.	
New Jersey	Camden	Jan. 4-18	31 cases.	6 deaths.
"	Jersey City	Dec. 29-Jan. 19	43 cases.	
"	Newark	Jan. 4-18	68 cases.	12 deaths.
"	Passaic	Jan. 4-11	2 cases.	1 death.
"	Plainfield	Jan. 11-18	4 cases.	
New York	Binghamton	Jan. 4-18	1 case.	1 death.
"	Mt. Vernon	Jan. 11-18	1 case.	1 death.
"	New York	Jan. 4-18	48 cases.	8 deaths.
Ohio	Cincinnati	Jan. 4-17	27 cases.	
"	Cleveland	Jan. 4-18	4 cases.	
"	Dayton	Jan. 11-18	1 case.	
"	Hamilton	Jan. 11-18	1 case.	
"	Toledo	Jan. 4-18	4 cases.	
"	Youngstown	Dec. 28-Jan. 18	30 cases.	4 deaths.
Pennsylvania	Allentown	Jan. 4-11	1 case.	
"	Altoona	Dec. 28-Jan. 4	4 cases.	
"	Lebanon	Jan. 4-11	1 case.	1 death.
"	Norristown	Jan. 4-11	10 cases.	1 death.
"	Philadelphia	Jan. 4-11	213 cases.	31 deaths.
"	Pittsburgh	Jan. 11-19	4 cases.	
Rhode Island	Providence	Jan. 12-18	1 case.	
S. Carolina	Greenville	Jan. 4-11	1 case.	
Tennessee	Memphis	Jan. 4-18	11 cases.	
Utah	Salt Lake City	Jan. 11-18	1 case.	
Vermont	Burlington	Jan. 4-11	38 cases.	
Washington	Tacoma	Dec. 29-Jan. 12	12 cases.	
Wisconsin	Green Bay	Jan. 4-18	25 cases.	
"	Milwaukee	Jan. 4-18	3 cases.	

Smallpox—Foreign.

Africa	Monrovia	Dec. 7-14	1 case.	
Austria	Prague	Dec. 14-28	12 cases.	
Brazil	Rio de Janeiro	Dec. 7-22	77 deaths.	
Canada	Halifax	Jan. 4-11	12 cases.	
"	Quebec	Jan. 4-18	110 cases.	1 death.
"	St. John	Dec. 28-Jan. 18	3 deaths.	
Colombia	Panama	Dec. 23-Jan. 13	48 cases.	
France	Lyons	Dec. 21-28	1 death.	
"	Paris	Dec. 21-Jan. 4	7 deaths.	
Gt. Britain	Glasgow	Dec. 27-Jan. 10	31 cases.	
"	Liverpool	Dec. 21-Jan. 4	5 cases.	
"	London	Dec. 21-Jan. 4	1419 cases.	68 deaths.
"	Newcastle-on-Tyne	Dec. 21-28	1 case.	
"	Sheffield	Dec. 21-28	1 case.	
India	Karachi	Dec. 8-15	6 cases.	2 deaths.
Italy	Naples	Dec. 21-28	32 cases.	2 deaths.
Russia	Moscow	Dec. 7-21	34 cases.	12 deaths.
"	Odessa	Dec. 14-28	11 cases.	2 deaths.
"	St. Petersburg	Dec. 14-28	11 cases.	4 deaths.
"	Warsaw	Dec. 14-21	5 deaths.	
Spain	Barcelona	Dec. 24-31	3 deaths.	
"	Corunna	Dec. 21-Jan. 4	2 deaths.	
"	Vigo	Dec. 1-31	1 death.	

Yellow Fever.

Brazil	Rio de Janeiro	Dec. 8-22	2 deaths.	
Mexico	Vera Cruz	Dec. 28-Jan. 18	8 cases.	5 deaths.

Cholera.

India	Bombay	Dec. 10-17	2 deaths.	
"	Calcutta	Dec. 7-14	36 deaths.	
"	Madras	Dec. 7-13	5 deaths.	
Java	Batavia	Nov. 30-Dec. 7	10 cases.	4 deaths.

Plague.

Brazil	Rio de Janeiro	Dec. 7-22	13 deaths.	
China	Hong Kong	Dec. 7-14	1 death.	
India	Bombay	Dec. 11-17	144 deaths.	
"	Calcutta	Dec. 7-14	21 deaths.	
"	Karachi	Dec. 8-15	81 cases.	56 deaths.
Turkey	Smyrna	Dec. 28	11 cases.	

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 25, 1902:

DENNIS, J. B., Passed Assistant Surgeon. Commissioned passed assistant surgeon from May 25, 1901.

HUNTINGTON, E. O., Passed Assistant Surgeon. Commissioned passed assistant surgeon from May 24, 1901.

LEWIS, D. O., Surgeon. Ordered to the *Pensacola*.

McCLURG, W. A., Medical Inspector. Ordered to the *Olympia*.

PAGE, J. E., Passed Assistant Surgeon. Detached from the *Pensacola* and ordered to hold himself in readiness for sea duty.

PARKER, E. G., Assistant Surgeon. Ordered to the *Pensacola*.

VAN REYPEN, W. K., Rear Admiral, and Chief of the Bureau of Medicine and Surgery. Retired from active service, January 25, 1902, upon his own application, after forty years of service, with the rank and three fourths the sea pay of the next higher grade.

WEBB, U. R., Assistant Surgeon. Detached from the *Pensacola* and ordered to the Asiatic Station, sailing from San Francisco on February 7th.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ended January 23, 1902:

BROOKS, S. D., Surgeon. To proceed to Bath, Maine, for special temporary duty.

MAGRUDER, G. M., Surgeon. Granted thirty days' leave of absence, on account of sickness, from January 22d.

THOMAS, A. R., Passed Assistant Surgeon. To proceed to Liverpool, England, for special temporary duty.

ANDERSON, J. F., Assistant Surgeon. Upon expiration of leave of absence, to proceed to Washington and report to the Director of the Hygienic Laboratory for duty.

GARCIA, FELIX, Acting Assistant Surgeon. Granted leave of absence for thirty days from January 25th.

ALLEN, G. C., Hospital Steward. Granted leave of absence for two days from January 27th.

Births, Marriages, and Deaths.

Married.

CLEVERDON — HOGARTY. — In Quindaro, Kansas, on Wednesday, January 15th, Dr. Lawrence Alexander Cleverdon and Dr. Sara Honora Hogarty.

DEARBORN — GULICK. — In New York, on Wednesday, January 29th, Dr. Frederick M. Dearborn and Miss Alice Romaine Gulick.

HANKINSON — LYETH. — In Augusta, Georgia, on Wednesday, January 29th, Dr. Stephen Hanford Hankinson and Miss Gertrude Viola Lyeth.

POWER — STONE. — In New York, on Wednesday, January 22d, Dr. Walter Bonamy Power and Miss Laura Lowrey Stone.

Died.

BADEN. — In Baltimore, on Monday, January 20th, Dr. Joseph Abell Baden.

BODKIN. — In Brooklyn, on Sunday, January 26th, Dr. Dominick George Bodkin, in the sixty-ninth year of his age.

DOWNEY. — In Chicago, on Sunday, January 5th, Dr. F. E. Downey.

SPOULL. — In New York, on Saturday, January 25th, Dr. Charles George Sproull, in the thirty-fourth year of his age.

SWEETLAND. — In Chicago, on Thursday, January 23d, Dr. Warren M. Sweetland, in the eighty-second year of his age.

WELLMAN. — In Dover Plains, N. Y., on Monday, January 13th, Dr. George M. Wellman, in the sixty-fifth year of his age.

WOOD. — In Indianapolis, on Monday, January 20th, Dr. Levi Wood, in the seventieth year of his age.

Pith of Current Literature.

Medical Record, January 25, 1902.

The Food Factor as a Cause of Health and Disease During Childhood, or the Adaptation of Food to the Necessities of the Growing Organism. By Dr. Joseph E. Winters.—According to the author, chemistry, physiology, and chemical physiology have furnished unerring guides for the feeding of children. The period at which farinaceous substances should be given, and the kind of them, is wholly evident. During all the years of early childhood, meat and its preparations should be given only sparingly on account of their overstimulating metabolism, but chiefly for the reason that they create a distaste for cereals, fats, and fresh vegetables, thus depriving the system of materials necessary to shield the proteids from oxidation that they may be stored for future needs, and of the necessary mineral salts which vegetables obtain direct from the soil. In a child, with its relatively large cutaneous surface, and correspondingly rapid heat loss, the large demand for calories must not be covered by proteids to any great extent, otherwise there is a lack of deposition of proteid—or of muscle growth. Increasing quantities of carbohydrates and fats in the food decrease proteid metabolism; a more lasting deposition of proteids for future needs is thus brought about.

The Nature of Cutaneous Epithelioma, with Remarks on Treatment by the X Rays. By Dr. Charles Warren Allen.—The author recapitulates briefly the chief theories of causation, as: 1. Infectivity of epithelial cells (toxic cause of overgrowth). 2. Proliferative overgrowth of misplaced cells. 3. Effects of micro-organisms. The author finds much that renders the parasitic theory probable, aside from what has been accomplished in laboratory investigations. Epithelioma differs materially from other cancer in a clinical sense only up to a certain point. There is less malignancy in all the early stages and little tendency to involve lymph nodes; but once the confines of the skin have been passed, it rapidly and malignantly invades contiguous structures, not stopping at bony barriers. As for treatment, the author has followed the plan of using first the familiar methods and then giving the patient the benefit of all that the x rays may possess for good in searching out germs or cells that may have escaped his efforts or have been beyond the field of operation. In strictly "inoperable" cases he would not hesitate to use the rays alone.

Report of the Committee on Sanatoria for Consumptives. By Dr. John H. Pryor.—The establishment of sanatoria, as an example, is necessary now; but the time is not far distant when the American will perceive that this country lags so far behind Europe, that it will soon compare with Asia in stubborn, stupid disregard of the greatest question concerning public health.

Two Cases of Gastro-enterostomy with Entero-enterostomy Done with the Aid of the Elastic Ligature (McGraw's Method). By Dr. Willy

Meyer.—The author speaks very strongly in favor of the operation done with the elastic ligature.

Report of a Case of Penetrating Wound of the Abdomen with Protrusion of Viscera and Injury to the Stomach—Operation—With a Later Development of Renal Symptoms—Recovery. By Dr. William V. Pascual.

Boston Medical and Surgical Journal, January 23, 1902.

Notes on the Life and Writings of Geronimo Cardano. By Dr. Charles Greene Cumston.—An interesting and readable article to show that Cardano was a great physician and observer. The author concludes that Cardano did not believe in the occultism with which his works abound, but that it was only written to increase "space" pay.

Lymphatic and Portal Infections Following Appendicitis. By Dr. John C. Munro.—Practically all lymphatic infections are curable by operation. Only rarely will a case of hepatic infection be cured, but if the patients are allowed to go on until they become septic skeletons before operation, the chances of cure are almost hopeless. A persistent temperature during, or following, appendicular inflammation, inconsistent with other lesions and associated with lumbar spasm, should suggest a lymphangitis. Slight or fleeting jaundice, irregular chills, hepatic tenderness, and progressive inflammation should suggest a portal pyophlebitis following appendicular inflammation, present or remote. Six cases are reported.

Notes on the Management of the Anæsthetic in Operations on the Respiratory Tract. By Dr. Harris Peyton Mosher.

Notes on X Light: Radio-active Substances in Therapeutics. By William Rollins.—The author believes it important to test these substances in cases of lupus, etc., in which the x light has been of value. He also suggests the making of plasters of radio-active substances by mixing them with rubber or celluloid to form moisture-proof plasters, to be used with proper directions as to the length of application.

Journal of the American Medical Association, January 25, 1902.

The Diagnosis of Small-pox. By Dr. Jay F. Schamberg.—The author's article points to the conclusion that it is injudicious to base a diagnosis of small-pox upon any one symptom. A case must be viewed in all its aspects and a diagnosis made from the *ensemble* of symptoms.

Vaccine Virus—Its Preparation and the Complications Attending its Use. By Dr. Joseph McFarland.—The author agrees with Dr. Moncton Copeman in recommending the glycerinated virus, with unqualified praise, as the method by which the bacteria can be destroyed and the vaccine organism preserved. He considers a simple dressing of sterilized gauze the best protection for the vaccine wound, and is greatly opposed to the use of shields.

Reversibility of Enzymes, and its Application to Physiologic and Pathologic Processes. By Dr. H. Gideon Wells.—The author concludes that all metabolism may be considered as a continuous attempt at establishment of equilibrium by enzymes, perpetuated by prevention of attainment of actual equilibrium through the destruction of some of the participating substances by oxidation or other chemical processes, or by removal from the body, or entrance into it of materials which overbalance one side of the equation.

Pulmonary Fearlessness. By Dr. W. T. English.—According to the author, man, at birth, is a pulmonophobic, and it has been proved by every method of analysis that the stages of fear obsolescence are a part of the phenomena of lung degeneration. It may be regarded as negative evidence as to the presence of bacilli when the fear-manifestations are constant in suspected lung disease.

The Experience of Syracuse, New York, with the Compulsory Tuberculin Test of all Dairies Furnishing Milk to the City. By Dr. B. S. Moore.—The experience of Syracuse has impressed the author with the great value of the tuberculin test as a means of diagnosing bovine tuberculosis. Milk, an indispensable article of food, universally used, must be removed from any suspicion of infection from a bacillus the cause of the most common, and at the same time the most fatal, of diseases.

Climatology of Arizona, with Especial Reference to the Climatic Treatment of Pulmonary Tuberculosis. By Dr. Robert W. Craig.—As being essential to the proper treatment of tuberculosis, the author summarizes: Pure and abundant air by both day and night, indoors and out; such good and plentiful food as a simple open-air life may enable a patient to digest; rest frequent and complete; a long night of sleep; an hour's rest after walking, additional rest when the individual may require it; and, in all cases, absolute avoidance of fatigue. The climatic conditions in Arizona are such as to lend the most favorable surroundings to the open-air treatment.

Blood Examination from the Standpoint of the General Practitioner. By Dr. F. W. Higgins.—The author believes that the routine examination of the blood may be profitably made by the general practitioner.

Brain Tumor Developing in a Case of Peripheral Neuritis, the Latter Obscuring Diagnosis—Operative Removal of the Tumor—Recovery. By Dr. G. W. McCaskey and Dr. Miles F. Porter.

Surgical Correction of Malformation and Speech Defects Due to or Associated with Harelip and Cleft Palate. By Dr. George V. I. Brown.—The author believes that the risk of operation in early infancy is unnecessary except where the vitality of the child is threatened by malformation. The most favorable time for operation is after the deciduous teeth have erupted, but before the habit of speech has been acquired. In the adult, correct methods of pronouncing words may be acquired by careful mental training after

operation. With the cooperation of the patient there can be no cases which cannot be improved by treatment and operation.

Traumatic Arterio-venous Aneurysms of the Subclavian Vessels, with an Analytical Study of Fifteen Reported Cases, Including One Operated Upon. By Dr. Rudolph Matas.

Report of a Death from Chloroform Anæsthesia, Being the First in a Practice of Sixteen Years, and Including no less than Two Thousand Chloroform Anæsthesias. By Dr. Bayard Holmes.

Case of Necrosis of Bones of the Skull. By Dr. W. U. Cole.

Philadelphia Medical Journal, January 25, 1902.

On the So-called Idiopathic Dilatation of the Œsophagus (Saccular Dilatation of the Œsophagus without Anatomical Stenosis). By Dr. H. Strauss.

Gastroptosis and Gastric Motor Insufficiency. By Dr. J. Dutton Steele.—Tight lacing and the hanging of heavy clothing from the waist-band should be forbidden. Rest for an hour after meals, and but moderate amounts of easily digested food should be taken at one time. Lavage is not required unless a considerable amount of dilatation or retention demands.

A Clinical Lecture on Scalp-wounds, and Cranial and Brain Injuries. By Dr. Thomas H. Manley.

Remarks on Vaccination in Relation to Skin Diseases and Eruptions Following Vaccination. By Dr. Arthur Van Harlingen.—The author believes that we should approach the operation of vaccination with almost the precautions employed before a surgical operation. He fears that some precautions, however, render the virus practically inert. Shields are indispensable, but for the first few days only. So soon as the vaccine virus has invaded the system, the shield should be cast aside and antiseptic dressings with frequent changes should be practised.

A Case of Pneumococcic Arthritis, accompanying Acute Pneumonia. By Dr. D. J. Milton Miller.

Medical News, January 25, 1902.

The Causation of Multiple Neuritis. By Dr. M. Allen Starr.—The author gives a list of the causes thus far determined. He adds, however, that in some cases of neuritis a double causation may be ascertained, and he instances the fact that alcoholic subjects are more liable to arsenic and lead poisoning than non-alcoholics. It has been observed that alcoholic neuritis often develops in an individual subsequently to an attack of the grippe, typhoid, or other infectious disease, though the amount of alcohol taken is not increased. Hence, it is not wholly sufficient to ascertain one cause in a patient, and we should not be satisfied that we have determined the exact ætiology of the affection in any patient until we have elicited every possible factor in the case.

Criminal Abortion. By Dr. E. Stuver.—The author points out that when one considers the

lives destroyed by the abortionist, the life losses caused by the Spanish-American and Boer wars pale into insignificance; but such evils are of comparatively slight importance beside the obtunding of the moral nature, the turpitude, and race degeneracy consequent on this most insidious and degrading of all crimes. The physician should refuse to perform such operations, and should embrace every opportunity to teach others. Legislators and judges should be taught the biological facts on which life rests. Laws, with severe penalties for their contravention, should be enacted prohibiting newspapers from advertising, and druggists from selling abortifacient remedies, except on prescription of properly licensed physicians.

On the Use of the Opiates, Especially Morphine. By Dr. Oscar C. Young.—The author believes that there is a growing tendency to ignore the common and well-tried remedies. In regard to morphine he thinks that the present danger of the physician inducing the habit in a patient is overdrawn, and he suggests that, when we have a patient of average intelligence in great pain, we should treat him as we would wish to be treated were he the doctor and we the patient.

Gonorrhœa in Women. By Dr. J. B. Killebrew.—The curative treatment of gonorrhœa in women is comparatively easy so long as the infection is confined to the urethra, vulva, and vagina. Treatment consists of rest, thorough cleansing by douches containing some antiseptic solution, and local applications. In cases of acute endometritis, curetting should be resorted to as soon as possible. In cases of pyosalpinx, unilateral or bilateral, in genital sclerosis, and in those cases in which conservative treatment has failed, a complete vaginal hysterectomy should be done, using forceps instead of ligatures to control hæmorrhage.

A Case of Spontaneous Rupture of the Eyeball. By Dr. H. Whitehead Gilfillan.

American Medicine, January 25, 1902.

Three Cases of Pancreatic Disease. By Dr. Francis W. Murray.—In many cases of pancreatic calculi, a simultaneous existence of gall-stones has been observed, and if the theory that gall-stones are due to infection is true, the author believes that it certainly strengthens the position of infection as an ætiological factor in diseases of the pancreas. Concerning the treatment of diseases of the pancreas, the indications are surgical, but owing to the difficulties of diagnosis its application is limited. In the future, should we succeed in overcoming the difficulties and be able to make an early diagnosis, many of the cases which are now considered hopeless will be cured. Cases follow.

What Reliance Can Be Placed Upon the Image Produced by the X Ray from a Medico-legal Standpoint? By Dr. Charles Lester Leonard.—The author believes that this method of diagnosis should not be feared, but courted for the scientific aid that it is capable of giving in the treatment of fractures. A more accurate method than

any other, and capable of rendering the greatest service by demonstrating the value and efficiency of the methods of treatment, its employment in competent hands should be demanded wherever it is feasible.

Diffuse Peritonitis Resulting from Appendicitis. By Dr. Carl C. Warden.—The author calls particular attention to septic intoxication, which may complicate both local and general forms of peritonitis. This condition may result from absorption of toxins which are developed in localized abscesses; it may also result from a diffuse peritonitis of any variety. It is not easy to distinguish the type of inflammation by the intoxication. This complication is characterized chiefly by an icterus of light grade. There is no bile pigment in the urine, but a slight albuminuria may exist. Mental aberration is pronounced and may be exhibited in depression or exaltation. It is this class of cases which affords the surgeon the greatest concern. The prognosis is bad in every instance. Very few recover even after the "laboratory of toxins" has been removed. The tendency to abscess formation in the liver and subphrenic region of the peritoneal cavity is most common.

The X Rays in So-called Sprains. By Dr. G. G. Ross and M. I. Wilbert.—The cases and illustrations in this article are sufficient to suggest the possibility of grave injuries and results which may be occasioned by very slight causes.

A Rapid Method of Detecting Bacillus Coli Communis in Water. By Dr. B. H. Stone.

Hæmorrhagic Typhoid Fever. Report of a Case Ending in Recovery. By Dr. C. B. Longenecker and Dr. Joseph Akerman.

Lancet, January 11, 1902.

Some Diseases Incidental to School Life in New Zealand, with Suggestive Methods for Combating Them. By G. R. Saunders, M. B.

Acute Suffocative Pulmonary Œdema. By Dr. J. L. Steven.—The symptoms of acute suffocative pulmonary œdema are so striking that there is but little difficulty in recognizing their significance. Without warning, and without any over-exertion or excitement, the patient is suddenly seized with great difficulty of breathing accompanied by a sense of intense oppression behind the sternum. It is quite impossible for him to lie down, and almost simultaneously with the onset of the dyspnoea—a most important diagnostic point—expectoration of a perfectly white, finely frothy, watery sputum begins. The frothy fluid seems to flow up the trachea and is expelled by a "hawk" as if clearing the throat, but there is no cough in the ordinary sense of the word. The sputum continues during the whole period of the dyspnoea and the seizure is not usually accompanied by fever. The pulse may be very rapid; and wheezing and moist râles are everywhere heard. The extremities soon become cold and blue, the face is ashen gray, and the agony and anxiety of the patient are extreme. After a little the frothy sputum becomes slightly pink in color, and in some cases, after the attack has lasted for

an hour or two, definitely bloody. In the course of five or six hours, as much as one and a half pints may be expectorated. The whole clinical phenomena indicate that the pulmonary alveoli are suddenly inundated with watery serum, and it is quite conceivable that such a condition may prove rapidly fatal. There are several forms of acute dyspnoea with which acute pulmonary oedema might be confounded; these are:

1. Pulmonary embolism. Here, expectoration is always a later development, and when it is established the sputum is bloody from the first.

2. Acute spasmodic asthma. Here there is no expectoration during the attack, it being only established after the dyspnoea is passing off. It is relatively scanty.

3. Uræmic asthma of the ordinary type. This is less severe, and is unaccompanied by the profuse, frothy expectoration. It usually occurs in the course of well-marked renal disease.

4. Acute pulmonary oedema. This, with abundant watery expectoration, following the removal of large pleural effusion by thoracentesis, somewhat resembles acute suffocative pulmonary oedema. But severe respiratory distress is usually absent.

As to treatment, the therapeutic measure indicated is free stimulation—hypodermic injections of strychnine and digitaline, together with rectal injections of brandy. Opiates in any form are to be avoided. Blood-letting has been suggested, but the depression and collapse seem to contraindicate it.

The author reports two cases of the affection, occurring respectively in a woman aged thirty-eight years, and a man aged forty years. Both patients recovered, but the man died later in a similar attack. The post-mortem summary in his case was as follows: Subacute tubular nephritis; chronic changes in the aortic valve; stenosis of mitral valve; and congestion of other organs.

Mental School Hygiene. By Dr. F. Warner.

Volkmann's Contracture. By L. S. Dudgeon, M. R. C. S.—Volkmann's contracture may be defined as a contraction of the fingers and sometimes of the wrist which comes on rapidly with loss of power which is not absolute in the forearm muscles after a severe injury, usually in the region of the elbow-joint, generally in young children. The deformity is due to changes in the flexor muscles without injury to the peripheral nerves caused in many cases by tight bandaging and the pressure of splints. The author has seen four cases of the affection, and has collected thirteen more from the literature on the subject.

The symptoms come on rapidly—in half a day or less in very severe cases. The great feature is the onset of paralysis of a limb with contracture. The fingers sometimes become blackish in color and frequently swell. There is rarely any pain; there is often sloughing of the skin, usually in the middle or upper part of the flexor surface of the forearm. The characteristic position of the hand is as follows: With the wrist extended, the metacarpophalangeal joints are extended also; the interphalangeal joints of the fingers and the terminal joint of the thumb are strongly flexed, so

that the tips of the fingers touch the lower part of the palm. So soon as the wrist-joint is flexed to a right angle then the interphalangeal joints can be easily extended. In very bad cases the wrist cannot be extended. The flexor muscles seem hard, firm, and much wasted. A swelling, bony in character, is sometimes to be found at the lower end of the humerus. Sensation may be normal, or there may be partial anæsthesia. There are usually three grades of the condition: (1) Partial contraction of the hand; (2) the hand in the typical position; and (3), strong flexion of the wrist and fingers, without the power of extension. There are no true trophic lesions, but the hands are frequently cold and blue, and the skin smooth. In well-marked cases there is well-marked shortening of the bones. The electrical reactions are normal. The condition is supposed to be ischæmic myositis, due to pressure; the peripheral nerves are not affected.

The diagnosis is usually easy, but there may be difficulties in finding out whether the case is purely ischæmic myositis or whether it is this disease together with injuries of the peripheral nerves. Among the other conditions which may produce such a deformity are: (1) Ulnar, median, or musculo-spiral paralysis; (2) the contraction after acute anterior poliomyelitis; (3) Little's disease; and (4), functional disease.

The prognosis of Volkmann's contracture is bad; massage and electricity may prove of some benefit, but complete recovery rarely ensues. Various surgical procedures have been suggested and tried; while they remedy the deformity, there is no recovery of the power of flexion of the fingers.

Some Figures as Regards Susceptibility to Revaccination. By Dr. F. W. Andrews.—The author's article is based upon the results of the revaccination of 171 individuals. They indicate that during the third decade of life some 80 per cent. of those vaccinated in infancy are most imperfectly protected against small-pox. It is this class which renders the number of attacks during an epidemic larger in the vaccinated than in the unvaccinated, whatever the proportion of fatal cases may be.

A History of the After-progress of Five Cases of Partial Gastrectomy for Cancer of the Pylorus. By J. R. Morison.—The author reports the after-progress of five cases of partial gastrectomy for cancer of the pylorus, operated upon by him between the years 1897 and 1899. All the patients had died at the date of making the report. In only one case was a necropsy obtainable; the liver was extensively involved, but there was no recurrence in the stomach.

Nævus Verrucosus Associated with Certain Anomalies of Pigment. By Dr. H. Taylor.

A New Method of Breaking Down Recent Adhesions. By G. W. Ord, M. R. C. S.

Presse médicale, December 21, 1901.

Hysteria and Paludism.—M. Boinet records a number of cases in which he has observed malarial infection in hysterical subjects. He says that paludism always aggravates the hysteria.

the attacks of the latter being frequent and continuing after the cure of the malaria. While it is, therefore, tenacious, it is not necessarily fatal. The malaria must be first combatted, and is best treated in these cases by the valerianate, the bromohydrate, or the glycerophosphate of quinine. Arsenic and the cacodylates are also indicated.

Centralblatt für Gynäkologie, December 14, 1901.

Carcinoma Statistics.—Dr. E. Waldstein says that, in Schauta's clinic, the following statistics have been elaborated: Of 14.7 per cent. of operative cases, 8.8 per cent. of the patients died. Of those who survived, 29.5 per cent. remained free from recurrence. This means that of 100 carcinomatous women, about four will be cured by timely operation.

On Dysmenorrhœa.—Professor Menge says that dysmenorrhœa appears 1. in functional disorders of the nervous system, hysteria and neurasthenia, when the genital apparatus is sound; in these cases, the central nervous system is hypersensitive and this *nervous* form of dysmenorrhœa is an hysterical stigma. 2. In pathological changes in the genital canal, where there is a lack of relation between the quantity of menstrual blood and the canal through which it must flow; this is mechanical dysmenorrhœa. 3. In pathological conditions of the pelvic organs when these become exquisitely sensitive; inflammatory dysmenorrhœa. The author describes the pain of dysmenorrhœa as resembling that of labor. It is increased if the menstrual blood appears in clots rather than fluid.

The author sums up by saying: "No menstruation or dysmenorrhœa without pain, but many cases of dysmenorrhœa the result of a diseased nervous system." This Menge attributes to the enormous distribution of hysteria and neurasthenia among women. The treatment must be directed to the cause. In nervous cases, massage, hydrotherapy, gymnastics, removal of the patient from her surroundings, are the main elements of treatment. The author does not believe in a "nasal dysmenorrhœa," but says that cocainization of the nose is sometimes wonderful in its results.

A New Sign of Early Pregnancy.—Dr. O. Schæffer says that while performing certain experiments, he found that the production of a hæmorrhage with a blunt instrument, as a bullet forceps, evoked an almost uncontrollable hæmorrhage from the cervix, usually of a bright red color. By titrating this blood and examining the blood cells under the microscope, he found that there was at the time of early pregnancy, a great increase in the venosity of the mixed blood from the cervix. [The test is interesting, but is altogether too complicated, according to the author's description, to be of general practical value.]

December 21, 1901.

Autolysis of the Placenta.—Dr. P. Mathes has conducted a series of examinations for the purpose of discovering the presence of peptones and albumoses in the placenta. He examined a large

number of placentæ, fresh and also several days after delivery, and was able, by using Devoto's method, to demonstrate that the placenta contains enzymes which, under certain circumstances, can evoke an autolysis of the organ, that is, a splitting-up of the placental albumin in a similar manner to that of the intestine. This has, of course, an important bearing on the nutrition of the fœtus while in the uterus.

Double Oophorectomy for Torsion of the Pedicle in the Fourth Month of Pregnancy. By Dr. J. Løwenberg.

Reposition of Prolapsed Umbilical Cord. By Dr. H. Henne.

Wiener klinische Wochenschrift, December 19, 1901.

Sterility.—Professor Chrobak, in a scholarly article, reviews the causes of sterility. He mentions adiposity as a cause, and anæmia chlorosis, intestinal diseases, and the habitual use of drugs, such as morphine, mercury, and iodine, as other reasons for sterility. Sexual feeling on the part of the woman plays no rôle, as those suffering from dyspareunia, as well as some who have carcinomata, vesical fistulæ, etc., also conceive. As to pathological conditions, he considers a hypoplastic cervix with a congenital retroversion as a common cause of sterility. In certain cases of short vagina, in which the semen is immediately ejaculated *post coitum*, the author advises a suitable ring pessary which will not stretch the posterior fornix, or a plastic operation which will cause the posterior vaginal wall to bulge forward toward the vulva. Radical operations for retroflexed and retroverted uteri, wedge-shaped dissection in cases of stenosis, and Gersuny's method of petrolatum injection in cases of relaxed vaginæ, are also advised.

Hypertrophy of the Mammæ and Supernumerary Mammæ during Pregnancy.—Dr. Arthur Foges records a case in which gigantic mammary hypertrophy developed during pregnancy, as well as in the supernumerary breasts which the patient had. The peculiarities of the case lay in the enormous growth of the breasts with a great loss of flesh and strength, in their removal by operation during the pregnancy, the favorable result generally and in regard to the gravidity, and in the peculiar histological findings.

Case of Primary Ascending Genital Tuberculosis. By Dr. von Hauschka.

Spinal Analgesia with Tropococaine. By Dr. F. Neugebauer.—(*Continued article.*)

Centralblatt für Chirurgie, January 11, 1902.

Treatment of Sciatica.—Dr. Fritz Hölscher says that for ten years, he has treated cases of sciatica with prompt and permanent results by exposing the sciatic nerve, and laying upon it for several successive days a gauze-tampon saturated with a five-per-cent. solution of carbolic acid. In fifteen cases, he has had but two recurrences, one after two years, the other after three.

Münchener medicinische Wochenschrift, December 17, 1901.

A Little Known but Frequent Accompaniment of Cancer.—Professor Leser points out that a very frequent accompaniment of carcinomatous invasion of any part of the body, is an angioma, or several angiomas, of the skin. It occurred in forty-nine out of fifty of his cases, all of which were carefully observed. He regards this as a diagnostic sign of great importance.

Experimental Basis of Tendinoplasty. By Professor A. Hoffa.

Disinfection of Rooms Occupied by Tuberculous Persons.—Dr. Ottolenghi advises the use of a one-half or a one-per-cent. solution of corrosive sublimate for the disinfection of premises occupied by tuberculous subjects, and especially for the disinfection of areas in which they have expectorated.

Chronic Pemphigus of the Upper Respiratory Tract. By Dr. J. Gugenheim.

Riforma medica, October 26 and 28, 1901.

On Epizootic Aphthæ. By Dr. B. Pernice and G. Riggio.—The authors study the histological features of epizootic aphthæ and find that the lesions common to all the cases of epizootic included inflammatory lesions of the blood vessels, a pronounced hyperæmia, hæmorrhages, and infiltrations of a specific yellowish-golden pigment. In addition, there were degeneration of the cardiac and other muscles, with small cell infiltrations in the connective tissue, a hæmorrhagic bronchopneumonia in isolated foci, or in confluent nodules, peribronchitis, emphysema, interstitial atrophic hepatitis, with marked degeneration and atrophy of the hepatic cells. Inflammatory lesions of the spleen, the kidneys (hæmorrhagic nephritis), and necrosis of the nerve cells, together with hæmorrhagic enteritis were also noted. These lesions, therefore, in addition to the external ones, constitute the pathological substratum of epizootic.

October 29, 1901.

Pylorotomy with Resection of the Stomach for Cancer of the Small Curvature of the Pylorus. Recovery. Remarks. By Dr. Pietro Pozza.—The patient was a man aged thirty-five years, who showed the clinical history of a malignant growth in the stomach. The operation consisted of the removal of the growth, which involved the greater portion of the lesser curvature of the stomach and the pylorus, which was partly contracted. The morbid process, however, extended only through the mucosa and the muscular coats, not through the serous coat, and but few glandular enlargements were present. The pylorus was accordingly resected, and the entire involved portion of the stomach removed. Only the cardiac end and a little of the greater curvature, forming a sac of the size of a hen's egg, remained. The stomach was then closed and a gastro-enterostomy with Murphy's button was performed. No recurrence was noted eighteen months later.

October 30, 1901.

Rumination in Man. By Dr. Francesco Cascella.—The patient whose case is here reported was a man aged thirty-five years, who had been sent to an asylum on account of progressive symptoms of insanity. He had markedly carious teeth and a dilated stomach. In this case there was a true rumination, i. e., a return of the bolus of food into the mouth and a re-mastication thereof, followed by deglutition, and a return into the mouth of a second bolus, etc. The act of rumination was performed quietly, without any nausea, in whatever situation the patient happened to be. The sense of hunger was strongly developed, and the patient ate indifferently any kind of food without distinction. He swallowed any food that was given him with great voracity at all times, and never seemed to be satisfied. He never chewed his food when first ingested. His favorite attitude during rumination was with his elbows on his knees, and the hands supporting the chin. At other times he would walk about slowly with measured tread and stare fixedly at the ground, where he would pick up anything that he thought would be suitable to eat, without regard to cleanliness. Rumination began soon after the meal, i. e., about ten minutes afterward if the meal had been abundant, and twenty minutes afterward if the meal had been scanty. The author believes that rumination in man may be reflex or dependent upon morbid digestive processes. It is a reversion to an ancestral type, and is met with in persons who present stigmata of degeneration.

November 2 and 4, 1901.

A New Method of Ureteral Anastomosis. By Dr. Anotonio Ferraro.—The author's method is briefly as follows: A small grooved sound is introduced into the upper end of the ureter to be anastomosed; at a distance of about one centimetre from the end of the fragment a transverse incision is made, in such a manner as to include in the incision only half of the circumference of the ureter. From the middle point of this incision a second one is now made longitudinally, down to the end of the fragment. In this manner two equal flaps with square corners are obtained. The lower cut end of the ureter is now treated in the same way as the upper. The flaps are reflected so that the mucosa looks outward, and the suture is introduced into the middle of the transverse incision of one end and is passed into the other end of the ureter, between the flaps, i. e., in that part of the end which has not been affected by the transverse incision. The suture is now drawn. The flaps are wrapped around the united ends, so that they can be sewn in place with catgut. The repair of the ureter in this manner is very efficient, as shown by experiments on dogs, and the method is easy of execution as compared with others.

November 5, 1901.

Tuberculous Ureteritis and Cystitis. Epicystotomy. Recovery. By Dr. Sergio Trombetta.—In the case here related a woman of seventy had been suffering for some time from ureteritis

and cystitis due to a tuberculous process in the bladder. Suprapubic cystotomy was performed, and the bladder drained by means of two syphon tubes, by Poirier's method. The recovery was uneventful and the symptoms of spasm and dysuria did not return for a year, when a few drops of pus were passed, which contained tubercle bacilli. Functionally, there was no further disturbance. Although perfect cure can not be obtained in such cases, the results of suprapubic cystotomy justify its employment in tuberculous cystitis.

November 6 and 7, 1901.

The Cremasteric Reflex. By Dr. Aldo Tozzi.—An investigation of the factors affecting the cremasteric reflex led to the following conclusions: (1) In persons with a neurotic temperament, marked modifications of the reflex are observed, from its absence to its exaggerated form, without any nervous disease being present. The reflex is most normal when the relation between height and breadth in the individual approaches most nearly to the ideal. (2) Contrary to the assertion of Moeli, it is very rare to observe an equally well-marked cremasteric reflex on both sides of the body. (3) In hemiplegias this reflex may be absent, or be present on the diseased side as well as on the normal side, contrary to the statement of Jastrowitz.

The cremasteric reflex may therefore be regarded as valuable in diagnosis, only when various causes that may modify it are excluded, and also when its presence is tested repeatedly at various times. (4) The cremasteric reflex cannot be considered as a sign of acute, much less of chronic, hemiplegia.

Vratch, December 15 (New Style, December 27), 1901.

Help for the Starving. By Dr. D. I. Jbankoff.—The author reviews the history of the charitable movement among physicians to assist, with food and medical attendance, the starving population of famine districts. He calls attention to the complicated and stringent rules of the Russian government, which affect local private charitable organizations and prevent them from giving efficient aid to the starving. The question will be taken up, at the author's suggestion, before the Pirogoff Medical Congress.

Adaptability in the Work of the Digestive Glands. By Dr. L. V. Popelsky.—According to Pavloff, the pancreas elaborates a juice which varies in composition according to the food to be digested. Thus, if starchy food is to be digested, the pancreatic juice contains a larger quantity of amylolytic ferment; if fat is to be digested the juice will contain an increased amount of fat emulsifying ferment, etc.; and if the food is of a mixed character, the juice will contain all the digestive elements in mixed proportions. The quality of the food to be digested is communicated to the pancreas from the stomach by means of special sets of nerves, one set serving to communicate the presence of starchy food, another that of fatty food, etc., whereupon the pancreas proceeds to "execute the order."

The author states that there is not sufficient experimental evidence to support the hypothesis of Pavloff. In illustration, he cites the fact that milk, which does not contain any starch, evokes an increased amount of amylolytic ferment, as compared to the pancreatic juice obtained with a diet of meat or bread. The adaptability of the gastric glands has also been recently proclaimed by Pavloff, who called attention to the increase in the amount of hydrochloric acid brought about by the presence of butyric and lactic acids. These acids are products of putrefaction, and, so soon as this sets in, the hydrochloric acid is secreted in larger quantity, in order to check the putrefaction. The author says that if the gastric glands are able to discern so well, they use other substances that accompany putrefaction as guides, for it is easily possible to introduce large amounts of lactic or butyric acid into the stomach. It is more probable that the adaptability of the stomach is controlled by impulses transmitted to the glands by nerves which are sensitive for special varieties of food. Fat is considered as a specific stimulant to the production of gastric juice, but this has not yet been proved experimentally. The author's experiments on dogs with permanent fistulæ show that the amount of gastric hydrochloric acid secreted is proportionate to the degree of stimulation produced by the ingested food. Thus, milk is a weak stimulant, and meat a strong one. The same principle holds good in the case of the salivary glands. The theory of adaptability therefore cannot be considered as proved.

On the Treatment of Exudative Pleurisy by Levaschoff's Method. By Dr. P. I. Tanflyeff (*continued*).—The general results obtained by Levaschoff's treatment (injection of and replacement of the exudate by normal saline solution) were very satisfactory, in cases of empyema. In uncomplicated cases recovery always takes place. The cases in which the effusion had remained for a long time in a stationary condition, were especially convincing, as improvement rapidly followed the irrigation with salt solution. It has been shown that, as empyema grows older, the absorbing power of the pleura grows less, and therefore the easily absorbed salt solution replaces the exudate and becomes rapidly absorbed, while the absorption of the exudate is tedious and hurtful. Tuberculosis of the lungs is not a contraindication to the use of Levaschoff's method, while the absorption of the exudate, when left to itself often does much harm in the way of increasing the inflammatory process in the lungs. On the other hand, primary tuberculous pleurisy is a contraindication to the use of salt irrigations. As regards empyemas, this method is indicated in the milder cases, in which the process depends upon diplococci, or in older cases, in which the bacteria have already perished.

On Acute Primary Osteomyelitis of the Spine. By Dr. F. K. Weber.—(*Continued*.)

On the Question as to the Use of Intra-uterine Injections. By Dr. G. I. Lebedieff.—The author refers to the article of Dr. Liboff on this subject, which was abstracted some time ago in this col-

umn under the heading of *Vratch*, and in which Liboff announced his complete disappointment with this method of treatment in gynæcological practice, and Lebedieff adds to the material on this question by citing his own experience, which is much more favorable than that of Liboff. According to the present author, the use of intra-uterine injections of iodine and carbolic acid was introduced, not by Grammatikati, as Liboff stated, but by Walton. An experience of eight years with this method enables him to conclude that the use of intra-uterine injections in many instances cures inflammatory affections of the uterine annexa. It will not cure all cases of this kind by any means, but it is effective in many. If all the proper precautions are observed, the intra-uterine injections will not be followed by any complications, which are indeed so rare as to be reckoned as unfortunate accidents.

The Present Status of the Kumyss Treatment and its Immediate Needs in the Combat with Tuberculosis. By Dr. N. A. Zolotavine.—The author urges the establishment of public and private sanatoria for consumptives, where, among other measures of treatment, the patients may be able to use kumyss as a dietetic remedy. He emphasizes the need of further study in the question of the effects of kumyss in tuberculosis. The composition of kumyss, as dependent upon the methods of preparation and upon the ferment used, must be studied, as well as the technics of the various modes of preparing it and the clinical results of kumyss treatment. A sanitary supervision should be instituted over the places where kumyss is made, and strict hygienic rules should be enforced, so that contamination may be prevented. At present, kumyss is prepared in most places in Russia by half-civilized nomadic tribes, the Basckirs, who of course observe only the most primitive details of cleanliness.

Roussky Archiv Pathologiyi, Klinicheskoy Meditsiny i Bakteriologiyi, August, 1901.

On the Question of the Pathogenesis of Spinal Curvature in Syringomyelia. By Dr. Sergei Nalbandoff.

A Contribution to the Study of the Elimination of Eberth's Bacilli by the Kidneys in and after Typhoid Fever. By Dr. B. N. Klimenko.—An analysis of the urines of sixty-five patients, collected under special precautions against contamination, showed that in 13 cases, *i. e.*, in 20 per cent. the bacillus of typhoid fever was present in the urine. The bacilli began to disappear from the urine from the third to the thirtieth day of convalescence. In rare cases they might remain in the urine for years. The urine of all patients and convalescents from typhoid fever should be regarded as a source of infection. Internal antiseptics should therefore be given to the patients in order to sterilize, so far as possible, the urine. It is desirable to examine the urine of all convalescents from typhoid fever for Eberth's bacillus, in order to take the proper precautions in case the bacillus should be found. In rare cases, the bacteriological examination of the urine may prove a help in the diagnosis of obscure cases of typhoid fever.

Clinical Forms of Mercurial Angina. By Dr. G. E. Glariche.—The author reports a case of buccal inflammation of mercurial origin which simulated recurring herpes of the mouth. Not long ago, Lanz, of Odessa, described a form of mercurial stomatitis which affected only the pharynx. During the administration of mercury there appeared a thin and superficial film of white color. The author observed a case of this kind and saw that the stomatitis disappeared so soon as the mercury was discontinued, and reappeared when the treatment was resumed. These observations apply particularly to patients who are treated by Fournier's method, *i. e.*, receive mercury when there are no manifestations of syphilis. It is difficult to say, however, whether, in some of these cases, the trouble was due to the disease itself or to its treatment. The lesions were very transitory, superficial, in the shape of small oval whitish spots, very painful, sometimes disappearing completely, sometimes reappearing for about a week. The tongue was also affected, and one could see the detached mucosa, white and shiny, as the remnants of a punctured vesicle. It may therefore be possible that this was a herpes of the mouth which was localized in the pharynx. Such recurring herpes, according to Fournier, is nothing but an effect of mercurial treatment.

Plasmolysis in Bacteria. By Dr. Alexander Ivanoff.—The author, in studying plasmolysis in bacteria, was unable to find the phenomena of plasmolysis recently described by A. Fischer, and, as regards plasmolysis proper, could not observe it except when the bacteria were transferred from one salt solution into another, no matter what the strength of these may be. He did not observe plasmolysis after transferring bacteria immediately from the culture into a salt solution, no matter how concentrated. He concludes that plasmolysis in bacteria is not a simple physical process, determined by osmosis, but a complicated process in which the nutrition of the germs and the construction of their protoplasm play important parts.

The Bacillus of Acute Contagious Conjunctivitis and Its Relation to the Bacillus of Epidemic Influenza. By Dr. F. Rymowitch.—A comparative study of the bacillus of Koch-Weeks and of that of Pfeiffer reveals that: 1. They are morphologically identical; 2. the conditions of growth on nutrient media, and the appearances of the colonies are identical in the case of both germs. The two bacteria, placed under similar conditions, give the same forms of evolution. Both are equally favorable to symbiosis with other bacteria of the same kind. 3. The effect of both germs upon the animal organism is identical. They produce intoxication without a general infection. The most conscientious study has not revealed to the author any differences between these germs. He therefore concludes that the bacillus of acute contagious conjunctivitis and that of influenza are one and the same germ. The germ in question, when attacking the mucous membranes of the respiratory tract, produces grippe, and, when affecting the mucosa of the eyelids, produces the contagious form of acute conjunctivitis, the form caused by the presence of the bacillus of Koch-Weeks. This conjunctivitis is therefore nothing else than "grippe in the eye."

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows]

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

X.—How do you treat puerperal convulsions? (Answers due not later than March 10, 1902.)

XI.—How do you treat pneumonia in children? (Answers due not later than April 10, 1902.)

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Russell A. Hibbs, of New York, whose paper appears on page 177.

PRIZE QUESTION NO. VIII.

IN FRACTURES

OF THE UPPER THIRD OF THE FEMUR, HOW DO YOU MANAGE THE TENDENCY OF THE UPPER FRAGMENT TO TILT FORWARD?

Dr. George H. Musso, of Lynn, Mass., writes:

In the endeavor to render our treatment rational, we naturally study the conditions and forces which tend to produce the displacement. In a large majority of cases the fracture is oblique, the obliquity usually corresponding to the normal curve of the bone, that is, in the upper third, forward and outward. The forward displacement of the upper fragment is mainly due to muscular action. The contraction of the gluteal muscles and psoas tends to tilt the upper fragment forward, outward, or in both directions; while the adductors and flexors of the leg draw the lower fragment up against the upper one, and this will produce an angular displacement in any direction favored by the line of fracture.

The fact that the displacement is sometimes backward or inward does not disprove the in-

fluence of the muscles attached to the upper fragment; the principal agency is the drawing upward of the lower fragment, and if the fragments are so related at the seat of fracture that the upper one is pushed in a different direction from that in which its muscles would draw it, the latter must yield. A displacement forward and outward of the upper fragment is the rule, the lower fragment usually passing behind and to the inner side of the upper one.

The displacement is a more or less difficult one to manage, for the weight of the limb and the action of the muscles are efficient and always ready to produce displacement. The chief points of management are: 1. Complete reduction. 2. Secure retention with traction and counter-extension. 3. Flexion and abduction of the thigh.

In reducing the displacement one must remember the known tendency of the upper fragment to assume the attitude of flexion and abduction, because of the unopposed action of the attached muscles, an attitude which is sometimes but faintly indicated by the form of the limb. The lower fragment is, therefore, placed in the corresponding attitude by flexing and abducting the thigh, even if we are unable to detect the deviation of the upper one, for we know that, even if it does not exist, the upper fragment will follow the movement given to the lower one, and the two fragments will be in line when we make traction and lateral pressure. The knee joint should also be held in partial flexion to aid in relaxing the muscles. An anæsthetic is used if necessary.

Retention has for its object to maintain the position of the fragments against those forces which might reproduce the displacement, to keep the fractured surfaces in contact, and at the same time to permit of a certain general freedom of motion to the patient which will facilitate the attentions necessary to meet his wants and promote his general comfort. To meet these indications, I prefer for a permanent dressing in most cases Buck's extension with a posterior moulded thigh splint or coaptation splints bound about the thigh (usually the posterior splint). Traction in some form is necessary, and I find Buck's suitable and convenient for the majority of cases. It is easily borne and permits of constant supervision of the fracture.

The foot and leg should lie upon a Volkmann's sliding-rest and the thigh be kept in a position of flexion and abduction in order that the fragments shall be in line.

The weight used varies from five to fifteen or twenty pounds, according to the age of the patient and the degree of muscular development. A small, firm cushion may be placed behind the trochanter and several similar ones beneath the thigh for sup-

port. I also place a long sand-bag on the outer side of the thigh with a shorter one on the inner side.

In the higher fractures, Hodgen's suspended splint is preferred by some to Buck's.

In young children vertical suspension is usually satisfactory and convenient. In children of over ten years I prefer Buck's extension.

BUCK'S EXTENSION WITH THE LIMB STRAIGHT.

Dr. M. H. Foster, of the Marine-Hospital Service, Stationed at Port Townsend, Wash., writes as follows:

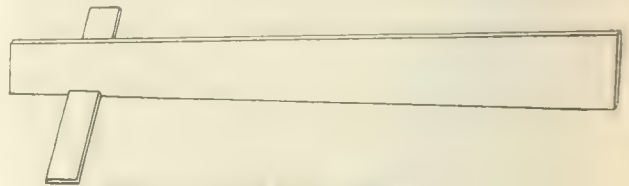
Every fracture is a problem in itself, and no one dressing, however approved, will be satisfactory for a corresponding injury in all individuals. All that is necessary in any case is to bring the fragments into as nearly as possible their proper place, to keep them there, and to prevent motion during the process of repair. In some the simplest appliances will suffice, in others no amount of dressings will produce satisfactory results. To proceed intelligently, it is necessary to understand the forces which produce and maintain the deformity.

In fractures of the upper third of the femur, forward tilting of the upper fragment, when present, is to be attributed to the action of the *psoas magnus*, *iliacus*, and *pectineus*, which are probably opposed only by the *glutæus maximus*, and that rather indirectly. To overcome the upward pull of these muscles, it has been proposed to flex the thigh on the pelvis and, using the double-inclined plane, the leg on the thigh. A little reflection will show that flexion of the leg puts the *vasti internus* and *externus* and the *cruræus* on the stretch, and this will result in a tendency to forward displacement of both fragments. A great many forces are to be considered as acting on the ends of the bone, and when theories conflict, clinical experience must be taken as the guide. A careful analysis, made by Hamilton, of cases treated by both methods, shows that the straight postural treatment with extension produces better results than the double-inclined plane. Apparently the large majority of authorities treat the injury in this way, finding that the approximation of the fragments is more easily maintained in the straight position and that the upward tilting can be overcome by suitable splints.

Nothing original is alleged for the following method of procedure, but in my hands it has given excellent results where there was forward tilting, and it has the advantage that all the articles needed can be made in a very little time from materials obtainable everywhere.

The bed is prepared by raising the foot four inches on bricks or blocks, boards are placed across where the slats generally go to prevent sagging, and a firm mattress is laid directly on these, the foot-

board is arranged so as not to interfere with the extension apparatus, and the pulley is attached to it in some manner, a hole being cut for the cord if necessary. A Buck's extension apparatus is now prepared as described in all text-books, with the modification that the adhesive strips are long enough to reach up beyond the knee almost to the seat of fracture. This takes a great deal of the strain off of the knee joint. An external Hamilton splint and a sand-bag long enough to reach from the perinæum to the heel are also to be made. The Hamilton



External Hamilton Splint, unpadded.

splint is merely a light board, long enough to reach from the axilla to below the heel, six inches wide at the axillary end, tapering down to four at the lower end, and with a strip twelve inches long by two inches wide and half an inch thick nailed transversely across its lower edge about five inches from the lower end. This strip passes under the ankle and keeps the board upright. The splint is well padded on the inner side and has tacked to it seven strips of bandage at about equal distances, to hold it to the patient and fasten all the dressings together. Anterior and posterior splints long enough to extend almost from the knee to the groin and wide enough to almost surround the thigh are cut from binder's board, moulded to suit their places, and well padded with cotton. A many-tailed bandage is cut as wide as these splints and with tails of a suitable length to tie around them.

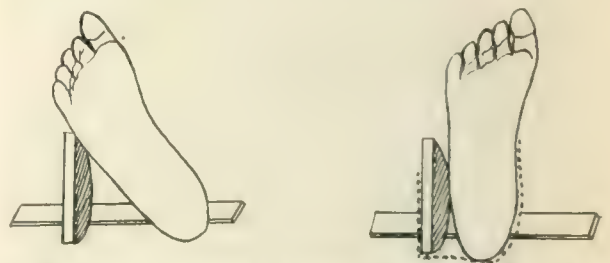


Diagram showing eversion and inversion overcome by drawing heel outward with adhesive strip, which is represented by the dotted line.

The patient is placed on the bed flat on his back. The extension apparatus is applied from the malleoli almost to the seat of injury (short strips of plaster across the leg, never completely around, will help to hold it) and a primary roller put firmly and carefully from the toes over the adhesive strips for its entire length. The posterior splint with the many-tailed bandage beneath it is placed under the thigh, the sand-bag on the inside, and the Hamilton splint on the outside, with all strips of bandage brought under

the patient ready for tying. Extension or, more properly, traction is now applied by attaching weights to the cord. A couple of bricks are always obtainable, and these or a bucket of sand will do very well in lieu of the more elegant-looking weights. Generally a weight of sixteen pounds is put on for an adult and gradually increased until the injured limb is as long by actual measurement as the sound one. Any apparent deformity is now overcome by manipulation, and the upper fragment pressed downward and held there by fastening the anterior splint with the many-tailed bandage; suitable compresses may be used in this connection, and the pressure on different parts of the splint may be varied at will by means of the bandage. As the splints do not quite meet, information as to the position of the fragments may be had by feeling between their edges. If a great deal of pain is complained of upon putting on the weight, we may put on as much as can be borne, adding a little from time to time, and defer the final adjustment of the bone for several hours. When it is finally in place to our satisfaction, the pasteboard splints being securely held, we fasten the strips of bandage, one around the chest, one around the abdomen, and five around the lower limb and sand-bag, which should fit snugly and extend well up to the perinæum. Any eversion of the toes is overcome by sticking a strip of adhesive plaster to the inner side of the heel, passing it under the heel and splint, and attaching it to the outside of the splint. This draws the heel out, and the splint, either alone or with a pad, throws the toes in. It is the only simple device I have ever seen which would keep the foot in the proper position.

Now comes what I consider a most important part of the treatment of all fractures of the femur, and that is the administration of large doses of chloral and bromides for three or four days unless directly counter-indicated. They aid muscular relaxation, relieve pain, remove nervous irritability, and keep the patient quiet until he has contracted the habit of lying still in bed. It is most essential that the surgeon see the patient every night and morning for the first week, to be sure that everything is properly in place. This dressing is kept on in most cases for seven weeks, then the patient is kept in bed for a week longer and made to use crutches for two weeks after he gets up. The time varies with different people, and it may be desirable to put on a cast at the end of six weeks and get the patient out of bed sooner. In giving a prognosis, it must be remembered that in all cases some shortening is sure to occur.

(To be concluded.)

Book Notices.

Einführung in das Studium der Malaria-krankheiten mit besonderer Berücksichtigung der Technik. Ein Leit- faden für Schiffs- und Colonialärzte. Von Dr. REINHOLD RUGE, Kommandirt zum Institut für Infektionskrankheiten in Berlin, etc. Mit 2 photographischen sowie einer lithographischen Tafel, 19 Abbildungen und 27 Fieberkurven im Texte. Jena: Gustav Fischer, 1901. Pp. 139.

This excellent monograph on malarial diseases, while it does not purport to offer anything new, is well worth reading because it presents all the facts clearly and succinctly. This manner of exposition is especially true of the chapter dealing with the distinction between the non-infectious and the infection-carrying culex and anopheles respectively, and the distinction of the various forms of the malarial parasites. After an historical and geographical introduction, the author takes up the consideration of the development of this parasite in man and then in the mosquito. The epidemiology of malarial fevers is then discussed, and this discussion is followed by a fine chapter on symptomatology, which deals chiefly with the fever produced by the large parasite and the affection caused by the small hæmosporidium. Black-water fever is then discussed, as are also the chronic malarial fever and malarial cachexia. The pathogenesis and the pathological anatomy of the malarial diseases receive due attention. The chapter on diagnosis is worthy of mention. Prognosis, treatment, and prophylaxis are carefully discussed and we find concerning them many data of interest. A very careful consideration of the technics of examinations is a noteworthy feature of this monograph.

A Laboratory Course in Bacteriology. For the Use of Medical, Agricultural, and Industrial Students. By FREDERIC P. GORHAM, A. M., Associate Professor of Biology, Brown University, etc. With 97 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 192. [Price, \$1.25.]

Within the limits of a small volume the author has outlined the elementary procedures of bacteriological study. The work deals with only the most important methods, and avoids all lengthy description. It is, therefore, only what its modest title proclaims it to be, but as such it will be found useful. The illustrations are of a high order.

Practical First Principles simplifying the Study of Normal and Abnormal Structure and Function, and aiding Diagnosis. Designed for the Use of Students and Practitioners of Medicine. By A. H. P. LEUF, M. D. Philadelphia: The Medical Council, 1901. Pp. 5 to 105.

This consists, for the most part, of brief descriptions of the various types of cells, of cell life, and of some of the tissues of the body. Though "designed for the use of students and practitioners of medicine," it is entirely too elementary for other than grammar-school classes. The illustrations are primitive.

Pathological Technique. A Practical Manual for Workers in Pathological Histology and Bacteriology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By FRANK BURN MALLORY, A. M., M. D., Assistant Professor of Pathology, Harvard University Medical School, etc., and JAMES HOMER WRIGHT, A. M., M. D., Director of the Clinico-pathological Laboratory of the Massachusetts General Hospital, etc. Second Edition, Revised and Enlarged. With 137 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 432. [Price, \$3.]

This admirable manual is too well known and appreciated to require more than passing mention. In presenting this second edition the authors have adopted the general plan followed in the first edition, except that in Part II the sections on clinical bacteriology and bacteriological diagnosis have been combined under the heading of special bacteriology. Many chapters show evidences of careful revision, and numerous recently described staining methods have been added. Among these may be mentioned the methods for elastic tissue by Weigert, for connective tissue by Mallory, and for bone by Schmorl. Many new illustrations are noted, particularly several photo-micrographs that are most beautifully executed.

The student who follows the lines laid down should become an adept in general laboratory techniques. Not all the methods of preparing and staining tissues are given, but it is quite needless to say that those described are reliable. The book will undoubtedly continue to be one of the most popular manuals on the subject, and we gladly recommend it to those not already familiar with the work.

Dose-book and Manual of Prescription-writing, with a list of the Official Drugs and Preparations, and many of the Newer Remedies with their Doses. By E. Q. THORNTON, M. D., Ph. G., Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia. Second Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 13 to 362. [Price, \$2.]

Though much on the style of other handbooks on therapeutic technology, and of pharmacopœial syllabi, this manual is more ample than most of them. Many of the newer drugs and organic extracts are listed in this edition, which is also enlarged by the addition of chapters on synonyms and on poisons and their antidotes, and by the introduction of some new matter in the pages devoted to prescription-writing and incompatibilities.

A Manual of the Practice of Medicine. By GEORGE ROE LOCKWOOD, M. D., Attending Physician to Bellevue Hospital. Second Edition, Revised. With 103 Illustrations, many of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 847. [Price, \$4.]

Although this book has met with some favor, as is shown by its having reached a second edition, we cannot recommend it as worthy to rank with such works as those of Osler, Anders, Strümpell, and Eichhorst.

BOOKS, ETC., RECEIVED.

Variola, Vaccination, Varicella, Cholera, Syphilis, Whooping-cough, Hay Fever. By H. Immermann, Th. von Jurgensen, C. Liebermeister, H. Lenhartz, G. Sticker. Edited, with Additions, by John W. Moore, M. D., F. R. C. P., Professor of the Practice of Medicine in the Royal College of Surgeons of Ireland. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 3 to 682. (Price, \$5.)

Clinical Hæmatology. A Practical Guide to the Examination of the Blood with Reference to Diagnosis. By John Da Costa, Jr., M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College, Philadelphia, etc. Containing Eight Full-page Colored Plates, Three Charts and Forty-eight other Illustrations. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xxxi-19 to 474. (Price, \$5.)

Alcoholism. A Study in Heredity. By G. Archibald Reid, M. B., C. M., F. R. S. E., etc. New York: William Wood & Company, 1902. Pp. xvi-293.

Municipal Engineering and Sanitation. By M. N. Baker, Ph.B., C. E., etc. New York: The Macmillan Company, 1902. Pp. viii-317. (Price, \$1.25.)

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume II. General Surgery. Edited by John B. Murphy, M. D., Professor of Surgery, Northwestern University Medical School, Chicago. Chicago: The Year Book Publishers, 1902. Pp. 3 to 515. (Price, \$2.)

Outlines of Physiology. By Edward Grove Jones, M. D., Lecturer on Physical Diagnosis in the Atlanta College of Physicians and Surgeons, etc. 107 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. vii-17 to 442. (Price, \$1.50.)

Neurological Technique. By Irving Hardesty, Ph.D., Instructor in Anatomy, University of California, etc. Chicago: University of Chicago Press, 1902. Pp. xii-183.

On the Cure of the Morphia Habit without Suffering. (Physiological Demorphinisation). With a Note on the Physiological Method of Relieving the Craving for Drink. By Oscar Jennings, M. D. (Paris), M. R. C. S. (Eng.), Fellow of the Royal Medico-Chirurgical Society. Second Edition, Revised and Enlarged. New York: William Wood & Company, 1902. Pp. xii-211.

The Pocket Gray, or Anatomist's Vade-Mecum. By the Late Edward Cotterell, F. R. C. E. Fifth Edition, Revised and Edited by C. H. Fagge, M. B., M. S. Lond., F. R. C. S., Senior Demonstrator of Anatomy, Guy's Hospital. New York: William Wood & Company, 1902. Pp. 269.

The Medical News Pocket Formulary for 1902. By E. Quin Thornton, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Fourth Edition, Revised. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. 3 to 287. (Price, \$1.50.)

Radiothérapie et photothérapie. Par le Dr. L. R. Regnier, Chef du Laboratoire d'électrothérapie et de radiographie à l'Hôpital de la Charité. Avec 10 figures dans le texte. Paris: J. B. Baillière et fils. 1902. Pp. 5 to 91.

Die Nervöse Schlaflosigkeit ihre Ursachen und ihre Behandlung. Von Dr. Max Heim, Spezialarzt für Diätetisch-Physikalische Therapie in Bonn. Bonn: Friedrich Cohen, 1902. Pp. 59.

Verhandlungen des Dritten Nordischen Kongresses für Innere Medizin zu Kopenhagen D. 26—28 Juli, 1900.

Transactions of the Colorado State Medical Society. Thirty-first Annual Convention.

Thirty-fourth Annual Report of the Board of Water Commissioners of the City of Middletown, N. Y. For the Year ending January 31, 1901.

Quarterly Report of the Medical Officer of Health of Islington. Third Quarter, 1901.

The Chayote. A Tropical Vegetable. By O. F. Cook, Special Agent for Tropical Agriculture. United States Department of Agriculture. Division of Botany.

Miscellany.

Dysmenorrhœa.—In a discussion at a meeting of the New York Obstetrical Society, held on November 12th, Dr. W. R. Pryor confined his remarks to dysmenorrhœa not due to disease of the ovaries and tubes. He believed that many cases were due to errors of development and others to changes which took place with advancing years. In the first class, he usually found irregularities in development of other parts of the body; conditions similar to the congenital ones might be caused by sterility, for the organs did not receive the benefit which followed the essential structural changes incidental to conception and delivery, and must undergo modifications in their structure. These changes were associated with and not caused by various distortions of the cervix and body of the uterus. The general health should be improved, tonics given, etc. The endometrium might be hypertrophied or atrophied. If an operation was performed at all, he used the curette in such a way as to promote the formation of a new endometrium. If the cervix was hypertrophied, he either amputated or incised along the lines of Simpson, Sims, or Dudley. So far as non-operative cases were concerned, he obtained the best results from gelsemium and cannabis indica if the flow was too free, or from hyoscyamus if the hysterical symptoms were marked. He avoided the administration of the coal-tar derivatives and the opium compounds. He believed conception to be the radical cure if the patient was married. He regarded the wearing of stems and repeated dilations as very mischievous procedures.

Dr. H. J. Boldt agreed in the main with the previous speaker, and said that he found many cases in which he was at a loss to find the cause of the trouble.

Dr. Florian Krug believed that antelexion, with stenosis as a rule at the internal os, had a great deal to do with dysmenorrhœa. In these cases dilatation and curetting would do much good, and gave permanent relief, while sterility was cured in the same manner. He thought the head of the fœtus the best possible dilator. Many of the cases of dysmenorrhœa were due to ovarian trouble and nervousness, and in these cases he used the curette. If this was not successful he would try again.

Dr. H. C. Coe did not believe that dysmenorrhœa could always be explained by the mechanical theory, nor could he say that disease of the endometrium was the only cause. Often the curette failed to show hyperplastic endometritis, and even when we examined antelexed uteri after removal, how seldom did we find such marked evidence of disease as would account for the painful symptoms. On the other hand, we had all had some experience with Dudley's operation, and had seen the dysmenorrhœa permanently cured by straightening the canal. Many cases in which dysmenorrhœa was apparently due to flexions were by no means so simple as would appear from the results of examination. He had performed abdominal section on the previous day on a young nullipara whose uterus he had stretched and curetted four months before in order to relieve obstructive dysmenorrhœa. There was a history of mild gonorrhœal infection, but examination under

anæsthesia failed to reveal evidences of disease of the tubes and ovaries. There was temporary relief after the operation. On opening the abdomen, he had found both ovaries adherent, one tube being so much diseased that he removed it. Such cases were quite common, and, yet, neither the dysmenorrhœa nor the sterility could be cured by dilatation and curetting alone. He thought the subject too broad to be viewed only from the standpoint of mechanical obstruction or disease of the endometrium.

Dr. W. Gill Wylie said that he held the same views to-day that he had held seventeen years before, taking the ground that the real cause of disease was imperfect development, that the membrane, especially in young women of the better class, was not nourished sufficiently to become a normal living membrane, that it was deficient in blood supply, was weak and feeble, and could not perform its functions of menstruation properly. He was unable to give the exact pathological conditions which existed. If the patient had dysmenorrhœa, the uterus would be found to be, as a rule, abnormally small, especially about the cervix and os internum, and if active disease was excluded, one would nearly always find antelexion. He did not believe that the mere mechanical act of opening the canal would aid much in overcoming the difficulty. He placed the patient in the Sims position and passed a small silver probe. In patients with dysmenorrhœa the presence of the probe would cause pain, especially when the probe reached the internal os; in other words, the tissues at that point were extremely hyperæsthetic. This test he considered almost decisive. In such a case, where the patient was well and the general condition fair, thorough divulsion and a fair amount of dilatation, without splitting the mucous tissue and tearing it, would yield good results. He thought a one-fourth to one-half inch separation of the blades of the dilator, with not more than two hundred pounds pressure, would accompany good results. After dilatation he passed over the surface of the endometrium with the curette, scraping if indicated, and then put in place a hard-rubber drainage-tube of the size of a lead pencil. This had a somewhat conical bulbous end with a slot which takes up fully one third of the calibre of the tube, and a round button-shaped end in the vagina. In many cases curetting did not bring away very much. In this way, keeping the os internum open for a week or more, a great many cases would be cured, but a large portion would not. By accident he had found that the tube could be left in through one menstruation, and then, as a rule, it should be taken out. In obstructive cases the tube could be left in through two menstruations without danger, and the patient could go about. In many cases results would last for three, four, or six months, but in typical severe cases there was likely to be a return of the trouble. In these cases the procedure might have to be repeated three times. If to-day he had ten cases of dysmenorrhœa, all the patients under twenty-three or twenty-four years of age, he would expect to cure without trouble not fewer than nine out of ten. He had treated several hundreds of cases without accident or serious consequences from the use of the tube. The tube was kept in place with a hard-rubber Albert Smith pes-

sary. The same treatment was of great value in sterility.

Dr. J. Riddle Goffe said that the imperfectly developed uterus had been one of the principal causes of dysmenorrhœa in his practice, and that in all cases where the trouble began with the first menstruation a faulty development had been the cause. Another class of women were free from pain in the earlier menstrual life, but had dysmenorrhœa later, and in these patients some pathological lesion could be found, such as endometritis, salpingitis, or oophoritis. In the case of undeveloped uterus, to accomplish permanent good, treatment must be continuous over a long period of time. He used the gauze pack after dilatation and curetting. Many cases were treated in his office. Under careful antiseptic precautions, he dilated the cervix and made an application of pure carbolic acid to the internal os and the interior of the uterus. If, after two or three dilatations, there were no indications for a change of treatment, he continued to treat the patient twice a week for three months. At the end of the third month he told her that he did not need to see her again for three months. At the end of that time the patient was often pregnant. If at the end of three months the patient still complained, treatment was continued for three months more or so. If the first course of treatment was without benefit, he advised more radical treatment, under an anæsthetic, when he thoroughly dilated the internal os, curetted the uterus, and, instead of using a hard-rubber tube, packed the uterus with gauze. The latter acted as a foreign body and stimulated contraction, and the uterus developed with exercise. He left the gauze in place for four days, but in some cases it was forced out by strong uterine contractions. He strongly advocated the use of gauze in the uterus, both for contraction and the improvement in circulation which followed in the uterus, ovaries, and tubes.

Dr. A. H. Ely believed the pathological condition to be one of undeveloped uterus in which the endometrium had become the seat of hyperplastic inflammation. Many cases might be considered from a purely local point of view, but there might be a cause or contributing factor in the general constitutional conditions, and particularly a supersensitive nervous system. He agreed with Dr. Goffe that it was necessary in many cases to continue treatment by means of frequent dilatation and application to the endometrium, as could be done in routine of work without fear of infection, if careful aseptic precautions were taken.

Dr. J. N. West referred to other causative factors, such as chronic salpingitis, retroversion, and tumors, but said that he used dilatation in cases of obstructive dysmenorrhœa. In one case, where the woman was almost insane, he had amputated the cervix high up, at the same time drawing down the endometrium until he could get past the point of constriction in the canal. The girl made an uneventful recovery and had been entirely relieved. It seemed to him that this operation offered some promise.

Dr. W. E. Porter thought that the form of the drainage used after dilatation was a matter which should be judged according to each individual case. He thought that gauze, when left in a sufficient length of time, obstructed rather than favored

drainage. He had found also that the slot in the rubber tube became obstructed with blood clots and mucus, and he had had a stem made with a device for flushing out the slot without the necessity of removal. This entirely obviated the only objection to this form of treatment. He had used the method advocated by Dr. Wylie for twelve years with unqualified success, repeating the operation if necessary once or twice at the most. Of course, where endometrium or tubal complications existed, other operations were necessary. In the cases of faulty development the best results could be obtained by dilatation and the use of the uterine drainage device referred to.

Dr. H. N. Vineberg agreed with other speakers that in the slighter degrees of arrest of development, with a long, narrow cervix and sharp ante flexion, dilatation and curettage were of benefit. In this class he used the cervical stem as well. He usually found that a slight rise of temperature followed its use, and his custom had been to remove the tube, irrigate the uterus, and reintroduce the stem, leaving it in place for a week or ten days. He recalled one patient, unmarried, who had come to him for dysmenorrhœa upon whom he had performed the operation of dilatation without effect, after which he had opened the abdomen and removed the left ovary. This did not help her. He had tried electricity and other remedies for a year and a half without effect, and finally he had removed the uterus with the right ovary and the patient had been well ever since. In some cases he had found the application of galvanism to be of service.

Dr. Joseph Brettauer used dilatation when stenosis existed, and thought that general hygienic treatment should be used. To him, the statements made by Dr. Wylie that he cured nine out of ten of these cases was most astonishing, for he had so far been decidedly unsuccessful, even using the method described by him. Two years ago he had seen a book written by Fliess in which were reported a number of cases of dysmenorrhœa cured temporarily and permanently by applications of cocaine to certain parts of the nose. Later on he had read the observations which had been made at Chrobak's clinic in Vienna, and, as he knew from personal connection with the clinic the conservative spirit with which it was directed, doubt was out of the question. According to Fliess, there were points in the nose which were in some way connected with the genital organs, proved by the so-called cocaine test. Dr. Brettauer added that his personal experience was so far limited and not uniformly satisfactory. As yet, successes were fewer than the failures; still, he was of the opinion that the subject deserved close attention.

The Inception of Menstruation and Fertility.—

In *Menstruation and its Disorders*, by Dr. A. E. Giles, which is No. 5 in the medical monograph series, the author publishes an instructive table to show the relation between the age at which puberty occurs and sterility. His conclusions are that, where menstruation begins between the seventeenth and eighteenth years, the woman is likely to prove fertile, where between the age of eighteen and nineteen, the probability of infertility increases; and where its appearance is delayed till after twenty years of age, there is a high rate of sterility.

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Original Communications.

AGE OF FIRST MENSTRUATION ON THE NORTH AMERICAN CONTINENT.*

By GEORGE J. ENGELMANN, M. D.,
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I.—GENERAL CONSIDERATIONS.

An investigation as to the age of *first menstruation* must appear as of purely scientific value; but, like most scientific researches, it carries with it a serious practical significance: it is a time to be noted; the coming of the flow indicates unmistakably the advent of puberty, it is the alarm signal which sounds the warning that the era of susceptibility and danger has come. The pubertal is a period of unusual interest and importance in the life of the girl; it is of extreme physiological interest and of vital practical importance not only to the girl, but to the educator, the physician, and even to the community, to the State; it is the most impressionable period in woman's life, the period when most havoc is wrought, and the *period when preventive gynecology must make its first and most effective impress*; but if we are to warn and protect the girl we must, first of all, thoroughly understand the process, we must know what the symptoms are and when we are to expect them. The time of appearance I shall here discuss.

I. THE PUBERTAL PERIOD. We all appreciate in a general way that the advent of puberty marks an epoch in the life of the girl; we look upon it as announcing the coming of womanhood, as the most striking indication of development—an evidence of the first blush of the unfolding bud; but we do *not* realize the deeply serious significance of the period, its influence upon the organism, upon the future of the girl, the deep and permanent impress of the surroundings at that most susceptible of all periods. This is not realized, though constantly apparent in facts which meet us at every turn, and which we will be forced to recognize and heed. These I have shown in my recent address before this society, but it may be well to briefly recall the more striking facts—facts established beyond doubt or dispute, by individual observation and by the national census.

Vitality, or *life-intensity*, is at its highest during the preparatory of *prepubertal* period, just before the advent of menstruation, and sinks with the coming of the flow, as is shown by Dr. Hartwell in his investigation in the schools of Boston, based upon 11,000 observations.

The mortality charts of the eleventh census of the United States show this same period from the tenth to the fifteenth year to be that of lowest death-rate; this is true of hereditary, of infectious, and many other diseases, and while mortality is at its lowest with an intensified resistance to infectious diseases, to fatal disease, and to the development of neoplasms, the sensitiveness of the system to impressions mental and physical—*i. e.*, the *susceptibility* of the system—is *higher* than at any other time of life—colds, headaches, neuroses, and slight disturbances of all kinds attain their greatest frequency in the year preceding puberty, as shown by the statistics of the schools of Sweden and Denmark, facts unfortunately not observed by either the census or the educational bureau of this country. The susceptibility of the nervous system, the wax-like mouldable nature of youth during the pubertal period, is shown by the curve of *greatest susceptibility to teachers' influence*, presented by Sanford Bell. This in *girls* begins to rise rapidly at eleven, and reaches its maximum at fourteen, then going down at the same rate, identical with the age-curve of first menstruation. In *boys* it begins one year later, reaching its maximum at sixteen, and then rapidly descends, like the pubertal curve of the male, bearing the same relation to the impressionability curve of the girl as the pubertal curve of the male does to that of the female. Another similar curve is that of the greatest desire for reading, which is highest between fourteen and fifteen in the girl, and from one and one-half to two years later in the boy. Nervous disturbances, marked by stuttering (Hartwell School Census of Boston) and hysteria (Cloblatt) attain their greatest frequency at the same time—all reaching their apex somewhat over one year before and dropping to their lowest with the advent of the flow. The same is true of physical development, of growth in height and weight; all these conditions are more marked in the girl than in the boy, but there they likewise exist, though to a minor degree. *All are directly linked with the pubertal period, and in no way dependent*

*Read before the American Gynecological Society, May 30, 1901.

upon age or years of life. In the same country this period of susceptibility, of highest vitality and lowest mortality, is later in the boy than in the girl, precisely as the pubertal period in the boy is more retarded. In the girl I have shown that it varies with country and clime in direct relation to the variation in time of pubertal development (*Chart I.*), and I am convinced that this is equally true of the boy, though not so accentuated and not so readily demonstrated.

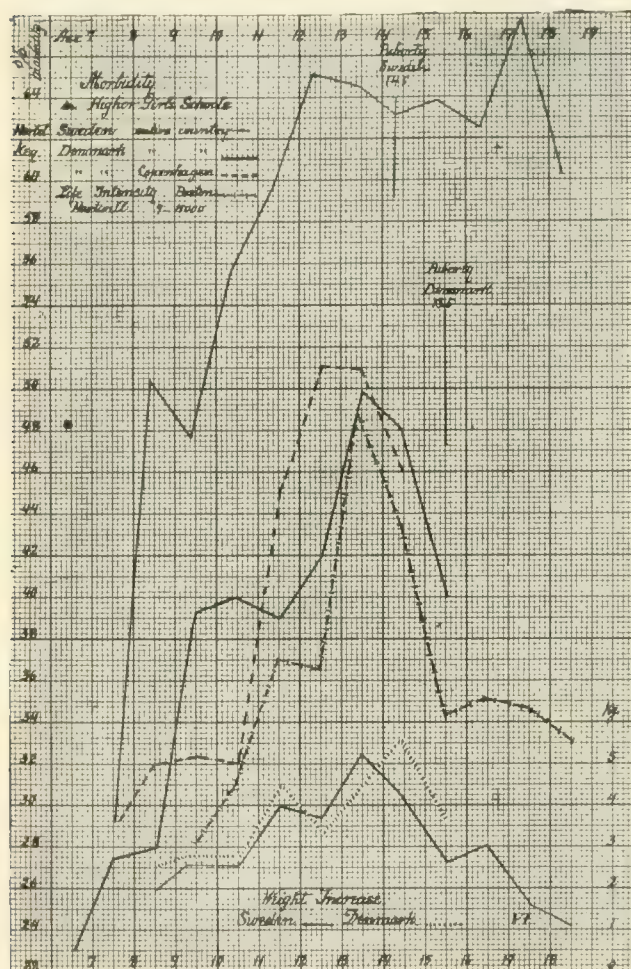


CHART I.

In Denmark the period of greatest growth, of highest morbidity, is one year later than it is in Sweden, and in Sweden one year later than it is in the United States, precisely as the time of first menstruation is later by one year in Denmark than it is in Sweden and later in Sweden than in this country.

The all-pervading force of this central function of female life is strikingly apparent in its correlation with growth and development and in the dependence of conditions, physiological and pathological, upon the *pubertal period*. This is the *controlling factor* in girl life, and must be given greater consideration than it has hitherto received.

It is a period to be recognized by the physician for a proper solution of the minor ailments—anæmia

and chlorosis, the perversions, depressions, and neuroses which are so prevalent; by the educator, that due allowance may be made for listlessness and inattention, a mental and physical let-down, and by the mother, that she may guard the child at this most susceptible period, and accord her the consideration due the changed, fretful, irritable, and indolent condition which accompanies this eventful epoch in her life.

This has been recognized by foreign observers, and attention has again and again been directed to the subject in admirable studies, more especially since the days of Robertson in England, 1836, and of de Boismont in France, 1842. In Germany Krieger, 1869; later Hegar and Reinl have done excellent work; so also Guy and Whitehead, in England; Leopold Meyer and Ravn, in Copenhagen; Gallard, Puech, Marc d'Espine, Courty, de Soyre, Raciborski, and Dusourd, in France; de Ott, Bensenger, and others, in Russia; Heinrichus and Engström in Finland; and Raseri, in Italy.

2. PRESENT KNOWLEDGE AS TO CONDITIONS IN NORTH AMERICA. This subject, and more especially the age of first menstruation, the time of puberty, in various countries was one of the leading questions elaborated at the International Medical Congress of Paris in 1867. Such a gathering of men from many climes and many countries was well adapted for the discussion of this subject, and it is upon the facts there presented that our present knowledge is still based. Here we find the work of Leudet, of Rouen; Lagneau, of Paris; Tilt, of London; Carl Mayer, of Berlin; Vogt and Faye, of Norway; and Lieven, of St. Petersburg. The results were eminently satisfactory as to the determination of the time of puberty in European countries. But no investigations were presented from the Western Hemisphere, nor has any investigation as to the time of first menstruation on this Continent appeared since then, save that of Emmet, whose careful study as it appears in his text-book is the only work upon the subject. Dr. Emmet there presents the material from his private practice in one group, regardless of nationality, parentage, or social status. With regard to one of these points we have data from Dr. Chadwick, who published some extremely indicative facts in his comparison of the date of first menstruation among Americans of American parentage and Americans of Irish parentage, but unfortunately did not develop the important points revealed, and the figures were presented incidentally only, in connection with another subject. I should perhaps add a small number by Dr. Kennedy, in which the pubertal age was also mentioned incidentally; that of Dr. Emmet is the only American investigation in which the question has been directly discussed.

It seems strange that so little attention has been given the subject in this country, and yet, as so long since recognized by Robertson, it is here in the United States that it may be studied to the best advantage, and the many interesting problems presented, which foreign observers have in vain tried to unravel, can be satisfactorily solved. The influence of race, climate, and surroundings upon the advent of puberty, which has been so much discussed, and with such varying results, is readily demonstrated by the time and the age of first menstruation among the different nationalities and in the different parts of this country, and I include Canada, because the conditions of life are sufficiently like those of the United States to admit of this blending.

3. ETHNOLOGICAL PROBLEMS PRESENTED. We have here many nationalities (in my dispensary records twenty-two are represented), from the pure type to various degrees of naturalization—Germans, English, Irish, French, Russians, and Italians—born and reared abroad, preserving all the characteristics of their foreign home; then those transplanted in childhood, who have developed amid the changed surroundings of a new country; next the American bred of foreign parentage; and, finally, when all traces of foreign blood have more or less disappeared, the American born of foreign ancestry more remote; in addition, we have the Negro, the Indian and the Eskimo—thus affording an ideal field for ethnologic study and for a determination of the influence of race, and of race amid all variations of climate throughout 60° of longitude and 24° of latitude, from Canada with an annual mean temperature of Russia, 38°, to New Orleans with an almost tropical temperature of 49° F.

We can observe the French in Canada under the influence of a climate colder by far than that of their native land, and, again, the same people under the changed conditions of the New Orleans climate; so the Irish and other nationalities under the same varying conditions.

Most interesting ethnologic problems are presented by the influence of surroundings upon different peoples, and it is here that the striking contrast between the emigrant in this and other countries most clearly appears.

Migration in European countries means more or less a continuance of the same surroundings, the same social status. The Russian in Russia, in Finland, or in Prussia, the Armenian in Armenia, in Transylvania, or in Turkey, retains his identity, his habits, and customs; the Jew in Russia, in Poland, and in Prussia, remains the same; he does not amalgamate. In the United States, on the contrary, national characteristics rapidly fade away, and a naturalization, amalgamation, and Americanization takes place which must leave its impress upon func-

tional life as well as upon the external more apparent characteristics which are evident to all.

4. IMPORTANCE OF SUCH INVESTIGATIONS IN THIS COUNTRY. The subject is an extremely interesting one from many points of view, and especially so in this country, because it has never been thoroughly studied; the data we have are confined to a very small part of the country and to a very few of the many classes of our population.

Above all, it is here of importance, because this country covers so large an area, with such variations in climate and population, that all phases of the many sociological, ethnological, and physiological questions involved may be solved by the facts within reach.

5. DATA UPON WHICH THIS STUDY IS BASED. *Material here Utilized.* These facts I myself have collected North and South, in Boston and St. Louis, and necessary material inaccessible to me has been supplemented by the generous collaboration of valued colleagues in every part of the country. Without their aid a solution of all the problems presented would have been a very questionable undertaking, and gratefully I acknowledge the interest they have shown by word and deed.

TABLE I.—RECORDS UPON WHICH THIS INVESTIGATION IS BASED.

I.—CIVILIZED OR IMMIGRANT RACES.			
a. Dr. Engelmann's observation and observations made and contributed for this investigation.			
SCHOOL AND COLLEGE:	Number observed.	Age of 1st menstr.	
United States, Private Schools.....	113	13.47	
United States, Colleges.....	1,360	13.50	
U. S., Physical Training Schools.....	90	13.66	
City, Normal School.....	452	13.76	
City, High School.....	121	13.82	
East, State Normal.....	226	13.90	
East, Country Seminary.....	68	14.03	
West, City Normal.....	304	14.20	2,734 13.8
UNITED STATES—ALL CLASSES:			
Baltimore, Higher Class. Williams....	230	13.09	
Baltimore, Labor Class. Williams....	714	14.00	
Cincinnati, Private Practice. Zinke....	658	14.01	
Boston, Working Girl.....	661	14.16	
United States, Hospital Nurses.....	221	14.20	
St. Louis, Private Practice.....	697	14.25	
St. Louis, Private Practice, French descent ..	56	13.40	
St. Louis, Dispensary.....	2,315	14.32	5,552 14.2
CANADA—ALL CLASSES:			
Ottawa, all classes. Coyteraux-Prévost..	612	14.20	
Montreal, all classes. Laphorn-Smith..	1,165	14.16	1,777 14.42
UNITED STATES—NEGRO:			
St. Louis, Negro. Engelmann.....	700	14.07	
New Orleans, Negro. Miller.....	384	14.09	
New Orleans, Negro. Clark.....	500	14.03	
Baltimore, Negro. Williams.....	755	14.04	2,339 14.05
America, total Engelmann.....			12,402 14.00
b. Corroborative Evidence. Previously Published Cases			
UNITED STATES, ALL CLASSES, PREVIOUSLY PUBLISHED:	Number observed.	Age of 1st menstr.	
New York, Private Practice. Emmet....	2,330	14.23	
Boston, Dispensary. Chadwick.....	2,503	14.32	
Boston, Private Practice. Chadwick....	164	14.14	
Massachusetts, Sherwood Prison. Chadwick ..	168	14.18	
United States, College. College Alumnae ..	665	13.62	
United States, High School. Kennedy..	125	13.72	5,055 14.00
CIVILIZED RACES.....			18,357 14.00

2. *Semi-civilized or Native Races*

	Number observed.	Age of 1st menstr.
Greenland, Esquimaux, von Haven...	100	16.0
Hudson Bay Terr., Subarctic Indian.		
Mathews	599	12.6
United States, American Indian. Rob-	82	12.04
ertson		
United States, Seneca Indian. Lin-	23	21.1
coln*	266	13.2
United States, Seneca Indian, Lake*		
Jamaica and Barbados Plantation ne-	612	14.20
Ottawa, all classes. Coyteraux-Prévost.		
Negroes	77	15.6
Native races		14.48 14.0
Total, North American Continent	19,405	14.0

*Data concerning Seneca, Oneida and Tuscarora Indians collected for Dr. Engelmann. Twenty-three cases by Mr. Lincoln are school girls, 266 by Dr. Lake are mainly older women from a more primitive life.

For data from Canada I am indebted to Dr. Coyteaux Prévost, of Ottawa, and Dr. Laphorn Smith, of Montreal; from Baltimore, to Dr. J. Whitridge Williams; from Buffalo, to Dr. Matthew D. Mann, and from Cincinnati, to Dr. E. G. Zinke. My valued assistant, Dr. F. C. Ameiss, has added facts from his private practice in St. Louis, and from New Orleans important material has been supplied by Drs. Rudolph Matas, S. M. D. Clark, and C. J. Miller. The presiding officers, and especially instructors in physical training, have contributed data with regard to the age of first menstruation among school and college girls in connection with my investigation as to the influence of mental and physical strain upon the function; wanting only are the facts with regard to the period of development from the white population in the extreme Southern States and from Mexico, but these are promised for the near future.

Available for the study of this subject are over 12,400 observations of American-born women collected for this purpose (12,402), ample for a final solution of the many questions presented, altogether material more complete than it has been the good fortune of the individual observer to control in any country; to this I add the previously existing records, 5,955, mainly those of Dr. Emmet and Dr. Chadwick, which cover some of the points in question, making some 18,000 observations among women of the civilized races; then there are the *semi-civilized races* on this continent (Indians and Esquimaux), 1,048 in number, so that we have a total of 19,405 American observations. My own 12,400 cases represent all phases of temperature and the various climates from the subarctic regions of Canada to the almost tropical conditions of New Orleans, from the Atlantic coast to the Mississippi Valley; representing, too, the various nationalities, of which I have utilized for this study only those most frequently represented—the English, Irish, German, and French of American birth; the negro as a native product is here included. Among the American born of foreign parentage the various social grades are recognized as far as we can distinguish: the

well-to-do observed in private practice and the poor, or laboring class, in the dispensary. Mentally or intellectually I have differentiated between the various grades of schools and colleges, endeavoring to classify with reference to differences of all kinds, with a view of determining the influence of such differences on the time of first menstruation, and to indicate, if possible, the causes of these variations.

The material here utilized is an unusual one in many ways; not only are the numbers large and the phases of life presented most varied, but the harmony of results is a factor of perhaps still greater importance—a factor which at once places the figures presented beyond all question. If differences exist they are not of consequences, usually in the second decimal, one or more hundredths of a year, three or six days. I find the age of development in 2,315 dispensary cases to be 14.32 years, precisely as does Dr. Chadwick in 2,503 of his Boston cases, and my observations in private practice among a higher class—697 cases, 14.25 years—differ by only $\frac{1}{100}$ of a year, six days, from Dr. Emmet's 2,330 cases of the same class; my own observations among negroes in St. Louis, and those of my colleagues in Baltimore and New Orleans, 2,339 cases in all, are almost identical, varying only between 14.03 and 14.07; and so with other groups. I more especially call attention to this fact, because no two European observers in the same country and the same group agree closely; usually the difference is even a very decided one, as it is between the results of the various observers in France: Leudet, in Rouen, gives the age of puberty at 14.9 years; Puech, in Toulon, at 14; Petrequin, in Lyons, at 15.45; Puech, in Nîmes, at 14.25; d'Espines, in Marseilles, at 13.58; de Boismont, Raciborski, and others, in Paris, average 14.98. Worse still in St. Petersburg, where we find a variation from Weber, with 14.6, to Horwitz, with 17.53; so also in other countries where different observers have reported.

With a practical object in view I shall, in the main, confine my observations to the race of our civilization, the white, the Indo-Germanic branch of the Caucasian race; for the sake of comparison I have briefly noted conditions existing among the various other races inhabiting this continent, the Ethiopian, the Indian and the Esquimaux, and these I have grouped as follows:

Civilized, or immigrant races: Caucasian and Ethiopian. Semi-civilized, or native races: Indian and Esquimaux.

Civilized, or immigrant races.

The negroes I have classed with the whites as living under precisely the same conditions, in the same localities, both immigrants into this country, and in all comparison they are placed side by side with the laboring class of the white population.

A. THE PERIOD OF PUBERTAL DEVELOPMENT IN AMERICA AS COMPARED WITH OTHER COUNTRIES.

While I shall confine this study strictly to the age of first menstruation in North America, it will be desirable to consider briefly the status here with reference to that in other countries and climates, as it is unique and deviates from all laws, as far as hitherto established, and which seem to prevail elsewhere.

TABLE II.—AGE OF FIRST MENSTRUATION IN THE GREAT CLIMATIC ZONES.

	Precise age.	Average in round numbers.	Age at which largest number noted.	Per ct. at that age.
Tropics	12.9	13	12	25
United States.....	13.9	14	14	27
Temperate Zone.....	15.5	15.5	15	17
Cold Climates.....	16.5	16.5	16	22

The climate is that of the temperate zone, but the mean age of pubertal development on this Continent differs from that of the same zone in the Eastern Hemisphere, approaching in some measure that of

climatic conditions, in a new home—that is, they have developed a more precocious puberty in a colder climate; and this is not a recent development, but has long since been recognized. Even in the earlier colonial days, as at present, the periodicity of functional development seems to have changed rapidly with migration to the American Continent, unlike the stability of pubescence among races and groups of people with migration in the Eastern Hemisphere. Strange to say, the period of pubescence attained by these immigrants is very much the same and closely approximates that of the native inhabitants—the American Indians in the southern and central belt of this Continent, from 12 to 14.

Dr. Douglas, an accurate observer, in 1730, notices the precocity of the inhabitants as compared with the parent stock in the mother country. This precocity of the early inhabitants of this country we may accept, not only because we see it verified in our day,

TABLE III.—ANNUAL PER CENT. OF DEVELOPMENT IN DIFFERENT GROUPS.

Years of age.	United States.					Canada. Montreal and Ottawa. Smith and Prévost.				Negroes. Baltimore, New Orleans, St. Louis. Clark, Miler, Engelmann, Williams.	Indian. Hudson Bay Indian. Mathews	Irish. St. Louis, Boston. Engelmann, Chadwick.
	Dispen- sary, St. Louis.	College, United States.	Labor class, Americans of Amer. parents.	Labor class, Americans of Irish parents.	Total Americans.	English descent.	French descent.	Irish descent.	Total, Canada.			
	2315 14.3	1360 13.5	2574 14.2	887 14.5	10,531 13.93	452 14.3	870 13.65	430 14.58	1752 14.2	2339 14.05	500 12.6	1494 15.15
8	% 100.08	% 100.0	% 99.41	% 99.6	% 99.95	% 99.7	% 100.5	% 99.6	% 99.7	% 99.83	% 100.0	% 99.5
9	.....	.....	.....	.....	0.04	.....	.....	.....	.....	.....	.....	.....
10	0.8	0.3	0.8	0.5	0.7	0.8	3.3	0.6	1.8	1.4	2.2	0.4
11	3.5	4.1	4.4	1.8	3.6	2.7	7.8	0.7	4.5	3.4	17.0	1.3
12	11.8	14.2	9.8	6.7	10.3	8.6	12.8	10.0	10.6	10.6	33.4	5.1
13	18.8	30.5	10.6	18.1	20.4	19.6	20.3	17.3	19.5	22.0	26.4	11.5
14	25.4	28.6	25.5	25.9	27.1	25.7	23.2	26.3	24.6	23.5	11.8	18.7
15	16.6	13.4	17.4	21.7	17.2	22.3	14.8	15.2	17.3	20.6	5.8	21.6
16	12.4	5.7	12.3	14.5	11.2	8.8	9.7	13.2	10.2	11.6	2.0	18.0
17	7.2	2.0	5.5	7.1	5.8	6.8	4.5	9.2	6.3	4.1	0.4	12.5
18	2.6	1.0	3.2	2.5	2.4	3.2	2.6	6.0	3.5	1.9	0.4	5.6
19	0.8	.....	0.5	0.7	0.7	0.4	.....	0.7	0.3	0.4	0.2	3.2
20	0.1	.....	0.3	0.1	0.2	0.4	0.4	.....	0.4	0.3	0.2	1.0
21	0.04	.....	0.04	.....	0.1	0.4	0.1	0.2	0.3	.....	0.2	0.2
22	0.04	.....	.....	.....	0.01	.....	.....	0.2	0.1	.....	.....	0.2

the equatorial belt. Combining all well authenticated data, the mean age of first menstruation in the southern climates is nearly 13 years, 12.9,¹ only one year later, 13.9 for America; while in the temperate zone of Europe and Asia it is between the fifteenth and sixteenth year (15.5)—so that in this country, mainly under the same climatic conditions with the centre of Europe (France, England, and Germany), and among the people composed of inhabitants sprung from these countries, puberty comes more than one and one-half years earlier, at 13.9, in place of 15.5 years abroad.

A decided change has taken place in the same people, under the same and even supposedly adverse

but because the observation is quoted in various works, among others in that reliable and valuable study of Sadler's (*The Law of Population*, Vol. ii, pp. 347 and 348); and the same fact has been observed in Canada by Rameau, a French scientist—i. e., that in Europe puberty is later as we go north, and that this does not seem to be so in America. Absurd as some of his deductions are, this is strictly correct. He adds "that in Canada, with a winter like that of St. Petersburg, among the French marriage takes place at 14 or 15—sometimes even at 13 or 12," which is indicative of precocious puberty.

Here we have observations of physiological and ethnological interest: a much more precocious puberty among immigrants to the United States, with the added fact that this pubescence of the civilized Caucasian immigrant approximates that of the savage native Indian.

¹This is another of the popular fallacies generally accepted as facts, accepted and reproduced by all writers, though based upon very limited observation, and I refer to it, as my own investigations are not as yet completed, though I do so under protest, and do not vouch for the correctness of this statement; correct as far as it goes, but covering too limited a field to be true of an entire zone.

The difference in the characteristics of pubescence is marked, too, in other respects. Development in this country is nearer the same age in all classes and individuals, a much larger number attaining puberty at the year common to most (27 per cent. in the fourteenth year (see *Table III* and *Chart II*); again, nearer the condition of the tropics, where we find 25 per cent. in the twelfth year, and in the temperate zone only 17 per cent. in the year at which the largest number develop, at 15. In the cold climates 22 per cent. come in the sixteenth year; in other words, there is much less variation in the age of first menstruation in this country, and if this is charted the figure presented is a narrow, steep triangle (*Chart II.*); while in the temperate zone of Europe it is rather a flat curve with a much broader base—that is, the variations are much greater. We see that in the United States the period of pubescence varies from the eleventh to the seventeenth year, while in

Mentality, or the educational status, at once impressed me as the most important factor, and this is the only one which has *not* been studied in its bearing on pubescence.

So much stress has been laid on these varied conditions that I have carefully assorted the material available in order to determine in how far in this country these various causes influence the time of pubertal development.

I. SOCIAL STATUS. All European observers concur in the great variations in age of pubertal development of the different social grades, which is well marked in every country and usually between two and three years. This class distinction is difficult to establish in the United States, and I have attempted some classification by utilizing my observations in private practice and in dispensary work, considering private practice as the well-to-do, or *higher class*, and dispensary patients as the laboring class, and

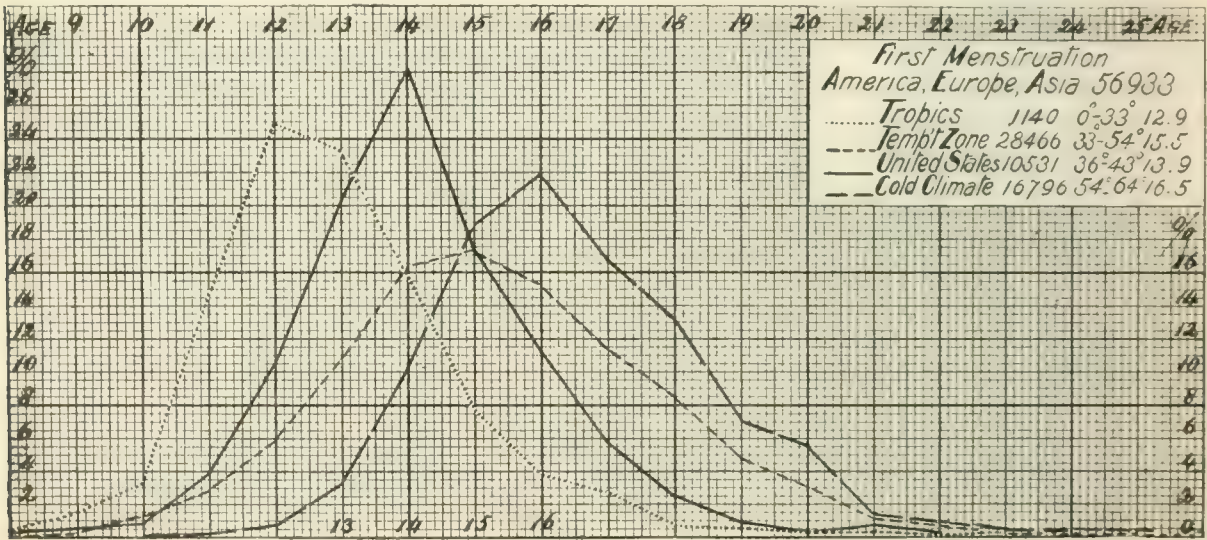


CHART II.

the Eastern Hemisphere it is protracted from the eleventh to the nineteenth year.

B. VARIOUS FACTORS WHICH INFLUENCE PUBERTAL DEVELOPMENT.

The various causes which may hasten or retard pubertal development have been much discussed abroad, and various authors have reached widely differing conclusions; but in this country no such investigations have been made, and, as conditions differ greatly from those found in European countries, it seemed essential to me to study my own material with a view of presenting the results here found, to determine how far the period of pubescence is influenced by the different *social, climatic, racial*, and *educational* conditions existing in the United States, *race, climate*, and *social status* being the causes which have been supposed by European investigators to influence the time of first menstruation.

poor or the *lower class*; these are the extremes, yet between these two there is very little difference. (See *Table IV*). The mean age of first menstrua-

TABLE IV.—SOCIAL INFLUENCE.

Age of Development in Different Social Groups.

Higher class			Laboring class.		
Locality.	Number.	Age.	Locality.	Number.	Age.
St. Louis . .	697	14.25	St. Louis . .	2315	14.32
New York . .	2330	14.23	Boston . .	2523	14.32
Cincinnati .	325	14.00	Boston (with schooling)	661	14.16
Baltimore ¹ . .	230	13.9	Baltimore ¹ . .	714	14.0
Montreal . .	658	14.01	Montreal . .	840	14.2
			Ottawa . .	612	14.21
	4240	14.2		6645	14.3

¹Mainly of American parentage.

tion in my private practice in St. Louis is 14.25 years and in the dispensary 14.32 years, almost identical

with the results of Dr. Emmet in New York (14.23 years in private practice) and those of Dr. Chadwick in Boston (14.32 in his dispensary practice). (Chart III.)

The 4,818 observations among the laboring class of Boston and St. Louis give precisely the same result (14.32 years), and between my figures and those of Dr. Emmet in private practice there is a difference of only $\frac{2}{100}$ of a year, a variation of six days, so that practically these are likewise identical. These 3,027 observations among the higher class show 14.24 to be the age of puberty, a difference of less than one-tenth of a year, $\frac{8}{100}$, one month between the well-to-do and the laboring class, which in Europe is between two and three years.

In Baltimore pubescence is somewhat earlier, but

States, and emphasizes the fact already shown, that in *this* country social status influences pubescence to an inappreciable degree only.

2. EDUCATIONAL INFLUENCES. Much more decided in its effect on development is what I may call the educational influence, as will be seen from the different conditions existing in the various educational institutions, the pubertal age being in direct relation to the status of the school.

In the highest class private schools in Boston and Buffalo the mean age of first menstruation is 13.47, in colleges from the Atlantic to the Pacific 13.5, in the normal school of Boston 13.76, in high schools of Boston and Cleveland 13.8, and in the Nurses' Training Schools in Boston, New York, and Philadelphia 14.2.

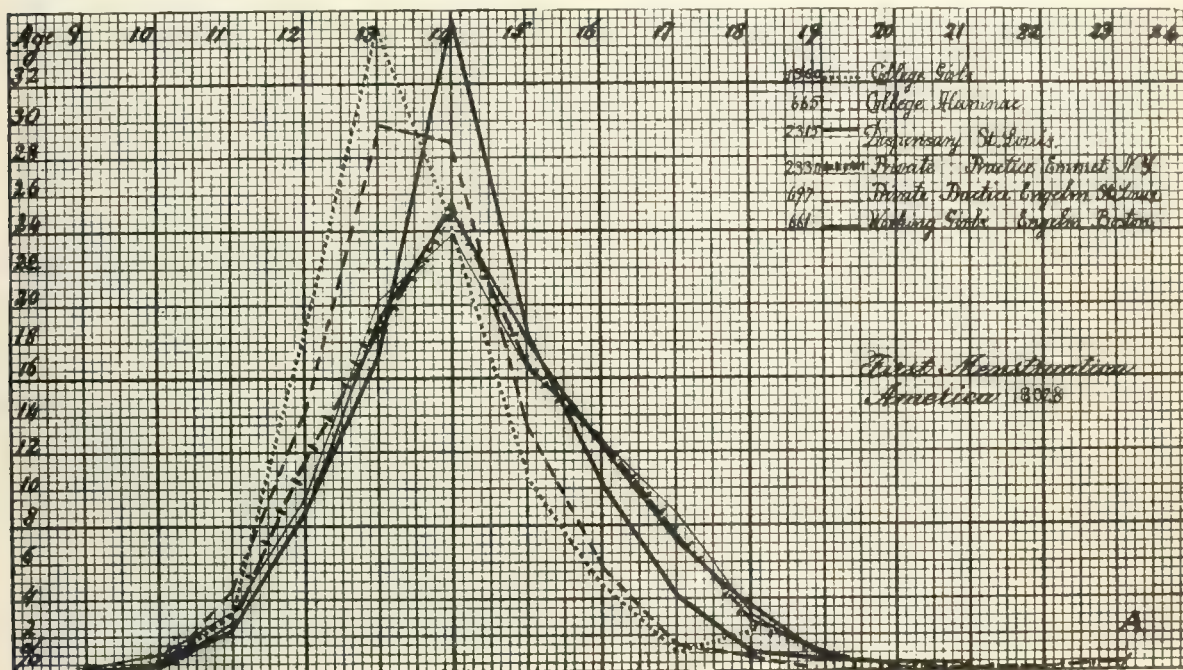


CHART III.

the same relation exists between the period of development of the two classes—13.9 among the *well-to-do* and 14.0 among the *laboring* class.

Precisely the same conditions exist in Canada; the age of first menstruation in private practice in Montreal is 14.09 or 14.1, in dispensary practice 14.2, the same as in Ottawa, a difference of a little over one-tenth of a year between the two classes, and in the United States a little less.

That the mean age of first menstruation in the more northern latitude of Canada should be somewhat less than it is in the United States, contrary to former ideas of climatic influences, is due in that particular region to the prevalence of the French element with an early puberty; the mean age of development of the same nationality and class, however, corresponds perfectly with that of the United

At first sight it appears absurd to connect the age of pubertal development with the grade of an educational institution entered by the pupil *after* menstruation has appeared; but a careful study of the subject has convinced me that this is unquestionably the case, and it is explained by the fact that the surroundings—physical and psychical, home and social influences—differ accordingly, and are accountable for this strange result. In the select private school we find the girl developing amid more or less luxury under the highest mental and social stimulus; her surroundings are such as awaken the nervous system to an early activity. Under much the same conditions is the girl destined for college: it is the surroundings, the "milieu" (of the French) which is supreme and a predominating influence, not only in functional development, but in all phases of exist-

ence, and accepted by biologists as a controlling power in development throughout animal and vegetable life.

It is a fact that the surroundings of the girls attending these various institutions differ, and it is mainly the mental, but also the social status of the parents, the comfort and luxury of the home, rich food, the early excitement of the nervous system, of the senses and the imagination which influence the child and bring about a more or less precocious mental awakening with stimulation of nerve activity, and this it is that determines the precocity of functional development—the psychic phenomena reverberating clearly in the genital plexus. This awakening of functional life in direct proportion to mental stimulus of the surroundings is to me a striking proof of the correctness of the position of that school of biologists who accept the predominating influence of the milieu, as contrasted with those who believe in the prevailing influence of inherent qualities. This is fully corroborated by my observations among the native American and the American of Irish parents.

TABLE V.
TABLE V.—EDUCATIONAL INFLUENCES.

	All American born.			Differentiation of parentage.		
	Num-ber.	Age of first menst.		Amer born.	Amer. parents	Irish parents
Private School, College,	113	13.47	Normal School, Laboring class, Negro, lowest " Same with some school girls, Negro schl. girl, Reserva'n Ind'n Ind. school girl,	13.76	13.7	14.08
	1360	13.50		14.32	14.1	14.50
Normal School,	452	13.76		14.09		
High School,	121	13.82		14.03		
Nurses' Train'g School,	221	14.20		13.2		
				12.1		

While the mean age of first menstruation in the normal school girl is 13.76 years, for the pupil who comes of American parentage it is 13.7, for the normal school girl of Irish parentage it is 14.08. If we now compare the woman of the laboring class, who attains puberty at 14.32, and if of American parentage, 14.1, we see that development is likewise earlier for the normal school girl of that class, 13.7; for the American of Irish parentage of the laboring class, 14.5, and for the normal school girl of Irish parentage, 14.08. So it is true of the negro. In one group from New Orleans the mean age of first menstruation is 14.09 years; for another, of which perhaps one-fourth are school girls, it is 14.03; only a very small difference, because I was not able to separate the school girls, but was obliged to consider them, together with the very lowest class; however, they render the age of puberty in the total mean somewhat more precocious; 13.2 is the age of development found among negro school girls of a higher class in Boston, though numbers are small.

If I have spoken of an educational influence, I have done so because the results have been secured in different grades of educational institutions; but it is more correctly the influence of mentality, of general nervous and mental development, of stimulating surroundings. This is clearly defined and a most potent factor in the precocious development of the American girl.

This is equally true of the Indian and the negro. (Table V.) Here the effect is more striking still because the difference between the lower class negro of former years and the better situated negro school girl of to-day is far greater than it is among the whites, and so also is the difference greater between the Indian girl of the agency school and her mother whose youth was a far more primitive one. The results in the white, black, and red race are the same.

(To be concluded.)

THE PRESIDENT'S ADDRESS,

DELIVERED BEFORE THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION AT ITS FOURTEENTH ANNUAL MEETING, AT RICHMOND, VA., NOVEMBER 13, 1901.

By MANNING SIMONS, M. D.,
CHARLESTON, S. C.

I congratulate you on having the privilege of meeting together again, after the lapse of another year with its many changes. It is, indeed, a pleasure to renew the friendships engendered by our meetings, and it is a great gratification to me to welcome you officially to the fourteenth annual assemblage.

I regret that my congratulations must be followed by the announcement of the great loss which we have sustained since our last meeting. On reassembling we are pained to find vacant the places of two of our fellows, Dr. W. D. Haggard and Dr. Hunter McGuire, two of the founders of this association—the former its first, the latter its second president.

Eminent in their profession, honorable and upright in their private lives, their death is an irreparable loss, not only to us, not only to the communities in which they lived, but to the profession, which labors for the advancement of that branch of knowledge that has for its object the relief of human suffering.

"The night dews that fall, tho' in silence they weep,
Shall brighten with verdure the graves where they sleep,
And the tears which we shed, tho' in secret they roll,
Shall long keep their memories green in our soul."

I make the announcement of their death with the assurance that the association will take appropriate

action to honor the memories of these distinguished men. They lived and moved among us, and their presence was a social and professional enjoyment. We honored them in the past by elevating them to the highest office in our gift; we honor them now by recalling their virtues and achievements.

To preside over the meetings of this association has been to my predecessors, and is to me, an unalloyed pleasure. To the president the function, "to see that the rules of order and decorum be properly enforced in all deliberations," has been the easiest of his duties.

A careful search of our transactions since the origin of the association fails to find any questions of ethics or personal controversies, unfortunately so common in medical organizations. The expression so common among the laity, "that doctors will differ," finds no confirmation, at least, in the personal relations of our members. The mutual enthusiasm to promote its welfare and the consequent subjection of individual interests to the common good, have constituted the unwritten code that has regulated all our sessions.

A single selfish feeling intrudes itself here, the pride felt in the position, to which your partiality has called me. The honor merits and receives my most grateful acknowledgements.

The only difficult duty of the president is prescribed in the article of the by-laws requiring him to "deliver an annual address at each meeting of the association." In the performance of this duty it is left to him how to evolve from his innermost consciousness what a presidential address ought to be. My predecessors have covered almost every imaginable subject in their excellent addresses, and I find myself embarrassed to know how to meet my obligations in this respect.

It seems to me, however, at the end of fourteen years of the life of this association, pertinent to inquire whether its existence has been justified by the results of its work.

The doubts and difficulties surrounding the inception of this association in 1887 have been most graphically described by Dr. Bedford Brown, in his admirable and interesting address at its sixth session, in New Orleans, in 1893. This address made so great an impression upon the association, that, by resolution, the publication committee was instructed to provide five hundred copies in pamphlet form for distribution among the members and the author's friends. This distinguished fellow of the association lived to see these doubts dispelled. The association has grown and rapidly developed to its present proportions. It has exercised a great influence on surgery in our part of the country.

When we review the state of affairs existing in the Southern States at the end of the civil war, the

doubts expressed by the author of the address referred to as to the success of a special scientific associations were most natural and reasonable.

In the present onward movement, and amidst the bright prospects of our Southland, as they exist to-day, few of us pause to make a retrospect of the educational status of twenty or thirty years ago. Certainly, the present generation has no conception of the difficulties that have been surmounted and the trials that were undergone by their predecessors in the rehabilitation of our educational institutions, both medical and literary.

We can scarcely realize now that for four years, from 1860 to 1865, inclusive, our educational institutions were deserted and closed. Years of valuable time were lost, and our people found themselves, in 1865, five years behind the world in mental culture. The world of letters was closed to us, and new books and new ideas developed in the rest of the civilized world, reached us only after they had been digested and assimilated by educated and cultivated people elsewhere. The work of progress in medicine, except such as belongs to military surgery, was as a sealed book to those who resumed civil practice, and years of hard work were necessary to bring us abreast with the rest of the medical world.

From 1865 followed years of educational chaos, when the wheels of civil institutions were blocked, and the institutions and customs of the old régime were overturned. Meanwhile, the earnest cry for higher education went up everywhere, and competitive examinations were the standard by which seekers for employment were measured.

All this has been changed. In looking back it seems as if it had been changed by magic, rather than by the slow process of united energy, determination, and industry.

The history of our medical colleges in the South testifies to the energy, determination, and industry of those by whom they were originated, maintained, and conducted. Few of our colleges are endowed, and their success depends upon their trustees, faculties and students, yet to-day the South can well be proud of her medical institutions. Their present standing is due, in great part, to the increased educational facilities of the country. But a few years have passed since students who presented themselves for matriculation had to be subjected to a preliminary examination, to ascertain if they possessed sufficient education to justify their acceptance as students of one of the learned professions. To-day they present themselves with college or university diplomas, as a foundation upon which to build their medical instruction. From year to year the demand has been made for a higher standard of medical education. The two years' course was regarded as insufficient training for a degree. The

Southern colleges promptly met the demand, and a three years' course was universally adopted. Again, the four years' course was deemed necessary by the colleges at the metropolitan centres, and the Southern colleges promptly met this demand. At this time the colleges of the South are holding their position with the foremost in this country.

Doubtless these advances in the standard of medical education are due in a great degree to the medical societies in the various States. This association has contributed largely to the elevated standard in the South, by the stimulus it has given to ambition in individual members of the profession. The design of this association has been, not only to advance surgery and gynecology in the South, but to establish a school of instruction for at least two classes of members provided for by its originators. The laws of the association were so arranged as to embrace three distinct classes of professional men; first, the specialist, whether surgeon or gynecologist of distinction, skill, and experience; secondly, the general practitioner of eminence and experience, who, in addition, practised surgery and gynecology to a limited extent; thirdly, the rising young surgeon and gynecologist of character, talent, education, and promise, but whose practical experience was limited. This wise provision has stimulated the study of surgery and gynecology in the South to such an extent that the two last-named classes of members have diminished in numbers yearly, until this association may now truly be regarded as composed almost entirely of specialists, whose work entitles them honestly and justly to be so styled.

Having to a great extent overcome the difficulties of the problem of its existence, this association has triumphed over sectional prejudice and unpatriotic jealousies. It has become as national in its character as the American Medical Association, and extends the right hand of fellowship to our professional brethren in every part of the country. We have the honor to number in our fellowship distinguished men from the North, East, and West, as well as the South, who have joined with us in building up this association of which they are a welcome and integral part.

This association, for the past fourteen years, has been steadily making the surgical history of the South and, in no small part, that of this country. A review of its transactions, constituting a surgical library in themselves, would repay one, who has already read them, or heard the papers at their original presentation. The history of surgical progress and improvement during these fourteen years can readily be traced in these volumes. The reader can see the narrow pathways of original investigation and work, blazed out by the pioneers and leaders,

widen into the broad highways of surgical practice now open for daily use.

We number among the fellows of this association some of the distinguished masters of surgery and gynecology, teachers and operators, originators and investigators, whose names and work are familiar wherever enlightened surgery is practised.

Can it not truly be said that, after the short term of fourteen years, this association has justified its existence, and that it is a living monument to its founders, who, by their ability, learning, and professional attainments, contributed to its present vigorous life?

Medical societies and associations are the natural outcome of the development of the science and art of medicine and surgery, and for this reason they have multiplied in recent years to fulfil the purpose of discussing "propositions bearing on the promotion of more systematic observation and plans of operation, and of greater uniformity in the mode of publishing results, as well as for the consideration of matters in which the cooperation of corresponding societies is desired." To the wonderful development of medicine and surgery during the nineteenth century may be traced the increase of such organizations.

Private scientific societies have originated chiefly during the past century, the demand for their existence being due to the necessity of the increased organization of rapidly developing knowledge and the desire among workers for a common ground to meet, discuss, and compare results, and collect facts for future generalization. The natural tendency of such societies is to become more and more specialized, to keep pace with the specialties into which medicine and surgery are daily being subdivided.

The benefits to the medical profession derived from those societies have been very great and their good influences far reaching.

There has been a general demand for specialism in every department of life in recent years, and in medicine and surgery particularly has this demand been evident, both in the profession and among the laity. Patients now demand and require special treatment of their ailments, and this requirement has been met by the division of medicine and surgery into many departments. As is usual in the development of a new idea, there is a tendency to go to extremes, and we now find even the recognized specialties undergoing subdivision in accordance with the trend of individual inclination.

It is probably admitted that general knowledge is the aggregate of special knowledge, but, conversely, individual special knowledge is attained at the expense of general information. If this is granted, it seems possible that the legitimate ends of specialism may be diverted into narrow-mindedness and one-

sidedness. It is more than probable that the greatest advance in recent years in specialism in surgery has been in the direction of perfecting technics and cultivating manual dexterity.

It is true, that we have availed ourselves of the aids derivable from the progress made in the collateral work of the bacteriologist and pathologist, but there seems to be a growing belief in some quarters that clinical observation is being somewhat neglected in our efforts to attain to perfect technics.

Accurate diagnosis naturally forms the basis upon which successful operative work must rest, and it must be admitted that skilful diagnosis depends upon extensive general knowledge. It is impossible to disregard the interdependence of the various systems of the human economy. Thought, habitually concentrated upon one system, must naturally influence our judicious and correct interpretation of phenomena relating to the whole. There is a growing tendency to neglect the ordinary methods of diagnosis for the more brilliant resources of exploratory incisions and operations, often of considerable magnitude, simply for diagnostic purposes.

In these days of enlightened surgery few will question the justifiable resort to exploratory operations with diagnostic object, nor will the doubt be raised, that such operations, in the hands of skilled and experienced operators under aseptic wound conditions, are comparatively free from danger. Still, it must be recognized that this short cut to knowledge is not conducive to the development of the higher art of diagnosis by exclusion, which, under existing surgical custom, bids fair to become a lost art.

Acuteness in diagnosis is the result of general learning and familiarity with all the elements conducive to a true appreciation of symptomatology and pathology. It is true that some men seem to possess intuitively the diagnostic art, but the safest diagnostician is he who arrives at his conclusions by process of reasoning, rather than by a short cut. The chairman of the Section on the Practice of Medicine of the American Medical Association, at its last meeting, has expressed somewhat this idea in these words:

"Neither the physician nor the surgeon can afford to confine himself alone to his special studies. Without wishing to detract from the merits of our surgical confrères, the medical practitioner is compelled to witness or learn of surgical operations having been performed, which would most probably not have been performed, had the operator first consulted with a progressive clinician, conversely the physician would grow less conservative as the result of more frequent consultations between himself and surgeons—a consummation to be desired."

Correct technics and deft manipulation are the common property of the surgeons of to-day. The brilliant results of modern surgery have to a great extent overshadowed the disasters that occasionally occur, and the people have become educated to accept surgical operations when proposed, even though they be of the greatest magnitude.

There is scarcely a cross roads, the whole establishment of which consists of a blacksmith's shop, saw mill, and grist mill, that has not a surgeon possessing a correct knowledge of modern technics and possessing manual dexterity, with the self-confidence and boldness, that enables him to do most of the operations of surgery.

One is impressed with the truth of this statement by the discussion on the paper of Dr. Deaver, on Appendicitis, read at the last meeting of the American Medical Association.

A member from Anaconda, Mont., said: "In Montana it is impossible to get Dr. Deaver or any other noted surgeon out there; it is impossible to do anything but take right hold of these cases yourself, and I promise you we do it. We find no difficulty in performing operations for appendicitis, but we *do* find difficulty in treating them on medical lines."

Technics and manual skill are indispensable attributes of the surgeon, but the danger of the day is their cultivation to the neglect of the knowledge of their proper and judicious application. The standard of excellence of the surgeon does not consist alone in his operative skill, but in his diagnostic acumen, his judgment in the determining of operative and non-operative cases, and his ability correctly to measure the limitations of justifiable surgery. Seven operations performed on the same patient at one sitting indicate the over-shadowing of diagnostic acumen by the boldness, skill, and correct technics of the operator, and his unbounded confidence in the powers of Nature to withstand so shocking a procedure.

The glamour of brilliant surgical results has fired the ambition to operate, and many aspirants enter the field of surgery who borrow their equipment from their better prepared confrères.

There is no more danger to the community from the injudicious and unlearned administration of calomel and castor oil and in "meddlesome midwifery" than lurks in the "aseptic scalpel" in the hands of the surgeon.

It has been said, "there could be no art of healing till the earth was full of graves," and "it is by shipwrecks that we learn to build ships."

It is true that some surgeons are "born, not made," but the problems of modern surgery demand more than manual dexterity or inspired knowledge. Four years of lectures, and six months of post-graduate course cannot be regarded as preparation

adequate to justify the position of a specialist in surgery.

The present too common custom for a graduate in medicine to select a specialty and establish himself as a specialist does not meet the requirements of the specialism of to-day. Hospital experience and a general practice of five or ten years, should be a prerequisite for affiliation with special societies. State examinations are required of all graduates in most of the States before they are granted licenses to practise as general practitioners. Surely there should be some provision of a like kind for special examinations to determine the qualifications of those who desire to enter upon the practice of a specialty, and particularly upon that of surgery and gynaecology.

In these days of materialism, it would seem out of season to speak of the sentimental aspect of medicine, but medicine has certainly had its sentimental side. The times have changed and we have changed with the times. The demands of modern medicine have, to a large extent, divested the practice of the sentiment that formerly surrounded it. It is a question to what degree specialism has led us into the paths and methods of ordinary business. The relations of the patient to the doctor and those of the doctor to the patient, have certainly changed in conformity to the modernized methods of practice. Gratitude, respect, and confidence do not express adequately the sentiments of patients to their physicians in the olden times. Their loyalty was as marked as their love of country, and their confidence as immovable as their faith in their religion. A patient, having selected a physician, recognized in him the one individual to whom he confided as much as possible the care of himself and his family.

The people, however, of the present time have been educated to appreciate the utility of, and necessity for, specialism in medicine and surgery, and each individual has his separate doctor for his eyes, his ears, his nose, his throat, and indeed for every system of the economy, to whom he goes from one to the other as he does to his "butcher, his baker, and his candle-stick maker."

Under these changed circumstances, the relations of the doctor to the patient have, in like manner, and in accordance with the demands of the times, undergone a radical change.

Formerly, calls made on him by his patients were binding, even at the risk of his life, health, comfort, and convenience. Now the obligations that formerly devolved upon him among his clientèle are shared by many others. The feeling that this changed relation is entertained by the public, is most graphically portrayed by Ian Maclaren in his pathetic description of William MacLure, a doctor of the old school. His description of the journey

"Through the Flood," of Dr. MacLure and Sir George, the great metropolitan specialist, to the bedside of Annie Mitchell, plainly points out the self-sacrificing devotion of the doctor of the old school. "Sir George was as brave as most men, but he had never forded a Highland river in flood, and the mass of black water racing past beneath, before, behind him, affected his imagination and shook his nerves. He rose from his seat and ordered MacLure to turn back, declaring that he would be condemned utterly and eternally if he allowed himself to be drowned for any person.

"'Sit ye doon!' thundered MacLure, 'condemned ye will be suner or later, gin ye shirk yir duty, but through the water ye gang the day.'"

After a brilliant and successful operation, when Dr. MacLure placed the precious bag of instruments beside Sir George he laid a check along with it and was about to leave. "No, no!" said the great man, "you have some right to call me a coward, but I'll never let you count me a mean, miserly rascal," and the check fell in fifty pieces to the floor. Thus we see portrayed in this pathetic story the contrast of the duty of the doctor of the old school with the charity of modernized medicine.

The contrast is probably harshly and somewhat unjustly drawn by the writer of the beautiful story of a doctor of the "old school," but it points to a possible danger into which the specialism of to-day may be leading us. This brings me to speak of the passing of the "family doctor."

Little by little he is being shorn of his glory and usefulness. Doubtless, he has been one of the most picturesque figures in society, about whom have clustered many recollections of kindness, charity, gentleness, and unselfish devotion to duty, and appreciation of the greatness of his mission.

As the great oak that has withstood the vicissitudes of tempests for ages, yields to the demands of rapid transit, and landmarks, around which historic associations cluster, give way to the necessities of modern improvement, so the "family doctor" of the old school is gradually yielding before the rapid advance of the continued development and improvement in the methods of medicine and surgery.

The history of Dr. William MacLure, by Ian Maclaren, the noble life of the typical Virginia gentleman, Dr. Carey, as portrayed by Thomas Nelson Page, and of Dr. Sevier, described by Cable, in these few words, "He stood straight up in his austere pure-mindedness, his inner heart was all flesh, but his demands for the rectitude of mankind pointed out like the muzzle of cannon through the embrasure of his virtues," constitute

fitting eulogies on the character and usefulness of the old-time family doctor.

In parting with him we may use the words of Sir George to MacLure, "Give's another shake of the hand, MacLure! I'm proud to have met you; you are an ornament to our profession."

In conclusion I desire to express my appreciation of the honor you have conferred upon me in having elevated me to the office of president of this association. I feel that it is the highest reward that can be conferred upon a Southern surgeon.

CLOSURE OF THE ABDOMINAL INCISION, WITH REMARKS UPON THE CAUSE AND PREVENTION OF VENTRAL HERNIA*

By I. S. STONE, M. D.,

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If the statistics of ventral hernia resulting from abdominal operations could be accurately tabulated, we should be astonished at the aggregate number, and for obvious reasons.¹

We are all operating for the relief of these unfortunate people, but strangely enough see comparatively few of our own cases. It is possible that such victims of our bad surgery often go to other surgeons to tell their tale of woe. Many women, however, never report their condition to the surgeon who operated, neither do they always go to another, but bear their affliction in silence, lest they be obliged to again undergo an operation.

We have reason to believe that the average surgeon has from eight to ten per cent. of his incisions become infected. The exceptionally careful man may have only two, or perhaps five, per cent. of such results. It is fair to assume that one half or one per cent. of these cases result in ventral hernia. While most cases of ventral hernia are a result of wound infection, it is true that some cases occur in which there is not the least evidence that such an accident has occurred. Some of these are doubtless due to imperfect or defective methods of closure; while others are due to an enteroptosis, which may overcome the best methods or the work of any surgeon. A majority of ventral herniæ are caused,

First—By wound infection resulting in loss of fatty and connective tissue, and consequent separation of wound surfaces.

Second—Improper wound coaptation or failure to unite corresponding wound surfaces.

*Read before the Southern Surgical and Gynecological Association at the fourteenth annual meeting.

¹Dr. Bull saw fifty cases of ventral hernia in two years, many of which had followed operations for appendicitis, and it is fair to presume that a majority of these were to the right of the median line, over the cæcum. Nearly four hundred cases of ventral hernia were admitted to the Hospital for Ruptured and Crippled in New York in six years.

Third—Enteroptosis with pendulous abdomen.

Fourth—Accidents, such as severe vomiting during recovery, or any violence sufficient to break one or more sutures. Loss of fat or cellular tissue must cause separation of wound surfaces. The extent of this separation depends upon the loss of tissue and the kind of material used to close the wound.

Any space between wound surfaces is temporarily filled with serum or pus, and this is replaced to some extent by granulation tissue. But a most important change in the relation of the wound surfaces occurs coincidentally with loss of tissue from suppuration; the peritonæum is pressed outward between the muscles, and possibly the fascia, and the first step toward the formation of a hernia has begun. In all ventral herniæ, we find the peritonæum attached to the skin, with very little fascia between, and which no longer serves its purpose.

This reference to the formation of a hernia in any case with conditions favorable to perfect union, is made with the intention of showing in contrast how easily a hernia may result where an imperfect or defective technique has been used. Given a thick abdominal wall, coaptation made with only a minimum of tissue embraced by a through-and-through transfixion suture, and we have a most favorable opportunity for a hernia to occur. Equally certain are we to find such results after layer sutures of poor material. If the patient vomit after anæsthesia, or if suppuration occurs, the intra-abdominal pressure will probably cause sufficient separation of the wound surfaces, for a collection of serum to fill the dead spaces thus formed, and to allow the introduction of a wedge of peritonæum which will keep the edges of the wound permanently separated.

The various methods of wound closure cannot be discussed here, and we will mention only two of those commonly used, *i. e.*, the "through and through" and the "buried suture" of absorbable material. These are equally satisfactory in competent hands and either one leaves very little to be desired if we are absolutely sure of the perfect sterilization of all suture material. We have used both methods of closure with nearly equally satisfactory results, but prefer the "through-and-through" suture of silkworm gut because it takes less time to close the wound, and because silkworm gut is easier to sterilize. We nearly always add a few sutures of catgut in closing the fascia over the rectus, as we believe there is no other way to be sure that this important step in the operation has been accomplished.

In all wounds made in or near the median line below the umbilicus, we find the peritonæum very loosely attached, and after dragging upon it during the time of operation we find excessively long flaps which may be removed with advantage. This long flap has probably been infected, and at least has suf-

fered much from severely rough handling. It is quite possible that this infected or injured portion favors the formation of omental or intestinal adhesions. We believe these long flaps should be excised, and accordingly we remove a strip from each side, from two to three centimetres in width, according to the length of the wound and the requirements of the case (Fig. 1).

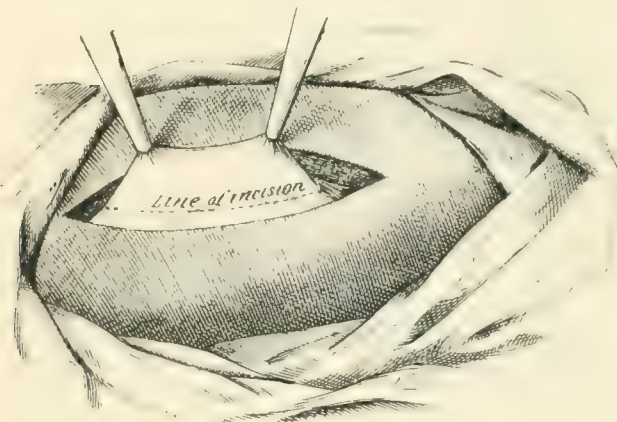


FIG. 1.

If any one will observe the appearance of this flap of peritonæum when the abdomen is opened for any reason a few days after operation, whether at the post-mortem or ante-mortem secondary operation, he will observe the discoloration and other indications which appear to call for the precaution here mentioned. Besides the necessarily poor circulation in the long flap, it is almost impossible to close the wound so that space is not left between the peritonæum and muscle for the collection of serum or blood, which invites infection. Still another reason may be given for the suggestion; the mistake is often made of placing the sutures in such manner that a portion of peritonæum is fastened between the muscles. We advise the excision of the flap and the introduction of the sutures so that the peritonæum will come together edge to edge, much as we would have after the operation for inguinal hernia.

In Fig. 2, 1—2 shows the wrong way to place an interrupted suture. The peritonæum is wedged between the muscle and when traction is made at the skin surface, in tying, the distance between the skin and peritonæum is shortened and pressure is made chiefly between these points, or in line with the suture, thus paving the way for a ventral hernia.

1a, 2a, shows a better method of placing the suture. More pressure is made laterally, and all dead space is prevented. The peritoneal flaps are excised before the sutures are inserted.

In very fat subjects we suggest the use of a special suture, well known to some present, which can also be used in operations for ventral hernia. The object of this suture is to close the peritonæum,

muscle, and fascia with pressure applied to these tissues, without including the fat or skin, and will enable us to remove the suture when necessary. To accomplish this, a small silver tube² is used through which the suture is passed, and which should be about as long as the fatty layer is deep.

It is my practice to leave these in place for at least three weeks. Some surgeons leave the thick fatty walls in such cases to heal by granulation, while others merely close the wound by means of adhesive strips. Neither of these methods appeal to us, however, as there can be no objection to any closure which brings the surfaces together without strangulation. The closure of the abdominal incision with silkworm gut properly placed in each of the structures through which it is passed, answers every purpose that any other suture can serve, with the one exception that it *must be removed*. Since the introduction of this material and its endorsement by Dr. Bantock and hundreds of his followers, no rival has appeared which can claim to approach it in value when properly used for surgical purposes.

I therefore suggest the following principles which should guide us in wound closure as next in importance to asepsis:

First—Remove all excess of peritoneal flap. Also remove all loose pieces of muscle or fat, as these bits of tissue may become necrotic.

Second—Bring peritonæum, muscle, fascia, etc., together to meet similar tissues of the opposite side, without space between layers for collection of serum or blood, and yet without strangulation. The sutures to be placed in such manner as to make pressure as much upon the fascia, or tissues in the cen-

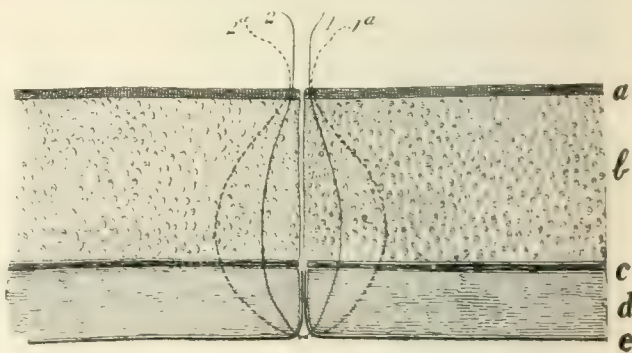


FIG. 2. 1—Skin; b fat; c, fascia; d, muscle; e, peritonæum.

tre of the circle made by the suture, as at the peritoneal or skin surfaces.

The interrupted sutures will answer these requirements in nearly every respect; the exception being its non-absorbability, and also its inability to bring like surfaces together accurately. We use this method with entire satisfaction when supplemented

²This silver tube was brought to my attention by Dr. W. E. B. Davis, of Alabama. I am, however, unable to say who first used it.

by additional buried sutures, preferably of some absorbable material, in the fascia. Finally, I believe that layer sutures as generally used, make unnecessary pressure upon the entire wound surface, and prevent proper blood supply, while they are not more effective in preventing dead spaces than the interrupted suture.

GASTROSTOTOMY AND RETROGRADE DILATATION IN IMPERMEABLE BENIGN TRAUMATIC STRICTURE OF THE ŒSOPHAGUS AND INTERNAL ŒSOPHAGOTOMY BY THE ABBE SAW-STRING METHOD.*

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Two years ago this little patient drank concentrated lye. In spite of persistent efforts to prevent it, a progressive stenosis of the œsophagus with the usual symptoms and consequences, resulted. For six or eight months prior to the time at which he came under my care, he had had the intelligent services of Dr. John Dunn, and ever since the date of his accident he had been under the treatment of one or more good physicians.

For months, Dr. Dunn had tried to stretch the stricture with bougies through the mouth. Finally, if not from the first, Dr. Dunn realized that the stricture was impermeable and did not belong to the class of cases which can uniformly be treated by direct dilatation. In spite of rectal alimentation, which was begun early to supplement what little possibly passed through the narrowed œsophagus, the child lost flesh and strength rapidly. At the time of his admission into the Virginia Hospital, apparently every drop of fluid taken by the mouth was promptly regurgitated from the dilated œsophagus. A more pitiable looking little creature is rarely seen—a child of six years of age, weighing but sixteen pounds, whose sufferings from hunger and thirst were distressing.

A gastrostomy, with the dual mission of an internal œsophagotomy and retrograde dilatation and feeding through the gastric fistula, was thought clearly indicated. By measuring with a bougie passed down to the stricture, its site was shown to be in the lower part of the œsophagus. It was evidently below the arch of the aorta, and this rendered an external œsophagotomy impracticable. Mayo and Gussenbauer have both recently urged the advantages of external œsophagotomy for dense stric-

tures above the arch of the aorta, but unfortunately, as in this case, a majority of dense strictures are situated low in the œsophagus.

The poor little starving creature was in a sad plight to stand the anæsthetic and the prolonged surgical intervention. Several times during the operation it was thought he would not live until its completion.

Upon opening the abdomen and stomach, we found we were able to dilate the cardiac orifice of the œsophagus sufficiently to introduce one finger, but about an inch above the orifice the œsophageal tube seemed to be completely obliterated. A stout pointed whalebone bougie, passed down from above, seemed at least an inch from the finger in the œsophagus below. Apparently the tube was obliterated for an inch. Neither from above nor from below could the smallest bougie or probe be passed, and of course no dilatation, direct or retrograde, could be accomplished. After persistent, gentle efforts, it was determined to make an opening through the obliterated portion of the tube by force. Accordingly, a whalebone bougie was shoved from above and guided by the finger below; it was safely made to emerge into the stomach and out through the abdominal incision. To the end of the bougie a stout piece of silk was secured and easily drawn through the mouth with the bougie. An effort was then made to saw the stretched cicatricial tissue with the silk. Apparently, we did not at first succeed with it as well as we expected. Several efforts or repetitions of the sawing were necessary before a satisfactorily large bougie could be passed. Finally, partly as a result of the sawing, and equally by using a dangerous amount of force in passing bougies, the tract was sufficiently opened.

We did not, as is advised by some, do an external œsophagotomy, through which to bring the proximal end of the string. The weakened condition of the boy did not warrant that much added trauma, even if such a procedure afforded decided advantages in the sawing movements. It was deemed wisest in this case to perform a gastrostomy. We were by no means sure that we should not need the gastric opening for future retrograde dilatation, and, certainly, in his depressed condition, the boy needed this new route for the introduction of food. This last condition is duly impressed by Bryant (*Operative Surgery*, Vol. ii, page 604) in the following words: "The enfeebled condition of many of the patients with œsophageal stricture, from lack of nourishment and the tendency of obstinate strictures to relax after a longer or shorter quiescence of the tube, has led to increased frequency of employment of the latter (gastrostomy) in order to permit of ample and immediate nutrition and to

*Read by title before the Southern Surgical and Gynecological Association, Richmond, Va., November 13, 1901.

afford the rest to the œsophagus essential to stricture relaxation."

It would naturally seem that, if we had the stricture open sufficiently to introduce a bougie from above, we could certainly introduce fluid food, in which event a gastrotomy, followed by an immediate gastrorrhaphy, would be all that was needed. We had the experience to guide us, that Dr. Dunn, in spite of his best efforts, had failed to keep the stricture patent.

The œsophagus above the stricture was very greatly dilated, very irritable and inflamed, and the number of false passages existing we could not, of course, know; and, as we have mentioned, it is impressed upon us that the rest secured to this inflamed area by means of a gastrotomy, induces a marked lessening of the irritation and inflammation, and naturally renders the passage of food and dilating instruments very much less difficult. It was also deemed advisable to leave the silk thread *in situ*, certainly for a time. One end was brought out of the mouth and fastened by a bit of adhesive plaster to the cheek and the other secured in the same way outside the gastric fistula. Our idea in leaving the silk was to use it again if needed, to saw the stricture, or possibly to guide a dilating instrument through the stricture, either from above direct, or from below (retrograde). In view of the fact that we expected to have to use the gastric fistula as a route whereby to reach and stretch the stricture, it was deemed best to have a straight tract through the abdominal wall. Obviously, the Ssabanajew, the Frank, or the Witzel method would not secure this desideratum.

The method adopted was that relied upon by Dr. E. J. Senn. "The basis of action of this method is the formation from the walls of the stomach of a circular valve-like structure near the surface, which readily permits of the introduction of food, yet aims to prevent the escape of fluid at all times." The great advantages incident to the Ssabanajew, Frank, and Witzel methods were well illustrated in the after-treatment of this case.

Leaking was incessant. Food, as fast as it was introduced into the stomach, through either the mouth or the gastric fistula, was at once pumped back through the fistula by the action of the diaphragm. The bad effects of a direct attachment of the stomach wall to the abdominal wall were very noticeable. The child was starving almost as surely with two openings into the stomach as was the case when he had only one. This was the case, in spite of the fact that the opening into the stomach had been made as high as possible on its anterior wall. A device was finally secured which was very satisfactory in preventing leaking. It was an infant's umbilical hernia truss of elastic rubber. An

elastic bulb which could be distended with air or water made efficient pressure over the orifice of the gastric fistula. For a week or ten days the child was fed through the gastric fistula with the purpose of giving the œsophagus rest. It was then found that he could swallow fluid food readily, and a good-sized bougie was passed with but little difficulty. From this time on, his convalescence was uninterrupted.

In the space of several months he has gained in weight from sixteen to forty pounds. The truss has been worn over the fistula constantly, and a few weeks ago it was seen that it had healed spontaneously. Dr. Dunn is kind enough to continue to look after the dilatation. Deglutition seems not to be interfered with to any appreciable extent, and solids as well as fluids pass readily. At times bougies are passed with ease; then, again, a spasm is very noticeable and calls for some patience before the attempt is successful.

A concise and logical summary of the treatment of this type of œsophageal strictures has recently been formulated by Mayo (*American Year-book of Medicine and Surgery*, 1901): "1. Systematic sounding should be commenced in from two to four weeks after the swallowing of a caustic substance. 2. Should the traumatism be severe, immediate gastrotomy will lessen infection and hasten cicatrization, sounding being carried on as before. 3. Non-dilatable strictures in the vicinity of the cricoid cartilage should be divided by external œsophagotomy. 4. Stricture above the arch of the aorta may be safely cut by a combined internal and external œsophagotomy. 5. Dense thoracic strictures are best dilated by Oschner's method, and, if necessary, divided by Abbe's string-saw. 6. Impassable strictures should be treated by retrograde dilatation. 7. A dilated stricture should be sounded occasionally for years, if not for life."

Tillmanns also advises gastrotomy for feeding purposes in the primary stages, obviously to lessen irritation and ulceration, to hasten cicatrization, and to minimize inanition. After my experience with this case, I should like to emphasize an idea which has been so often impressed upon us, and that is, that operative intervention in such cases is too often delayed until the patient is in no condition to stand it.

Aristotle on Uncontrollable Impulse to Crime.
—Aristotle (*Nikomachæan Ethics*, III. i) says: "For some actions no approval, but only allowance, is meet, when one does something which he should not, by reason of [circumstances] which overstrain human nature and which no one could endure. But equally some must not be done, even under controlling impulse, but rather one should endure the worst and die. For indeed the plea of constraint [advanced by] the Alcæon of Euripides, that he must kill his mother, appears ridiculous."

WHAT SHALL WE DO WITH THE CONSUMPTIVE?

By ANTONIO FANONI, M. D.,

NEW YORK.

The trend of the discussions at the recent congresses on tuberculosis shows that every one now agrees in recognizing hygiene as the truly effective force wherewith humanity may defend itself against the spread of that devastating scourge, the bacillus of Koch.

The remedy offered by the congresses was the establishment of sanatoria where tuberculous patients could be received, with a certain probability of cure. It seems that everybody believes that the solution of the tuberculosis problem will have been accomplished by the establishment of sanatoria. But, after all, is it true that sanatoria alone represent the means of defense in the battle which the commonwealth is waging against an enemy so formidable as tuberculosis? Is it true that the spread of the disease can be checked and the safety of society assured by the establishment of sanatoria, without other, stricter measures based upon the recognition of the relation of the community at large to the enemy—tuberculosis? Shall we leave the treatment of the graver cases, the hopeless ones, to the hospitals, sending, as now, the incipient cases to the sanatoria, and allowing the wealthy, whether incipient or advanced, to take care of themselves in any way and anywhere they please?

Frankly speaking, I do not believe that under the present condition of things, the means employed in the battle against consumption are sufficient to destroy the enemy. In the universal combat against tuberculosis much more rigorous measures are needed to attain the result desired by all, by both the *poitrinaires* and the well.

It is true that, by advancing on the lines now laid out, the sanatoria will still do a great deal of good. There will be a diminution in the mortality as well as in the spread of the disease. But this is not sufficient. The establishment of sanatoria, the closer attention paid to hygiene, are indeed advances—stones that will help to complete the edifice, but they are not sufficient to bring about the subsidence of tuberculosis throughout the world.

Under the present system, the patient goes to the sanatorium, after perhaps having exhausted a great deal of his strength while trying to keep up his life's routine, and to palliate the ill by home-treatment, and after having incidentally been the source of infection wherever he happened to be. After a varying period of residence in the sanatorium, he goes out, free to go wherever he pleases, whether he is cured or merely improved.

Of course, this patient, who in the majority of cases is not cured, still carries in his lungs that dreadful weapon, the tubercle bacillus, and in spite of all the instruction which he had received while at the sanatorium, and of the supposed care which he devotes to the destruction of his sputum, succeeds but with difficulty in destroying the germ-bearing droplets (Flügge) which are thrown into the air when he coughs. He is, therefore, in spite of all precautions, the means of communicating the disease to others in his immediate surroundings, or to those with whom he may accidentally come in contact.

Such a patient has, therefore, come out of the sanatorium only to prepare new clients for the institution whence he has come. In most cases this patient will continue to provide the daily bread for his family "so long as his flesh still binds his bones together," and then he will again break down. But, this time, he will be sent to the hospital, where only the hopeless cases are received, and there, after lingering a while, he will breathe his last.

The patient who enters the hospital from the first, and who does not get the benefit of a preliminary treatment in a sanatorium, secures his discharge from the hospital as soon as possible, if he is strong enough, and then, just like the other patient, continues to diffuse consumption.

At the recent Congress of Tuberculosis, in London, Professor Koch expressed himself as follows: "A consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous." But it must not be forgotten that the expectoration is not the only thing to be feared. There are patients who think that they are taking a great deal of scrupulous care in disposing of their sputum, but who sometimes, after expectorating, wipe the mouth or mustache with a handkerchief. The minute particles of sputum which inevitably adhere to the lips are thus transferred to the handkerchief. If, then, the handkerchief were immediately taken care of, all would be well; but the patient usually puts it into his pocket or on the bed-sheets, and these nearly invisible particles of sputum pass by contact to the sheet or to the lining of the pockets—occurrences which are not even dreamt of by the scrupulously clean patient or by the watchful physician. After a few days, when these particles of sputum have become dry, the bacilli are disseminated into the surrounding air, infecting those who are near, or are carried in the dust to distant places.

According to Skulteki, a consumptive emits daily eight thousand million tubercle bacilli, and the example cited here shows only that it is very difficult for the patient, be he ever so watchful, to block all

loop-holes of escape for the tubercle bacillus. So much for the careful patient.

But there is another class of patients who are careless by nature, and who spit everywhere in spite of all pleading and suasion on the part of the physician.

Finally, there is still another class of consumptives who are poisoned by the tuberculous toxines, and whose nervous system is in a state of abnormal tension from the consciousness of being afflicted with an incurable disease, who become neurasthenics and even possessed of criminal tendencies. Statistics of crime are not wanting to prove this relation between acts of violence and phthisis. Is not the fact that such patients will spit everywhere premeditatedly, with the distinct intention of killing others, a sufficient proof of a disturbed mental equilibrium? There may be many such patients, though it is for obvious reasons difficult to discover them.

I have come across a number of such persons by accident. Two years ago, while conducting some experiments in the treatment of pulmonary tuberculosis, I had under my care a group of eleven patients, who were receiving the treatment simultaneously in a room in my house, in which they would meet at an appointed hour. In this room I had all the necessary arrangements for the disinfection of the sputum, but, in spite of this, I noticed on several occasions that there was sputum on the floor in one corner or another of this room. Astonished and vexed to find my express orders disobeyed, I called these patients, one after the other, into the consultation room and told each, privately, that if he continued to expectorate upon the floor and did not make use of the receptacle with antiseptic fluid, he would never be cured, inasmuch as he would re-inhale the dried bacilli which he had expectorated. Several of these patients, on being told this became pale and agitated and then grew thoughtful. One of them, a young man, admitted that he did not pay much attention in his own house to my instructions as to the care of the sputum, "because he had been newly married, and did not wish his wife to survive him, but preferred her to die with him, rather than to leave her without any one to take care of her." Another patient said that, like Samson, when he pulled down the house of the Philistines, he wanted the world to die with him; and still another case illustrating the criminal tendency of some phthisical patients was reported by Gilbert, who tells of a man who expectorated into a glass of champagne and compelled his wife to drink its contents. The unfortunate woman died of tuberculosis of the intestine.

If the consumptive does not commit homicide by force of arms, or by poison like the criminal, he kills

willingly or unwillingly with another weapon, the tubercle bacillus; and the responsibility for his acts seems to lie with certain defects in the organization of modern society. The community should protect itself against an enemy which is daily undermining its health. Cannot the community therefore restrict the liberty of the consumptive for his own good as well as for the good of others?

It is not enough that patients shall be required to take scrupulous care of their sputum, for among so many it is almost impossible that there will not be one who is not so careful, and it must be remembered that one is enough to infect many.

Therefore, the ultimate cause of the trouble, the consumptive himself, not the sputum alone, must interest the sanitarian. The same society which, by confinement in an asylum segregates the criminal insane, for the simple reason that such persons threaten the existence of their fellow-men, should not hesitate to remove the consumptive to a place which is beneficial to himself and safe for others. Both the insane criminal and the consumptive are diseased. Are they not both dangerous?

The word humanity must be interpreted in a broad sense. It is not humanity, it is not justice, to sacrifice millions for the sake of a few. So, when the Superintendent of Immigration last June issued an order which debarred in future all consumptive immigrants from entering the United States, he did not commit a great crime against humanity and charity. In all reason, he was right, unless we consider the argument that, as we have not yet any means of removing consumptives from contact with the rest of the community, one Thomas P. Boden, more or less, among so many hundreds of thousands of consumptives scattered all over the country, will not make much difference.

Would it not be perfectly humane to segregate these unfortunates from intercourse with the rest of the community, and to leave them in sanatoria or in colonies, etc., until they are either cured or succumb to the disease? In this manner only should be waged the truly effective battle against tuberculosis, in this way carried on the contest against that dreadful plague that in so many ways undermines the social mechanism.

Raquin (*Éléments de pathologie médicale*, Paris, G. Baillière, 1846, p. 336) regarded the law passed in Naples in 1782, which branded consumption as a contagious disease, as a measure based upon heretical and superstitious views. This law required the isolation of all consumptives in special wards in the Neapolitan hospitals, and had been passed on the initiative of such distinguished clinicians of the eighteenth century as Cotugno and Cirillo. In the same way, was it not considered heresy some years ago to advocate the prohibition of marriages among

consumptives, and the reporting of all cases of consumption to the local sanitary authorities? And yet, both these measures are now admitted very generally as most desirable.

The time may come, therefore, when the proper conception regarding the duty of the State to protect the public against the consumptive will gain general recognition and will be put into action.

In concluding, I would recommend the following measures for the abatement of the pandemic of tuberculosis:

(1) Marriages of consumptives should be avoided.

(2) Children of consumptives should be so brought up as to strengthen their systems against the invasion of the tubercle bacillus.

(3) The public should be educated to realize the fact that consumption is curable in its initial stages, *i. e.*, when mixed infection has not yet taken place.

(4) An early diagnosis is the secret of cure. Let us drop the word "cold" as a term for a little cough and a subnormal temperature, and the word "malaria" for cough accompanied by chills, and let us examine the patient carefully in each case. When questioning the patient it must be borne in mind that the consumptive, fearing to hear the word "consumption," often tries to disguise his symptoms, and that it is in such cases that the skilful physician proves his ability.

(5) Every case of pulmonary tuberculosis should be reported to the local health authorities so soon as the diagnosis is made.

(6) Every consumptive should be isolated until cured or until the disease terminates fatally.

A battle waged in this manner against consumption will stamp out the disease in a few years. But in order to attain this result, enormous expenditures of money are required, which would, however, become less and less as time went on, and as the number of consumptives diminished.

The scope of these plans, it is true, is great, but many years will elapse before they will mature, and before the necessity for their execution will be generally recognized. When this happens, the governments of the civilized world, just as they now spend untold millions annually for the support of armies and navies for the national defense, will provide a defense against one of the most formidable enemies of all nations—tuberculosis.

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119 WEST ELEVENTH STREET.

THE MANAGEMENT OF THE TENDENCY OF THE UPPER FRAGMENT TO TILT FORWARD IN FRACTURES OF THE UPPER THIRD OF THE FEMUR; A QUESTION OF PRIORITY.

By NEWTON M. SHAFFER, M. D.,

NEW YORK.

Dr. R. A. Hibbs, in the prize essay on this subject, published in the *New York Medical Journal* for February 1st, describes a method of treatment that was used by me as long ago as 1871. Briefly, Dr. Hibbs advises "(1) Extension or traction, (2) coaptation splints," and (3), to place "the limb in a flexed position." He records in his essay one case somewhat in full, and refers to two others which were under treatment, at the time of the fracture, for hip-joint disease.

In the *Annals of Anatomy and Surgery* for December, 1883, you will find the following. After describing, somewhat in detail, the history of a patient with hip-joint disease, I say:

"July 23, 1871.—'Patient had a fall and fractured the femur, on the diseased side, at junction of lower and middle third. The apparatus was uninjured.' Treatment.—Removal of adhesive plaster on thigh to a point just below fracture. Traction with the hip splint, the fractured ends being held in apposition by a leather splint, which was snugly bandaged to the entire thigh. Patient was seen every day, and good traction was maintained. On August 25th, it was found that the fracture had united perfectly in good position, and that there was one-half inch shortening, some, if not the greater portion, of which was due to the disease."

The same inclined plane used in the early history of the treatment of the flexion and adduction of the thigh, due to the hip disease, was used in the treatment of the fracture.

My comments on the conditions presented by this peculiar combination is as follows:

"This period of the patient's history is very instructive. After reaching a point where recovery was almost certain, she fell, and, by some strange

combination of circumstances, broke the thigh bone that was protected by a strong extension splint. I anticipated much trouble in this case, and looked for a decided increase of symptoms. But by making a considerable amount of traction and using a coaptation splint, I succeeded in obtaining a good result as to the fracture, and protected the joint at the same time. There was no decided increase in the symptoms, and, as shown in the history, after a somewhat prolonged struggle, the patient was discharged cured, with good motion, and with an excellent and useful limb.

"This experience with the hip splint in the treatment of a fractured thigh, and the favorable result obtained, under so many discouraging circumstances, led me soon after to adopt the same measures in a case of ununited fracture of the thigh, in an adult, aged fifty-five, who had four months previously been thrown from his carriage. The surgeon who attended the case immediately after the fracture used the gypsum bandage.

"When I saw him there was three and one half inches shortening, and the point of fracture at junction of upper and middle thirds was easily demonstrated. I applied a long extension splint, and drew the limb down to nearly its normal length, and maintained it there for four weeks. Then a modified support was applied, and in four months union was complete, with about one inch shortening. Another case very similar to it in all essential particulars came under my care two years ago, and was treated in the same way. The result was perfect union in three months. A case of recent fracture of the thigh was also treated by Dr. George A. Peters, in St. Luke's Hospital, by this method, in a child, with an excellent result."

The "recent fracture" above referred to, though nominally in Dr. Peter's service, was under my care, I having advised this innovation in the treatment of fractures, and Dr. Peters kindly turned the patient over to me.

In all these instances the method advised by Dr. Hibbs, except the etherization (which he advises and which seems, in the light of clinical experience, to be unnecessary), was carried out in all its details, viz., the long (Taylor) hip splint, the coaptation splint, and the inclined plane.

It was these, and numerous successes in both recent and ununited fractures of the shaft of the femur, where I have been called in consultation, that led me to adopt the same measures to ununited fracture of the neck of the femur,¹ the coaptation splint being a "Surcingle" band, with a Fourniquet pressure, the thigh being abducted, flexed, and pulled downward by the traction splint, to bring the proximal and distal fragments into apposition. Dr. Hibbs's familiarity² with this method is a matter of record. The principle involved is precisely similar to that which he advises, presumably as a matter of originality, in the essay above referred to.

¹On the Mechanical Treatment of Ununited Fracture of the Neck of the Femur, *New York Medical Journal*, October 23, 1877.

²*Loc. cit.*

Issues and Events of the Day.

THE ANACHRONISM OF THE CORONER'S INQUEST.

By H. R. PURDY, M. D.,

NEW YORK.

The fact that we inherited the coronership from our "mother country" is no reason why we should retain it, since it has been abused until it has been perverted to a mere money-making machine. The true remedy is its absolute abolition. This view has been held by some of our ablest lawyers and physicians these many years, but the people, though they have had to pay for costly and unnecessary inquests, have been so apathetic that they could not be roused to take the slightest interest in the matter. It has taken almost an earthquake, the recent terrible disaster in Park Avenue, to call their attention to the facts that not only are the coroners useless, but that by their blustering interference they actually obstruct the investigation of serious accidents. At last public sentiment seems to be against retaining an officer whose actions are not only obstructive, but at times grotesque, and whose censures and recommendations are valueless for any future legal proceedings. The verdict of a coroner's jury is effective only as a provoker of mirth. For instance: "Murray Hall came to his death," etc., . . . "he is a lady."

Suppose we abolish the office, who shall perform the duties that the coroner and his physicians are now required to perform? The answer to that question was, in my opinion, very satisfactorily given more than ten years ago by Dr. Stephen Smith. His idea was that, inasmuch as there was in every city or town of this State an organized board of health with competent physicians attached, and as the boards of health had finally to pass upon all death certificates, the duty of investigating the cause of death of persons who died under conditions that warranted the suspicion of crime should belong to them. Dr. Smith further contended that the judicial duties pertaining to the coroner's office should be performed by justices of the peace, police justices, or city magistrates, and that at every examination or inquest held by them the district attorney or an assistant should be present and examine all witnesses. A bill embracing these ideas was prepared two years ago by Dr. Smith, with the addition of a section suggested by Dr. J. W. S. Gouley, providing that in the larger cities the boards of health should each organize a pathological laboratory and equip it with the apparatus necessary for the accurate and immediate investigation of the causes of death requiring chemical or bacteriological appliances. Dr. Nelson H. Henry introduced

this bill into the Assembly at Albany on February 24, 1900, but it was unfortunately killed in the committee on public health by the country members. A few years ago the rural legislators passed a law which reduced the functions of the coroners in all places in this State, save New York city and Buffalo, to a mere "medical examinership." Why they deny these two cities any relief can only be guessed at. A good guess would probably be that certain politicians do not wish to curtail political patronage.

There is no class of men that this matter more deeply concerns than the members of the medical profession. There are few of them who are not aware that frequent and sometimes dangerous delay occurs in investigating the cause of death in suspicious cases, and that imperfect and superficial examinations of the dead have caused innocent men, reputable physicians, to suffer the indignity of unwarranted arrest.

If there are any who do not know that "the coroner's office is a menace as it is a disgrace to the city," let them take the word of a coroner's physician who made that charge.

If it is the desire of medical men to have physicians learned in the science of pathology to conduct the post-mortem examinations and men learned in the law to hold the inquests, without an ignorant jury, let them take five minutes of their valuable time to write to their senators and assemblymen and tell them so.

If we but show half the zeal that some of our brother physicians did in 1894 in their successful efforts to have the constitutional convention omit the coroner from the list of elective county officers, the legislature will not dare to turn a deaf ear to our appeals.

149 LEXINGTON AVENUE.

Therapeutical Notes.

For Dysmenorrhœa.—Dr. Labric (Ἱατρικὴ πρόοδος) December, 1900,) gives the following course of treatment.

1. For fifteen days before the period the patient takes, between 7 and 11 a. m., two glasses of Vichy water. Also one of the following cachets before the midday meal:

℞ Powdered calumba,
Powdered saffron, } of each, 1½ grain;
Iron, reduced by hydrogen, }
Socotrine aloes. ½ a grain.

M. For one cachet.

For the last three days (except only if there is diarrhœa) the patient takes from 5 to 10 drops of tincture of iodine, recently prepared and not acid, in a small glass of Malaga wine.

2. If the foregoing therapeutic measures induce diarrhœa, we have recourse to the following:

℞ Alcoholate of the roots and fresh leaves of anemone pulsatilla. . . 75 minims.

M. Forty drops, to be taken in two doses.

3. The general condition is improved by sulphur baths, tepid or cold affusions, according to the time of the year and the neuropathic state of the patient.

4. Chloral in clysters (1 to 50) will allay the pain.

For Muscular Rheumatism.—*Progrès médical* for January 1st gives the following:

℞ Balsam of Fioravanti, } of each, 300 minims;
Spirit of camphor, }
Oil of turpentine. 45 "
• Chloroform. 75 "
Menthol. 30 grains.

M.

For local application, with or without gentle friction.

Bromoform in Whooping Cough.—Dr. G. Carrieré (*Nord médical*, January 15th) recommends the following formula:

℞ Bromoform. from 15 to 30 grains;
Oil of sweet almonds. 7 drachms;
Powdered gum arabic. 300 grains.
Syrup of bitter orange peel. . . 2 ounces;
Water. enough to make 8 "

M.

From four to six teaspoonfuls, according to age, may be given in the course of the day.

The Treatment of Chlorosis.—Huchard (*Consultations médicales*; *Nord médical*, September 1, 1901) recommends the use before meals of a weak alkaline to augment the secretion of the gastric juice:

℞ Sodium bicarbonate, } of each, 150 grains.
Neutral sodium phosphate, }

M.

Divide into 60 cachets. One cachet twenty minutes before each meal.

Immediately after the meal a weak dose of hydrochloric acid may be administered:

℞ Pure hydrochloric acid. 7 minims;
Curaçao (or syrup of bitter orange peel). 1½ ounce.
Distilled water. 15½ "

M. A wineglassful immediately after the meal.

In some cases lactic acid, from 15 to 30 drops to the dose, may be substituted advantageously for the hydrochloric acid in this formula.

Lavage of the stomach, either with pure water, or with the addition of 15 grains of salicylic acid to each 1,000 parts, is indicated when there is gastric fermentation.

Rebellious constipation, when present may be combated, and intestinal antiseptics attained, by the following:

℞ Powdered licorice, } of each, 15 drachms;
Senna, }
Washed sulphur, } of each, 7½ "
Powdered fennel, }
Sugar. 45 "
Powdered cascara sagrada. . . 45 grains.

M. One or two coffeespoonfuls in the morning.

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THE CORONER.

We might almost as well revive the old Dutch office of the patroon in New York as to go on maintaining that of the coroner. Thoughtful men have long been of this opinion, and the Massachusetts office of medical examiner has commended itself to them, but it has taken "almost an earthquake," as Dr. Purdy remarks elsewhere in this issue, to bring the matter to the serious consideration of the people in general. If our district attorney lowered his dignity a little in a recent affair with a coroner's clerk, as has been reported, he, too, has done something to make New Yorkers realize the utter uselessness of that expensive institution, the office of coroner, for he has fixed public attention upon it.

It has more than once been recommended—and naturally the suggestion now comes up anew—that special medical officers connected with the board of health might properly perform the medical work now appertaining to the coroner's office, and that the board's existing resources for conducting chemical analyses and bacteriological investigations should be applied in the prosecution of such work whenever the necessity might arise, to the occasional great saving of expense, as has been shown in a number of murder cases within recent years. It would hardly be requisite, we presume, to couple any judicial function with the inquisitors' authority, for the district attorney, the grand jury, and the recorder would probably be free to exercise all the legal action that might be called for in any case of apparent criminal responsibility for a death.

Under any new order of things, of course, neglect and delay would have to be vigilantly guarded against, but doubtless it would be far more practicable to discipline appointed officers than those elected to serve for specified terms. Whether the

investigation of deaths occurring under suspicious circumstances is made the duty of one set of medical officers or of another, the time has come, it seems to us, for some change to be made from the present cumbrous and antiquated methods. So far as we have been able to ascertain, no intelligent and disinterested citizens dissent from this view, and the people ought to be able to have their way in the matter without any great loss of time.

TETANUS FOLLOWING GELATIN INJECTIONS.

The occurrence of tetanus by misadventure, as one might say, is getting to be painfully common. That procedures intended to save life should so frequently lead to death by a much more horrible disease than the conditions they were meant to remedy is not a pleasant fact to contemplate; it is an ugly blot upon the otherwise fair record of the progressive therapeutics of the present day. We are moved to this reflection by the simultaneous publication of reports of four cases in which so simple an operation as the subcutaneous injection of gelatin as a hæmostatic has of late been promptly followed by fatal tetanus. All four of the cases are reported in Vol. LXI of the *Deutsche Zeitschrift für Chirurgie*, and the reports are briefly summarized in the *Centralblatt für Chirurgie* for January 18th. In every instance the signs of tetanus made their appearance within from five to seven days after the gelatin injection, and the disease ended in death within twenty-four hours.

The first case is reported by Gerulanos, of the Kiel clinic. In this instance the gelatin was used as a preventive of hæmorrhage in the operation of extirpation of the larynx. The skin at the site of the injection became necrotic. The post-mortem bacteriological examination revealed nothing to explain the mode of infection. The second case, reported by Georgi as having occurred in the Deaconesses' Institute in Flensburg, was one in which abdominal section was performed on account of a penetrating wound of the liver. An abscess formed at the site of the injection, and inoculation of animals with the pus of this abscess led to their speedy death with tetanic convulsions, but in this instance, too, the post-mortem bacteriological investigation did not reveal tetanus bacilli. In this case commercial gelatin furnished by an apothecary, and supposed to have been sterilized, was hastily dissolved in sterile

water by the surgeon himself. The third and fourth cases are reported by Lorenz, of the Vienna University clinic. In one of them the gelatin was injected subcutaneously to arrest vesical hæmorrhage due to papillomata, and in the other on account of secondary hæmorrhage following excision of the rectum. In the first of Lorenz's cases erythema occurred at the site of the injection.

Of course it is not shown with mathematical precision that in any of these cases the source of the tetanic infection resided in the gelatin; however, the presumption seems to be that it did. We know of no reason why gelatin should be particularly prone to become infected with the micro-organism of tetanus. We do know, on the other hand, that artisans who have constant occasion to use the glue-pot are much given to the application of glue to fresh wounds to stop bleeding. We are not inclined, therefore, to look upon gelatin injections as especially apt to prove the vehicle of tetanus infection; but we should rather draw the lesson that all procedures involving traumatism, even the prick of the hypodermic needle, are to be resorted to only with the most scrupulous precautions.

THE EQUINE "CALENTURA" OF THE PHILIPPINES.

A new epizootic disease affecting horses in the Philippine Archipelago is briefly described by Major and Surgeon L. M. Maus, of the army, commissioner of public health for the Philippine Islands, in the insular board of health's monthly report for September, 1901. Although it prevails as an epizootic, and a spirillum is found in the blood, Dr. Maus does not think it is contagious, for in stables sheltering a number of horses some of the animals are attacked, while others escape. It appears to be very fatal, as is shown by the fact that in several localities all the native horses have been destroyed by it. Many of the government horses also, presumably of American breeds, have taken the disease, but the mortality among them has not been so great as among the native animals. The affection seems to have broken out since the beginning of the rainy season.

The onset of the disease is described as sudden, but it is said to be so little noticeable that usually a horse is not known to be affected until it is too

late for treatment to be of avail. There is a rise of temperature to from 103° to 107° F., apparently without a chill, the pulse is full, and the respiration becomes more decidedly abdominal. The rise of temperature is speedily followed by the appearance of swellings on the lower surface of the abdomen, in the sheath, on the testicles, and on the legs. In the cases that end in recovery, convalescence is apt to be protracted for several months and there is emaciation; in the fatal cases, death appears to be due to failure of the heart's action. It is said that ante-mortem clots are found in the heart post mortem. All the tissues and organs are generally found to be anæmic, and in some cases there are abdominal abscesses. The pericardial sac and the pleural cavities are always full of a serous fluid, but without any appearance of inflammatory changes. The tissues in general, particularly the intima of the blood-vessels, show diffuse redness. There is fatty degeneration of the liver, with cloudy swelling; the kidneys are large and white, with the cortex thickened; and the spleen is atrophied.

The spirillum is said to be about twice as long as the diameter of a red blood corpuscle and about half as wide. It shows active and definite movement, and pseudopodia are observed along its sides. Most of the spirilla contain two or more dark granules situated irregularly. The disease, which is called "calentura" by the natives, is not wholly new, since for several seasons it has been noticed by the veterinarian of the Manila government corral, Dr. Muecke. Further investigation of its nature is now being carried on by the insular board of health, under the direction of the superintendent of government laboratories, a large number of specimens of blood having been taken from infected animals for the purpose.

ACCIDENTAL POISONING WITH LILY OF THE VALLEY.

A certain German apothecary, having been called upon to dispense official glycerin, gave out glycerin which it had pleased him to scent with a strong extract of *Convallaria maialis*, and in consequence Dr. Hühnerfauth (*Centralblatt für innere Medicine*, January 11th) reports having been twice poisoned himself by rectal injections of the glycerin thus perfumed.

A NEW SOUTHERN JOURNAL.

We have received the first number, dated January, 1902, of the *Mobile Medical and Surgical Journal*, edited by Dr. E. L. Maréchal and published monthly. The number contains sixty-four octavo pages of reading matter, half of which consists of original communications. It is embellished with a frontispiece portrait of Dr. George A. Ketchum. The quality of the reading matter is excellent, and the *Journal* looks well. We wish the publication a prosperous career.

THE ACADEMY OF MEDICINE AND
TUBERCULOUS IMMIGRANTS.

While we quite agree to the drift of the resolutions recently passed by the New York Academy of Medicine deprecating the exclusion of tuberculous immigrants from the country, we can hardly go so far as to chime in with the statement that their exclusion places "a stigma wholly undeserved upon every American citizen who is suffering with consumption." Nothing can cast a stigma upon such citizens, unless it may be their own carelessness in spreading the disease—or their criminality in wilfully so doing, as seems from Dr. Fanoni's observations, published in this issue of the *Journal*, to be manifested occasionally, but, let us hope, rarely.

THE PRESERVATION OF ONE'S HEALTH A DUTY
TO THE STATE.

The secretary of the Minnesota board of health is credited with having expressed the opinion that every person of the age of discretion found afflicted with small-pox should first be cured and then sentenced to imprisonment for ninety days. The idea seems to be entertained that the obligation under which a person rests to preserve his health is not to himself and his family alone, but also to the State, for the work of the individual adds to the welfare of the State and the State is robbed of the value of that work by illness. If this conception were carried to its ultimate logical conclusion, every person who is incapacitated for work by reason of a preventable illness should be made to reimburse the State for its loss. We may look forward, then, to a court scene in which the accused are convalescents and, in default of a physician's certificate showing that the illness was not of a preventable nature, will be fined proportionately to the duration of the disability due to sickness. We are inclined to think, however, that it was not so much the value of services theoretically due the State that the Minnesota sanitarian had in mind as the public injury resulting from the spread of small-pox, an easily preventable disease.

COLD STREET CARS.

Perhaps no other single cause so frequently gives rise to "colds" as the unheated street car. Evidently this fact is realized by the health authorities of the borough of Brooklyn, who have carried on an investigation which shows that cars are sometimes allowed to run with an inside temperature as low as 23° F. In extenuation of this neglect to heat their cars, the street railway people say that, owing to lack of electric power, they cannot at present do better, and cannot promise any improvement before the autumn of 1903! It is to be hoped that this excuse will not be accepted. If they can furnish no other means of heating the cars, they should be forced to put in stoves.

WITH THE PATIENT "TOUCHIN' ON AN'
APPERTAININ'" THERETO.

We are all familiar with accounts of cases in which an ovarian tumor is stated to have weighed more than what was left of the patient after the operation for its removal, but it strikes us as something of a novelty to read of a patient "belonging to" a morbid specimen, as in an instance (*Centralblatt für Gynäkologie*, January 4th) in which, at a recent meeting of the Berlin Society of Obstetrics and Gynecology, Dr. Orthmann showed "einen nach der Schuchardt'schen Methode wegen Carcinom der Portio und Vagina extirpirten Uterus, nebst der dazu gehörigen Pat."

PAPER MONEY AS A DISSEMINATOR OF
DISEASE.

Often indeed is paper money "filthy lucre," an expression well employed by the *Rochester Herald* as the heading of an editorial article having for its purpose to strengthen the hands of the board of health of Columbus and the Ohio State board of health in their efforts to limit the circulation of soiled bank bills. Paper money, to be enduring, should always be crisp and clean. Unfortunately, even newness does not guarantee its freedom from pathogenic germs, for, clean as it may be so far as ordinary inspection can determine, it may still be contaminated with almost any micro-organism. Nevertheless, the dirtier it is the more likely it is to be so contaminated. Perhaps it is impracticable to abolish paper money altogether, but at least let us have it apparently clean. There are some commercial houses that know the value of a reputation for never giving out in change any but new bills; it is strange that more of them do not recognize it.

SPONTANEOUS AMPUTATION OF THE FALLOPPIAN TUBE.

This occurrence, while evidently to be reckoned as among the rarest in pathology, has been observed. In a case reported by Jacobs (*Bulletin de la Société belge de gynécologie*, xi, 2; *Berliner klinische Wochenschrift*, January 6th) it was discovered during an operation for a parovarian cyst with a twisted pedicle, and was apparently the result of the torsion. The tube was normal in other respects, and the site of the amputation was about two thirds of an inch from the uterine end.

CHOREA AND ITS MORBID FORERUNNERS.

In a general way, a connection between chorea and certain antecedent diseases, particularly rheumatism, has long been recognized, but more definite data are desirable. A contribution to our further knowledge of this matter has recently been made by Fröhlich (*Jahrbuch für Kinderheilkunde*, September; *Berliner klinische Wochenschrift*, January 6th). On investigating forty-seven cases of chorea, he finds that 31.9 per cent. were preceded by rheumatism, 8.5 per cent. by other infectious diseases, 34 per cent. by infections of unknown nature, and 25.5 per cent. by no infection.

A FURTHER MODIFICATION OF TUBERCULIN.

At a recent meeting of the Paris Society of Biology (*Presse médicale*, January 22d) M. Arloing and M. Descas reported that they had endeavored, with the aid of tuberculin "neutralized" with anti-tuberculin serum, reduced to its toxones, to prevent and cure tuberculous disease, but the product had only exaggerated the animals' susceptibility to tuberculous inoculation. Whatever the toxones of tuberculin may be, they seem capable of furthering experimental inoculations with tuberculous disease, however disappointing they may have been to the authors from the therapeutical point of view.

BIRDS AS SANITARY AUXILIARIES.

If we have certain of the lower animals to blame for the dissemination of disease, as seems indubitable, possibly there are others to which we should feel indebted as allies in the struggle against infection. Certain statements favoring this view were lately made before the Lyons National Society of Medicine by the society's president, M. Horand (*Lyon médical*, January 5th). He regretted the diminution in the number of swallows and swifts in Lyons, for they assisted in the destruction of mosquitoes. Gulls, moreover, he regarded as valuable hygienic agents, inasmuch as they subsisted on dead fish and never attacked living fishes.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 10th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private) (anniversary); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, February 11th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, February 12th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, February 13th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, February 14th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

The Richmond Academy of Medicine and Surgery, at its meeting on Tuesday, January 28th, discussed the physiology of urea, its bearing on the dietetics and treatment of uræmia.

The Ohio Medical Society.—The date of the next meeting has been fixed for May 28th, 29th, and 30th, at Toledo. Further information concerning the meeting may be obtained from the secretary, Dr. P. Max Forshay, of Cleveland.

Typhoid Fever in Philadelphia.—An unusually large number of cases of typhoid fever have occurred in West Philadelphia recently in consequence of the polluted condition of the water supply, due to the heavy rains.

Medical Examiners for the State of Minnesota.—Dr. Adele S. Hutchinson, of Minneapolis; Dr. C. M. Cannon, of Merriam Park, and Dr. A. B. Cole, of Fergus Falls, have been appointed members of the board of medical examiners for the State of Minnesota.

Foreign Obituary Notes.—Professor Hugo Wilhelm von Zeimssen, of Munich, is dead.—Dr. N. Homs y Pascuets, professor of the medical clinic at Barcelona, died recently.—Dr. Blaise, professor of medical pathology; Dr. Gemy, professor of diseases of the skin and syphilis, and Dr. Boerlier, professor of therapeutics, in Algiers, died recently.

Rush Medical College to Admit Women.—The faculty of Rush Medical College, Chicago, have adopted resolutions recommending the opening of the courses of that institution to women, the change to take effect in the fall. This recommendation will undoubtedly be adopted by the board of trustees.

The Lying-in Hospital, at Seventeenth Street and Second Avenue, which was built and equipped by J. Pierpont Morgan, at a cost of \$1,400,000, was formally opened on January 21st by the Society of the Lying-in Hospital, to which it was presented by Mr. Morgan. It is probably the most perfectly appointed hospital of its character in the United States.

Washington Hospitals for Department of Interior.—Bills have been introduced in both houses of Congress to transfer the control of the Government Hospital for the Insane, the Freedmen's Hospital and Asylum, and the Washington Hospital for Foundlings from the board of charities of the District of Columbia to the Secretary of the Interior.

Kings County Medical Society.—The annual meeting of the Kings County Medical Society was held at the clubhouse, in Bedford Avenue, near Pacific Street, on January 21st, when the following officers were elected for the ensuing year: Dr. H. C. Fairbairn, president; Dr. C. N. Cox, vice-president; Dr. W. S. Hubbard, secretary; Dr. O. A. Guden, treasurer, and Dr. James M. Winfield, librarian.

The Cleveland Medical Journal is the title adopted by a journal formed by the amalgamation of the *Cleveland Journal of Medicine* and the *Cleveland Medical Gazette*. The new journal is to be published as an independent and free professional institution, conducted for the good of the medical community, with no idea on the part of the stockholders that they shall ever look for dividends. The officers are: President, Dr. Marcus Rosenwasser; secretary, Dr. William E. Bruner, and treasurer, Dr. Joseph F. Hobson. Dr. P. Maxwell Foshay was elected editor and Dr. Edward S. Lander associate editor of the journal.

A Prize for Original Research in Medicine.—The Nathan Lewis Hatfield prize for original research in medicine, amounting to \$500, will be awarded by the College of Physicians of Philadelphia for the best essay on The Relation between Chronic Suppurative Processes and Forms of Anæmia submitted on or before March 18, 1903. Each essay must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device and containing the name and address of the author. No envelope will be opened except that which accompanies the successful essay. The treatment of the subject must, in accordance with the conditions of the trust, embody original observations or researches or original deductions. The competition is open to members of the medical profession and men of science in the United States. For further information address Dr. J. C. Wilson, chairman, 219 South Thirtieth Street, Philadelphia.

The German Medical Society of the City of New York.—The programme of this week's meeting, held on Monday evening, included the following items: A Case of Sarcoma of the Trachea, with a Demonstration of the Tumor Removed per Vias Naturales, by Dr. J. W. Gleitsmann; Cases of Oophorectomy for Inoperable Carcinoma of the Breast, by Dr. F. Torek; On the Operation for Tumors of the Nasopharynx, by Dr. F. Maass; and On Some Cases of Hodgkin's Disease and Lymphatic Leucæmia, by Dr. M. Einhorn.

The Exclusion of Tuberculous Immigrants.—At the meeting of the Academy of Medicine, held on February 6th, the following preamble and resolutions were adopted:

Whereas, the Treasury Department of the United States, upon recommendation of the Surgeon-General of the Marine-Hospital Service, has recently decided to classify pulmonary tuberculosis with dangerous contagious diseases, thereby placing a stigma wholly undeserved upon every American citizen who is suffering with consumption, be it

Resolved, That the New York Academy of Medicine deeply deplores this decision, which is not based either on clinical experience or on scientific experiments.

Resolved, That the Academy considers the exclusion of non-pauper tuberculous immigrants and consumptive aliens visiting our shores unwise, inhumane, and contrary to the spirit of American justice. Be it further

Resolved, That, while the Academy upholds the fact of the communicability of tuberculosis and urges all possible precautions against the spread of the disease from the sputum and other tuberculous secretions, or from the ingestion of tuberculous food substances, the Academy is opposed to all measures by which additional hardship is imposed upon the consumptive individual, his family, or his physician.

The Academy of Medicine.—The Section in Surgery will meet at the Academy of Medicine on February 10th, when the following papers will be presented: Disadvantages of Gauze Packing, by Dr. R. T. Morris; Report of a Case of Anuria, by Dr. A. V. Mosckowitz, and Volvulus as a Cause of Intestinal Obstruction, by Dr. J. G. Erdman. The Section in Otology meets on Thursday evening, February 13th. The programme for the evening includes the following: Exhibition of Specimens and New Instruments; Presentation of Cases; a paper entitled Does the Early Treatment of Acute Inflammation of the Middle Ear Prevent the More Serious Complications? by Dr. E. L. Meierhof; and A New Treatment for Deafness from Chronic Catarrh of the Middle Ear, a Preliminary Report with Presentation of Cases, by Dr. W. H. Bates. The Section in Pædiatrics, which meets on the same date, will discuss the following papers: The Pathology of Adenoids and of the Tonsils, by Dr. A. J. Lartigau; Operative Treatment of Adenoids and Enlarged Tonsils, by Dr. W. K. Simpson; The Lymphatic Constitution, by Dr. James Ewing; and Notes on the Surgical Treatment of Enlarged Lymph Nodes, by Dr. Charles N. Dowd.

The Boston Board of Health.—A bill has been presented in the legislature of Massachusetts providing for a legislative investigation of the acts of the members of the Board of Health of the City of Boston in connection with the small-pox epidemic.

The American Therapeutic Society will meet at the Academy of Medicine, in this city, on May 13th and 14th. Dr. Smith Ely Jelliffe, Dr. Thomas E. Satterthwaite, and Dr. F. E. Stewart constitute the committee of arrangements and are now engaged in preparing a programme for the entertainment of the visiting members.

An Isolated Pavilion for Tuberculous Patients in New York.—Five buildings on Blackwell's Island, formerly occupied by the insane, who have been removed to Ward's Island, are being prepared for the use of tuberculous patients, and hereafter all the tuberculous patients in the municipal hospitals will be transferred to these pavilions. One hundred and twenty beds are already ready, and as soon as the funds at the disposal of the commissioner of charities will permit two more buildings will be prepared for receiving tuberculous patients, giving a total capacity of about 350. The tuberculosis pavilion will form part of the Metropolitan Hospital.

To Consolidate the Cleveland and the Cuyahoga County Societies.—In his inaugural address as president of the Cleveland Medical Society Dr. P. Maxwell Foshay advocated a consolidation of the Cleveland Medical Society and the Cuyahoga County Medical Society. The membership of both organizations is composed of physicians belonging to the same school, and Dr. Foshay argued that more effective work could be accomplished by a consolidation. The Cuyahoga is by far the older of the societies, and was organized in the days when Cleveland was not much more than a village. For a time there was considerable rivalry between the two organizations, but this has practically disappeared.

Dr. Henry Rutgers Baldwin, president of the Board of Health of New Brunswick, N. J., died at his home in that city, on February 3d, from pneumonia and heart disease. Dr. Baldwin was born in New York city on September 18, 1829, and graduated from the College of Physicians and Surgeons of New York in 1853. At the time of his death he was a member of the board of managers for the New Jersey Hospital for the Insane, the New Jersey Medical Society, the Middlesex County Medical Society, the New Jersey Microscopical Society, and the medical staff of the Wells Memorial Hospital, at New Brunswick. He was a trustee of Rutgers College, a member of the alumni association of that institution and of the Phi Beta Kappa society. He was at various times city alderman of New Brunswick, member of the New Brunswick Board of Education, and of the Middlesex County Board of Freeholders.

The Medical Association of the Greater City of New York.—The next stated meeting will take place at the Academy of Medicine on February 10th, at 8.30 p. m. Addresses will be delivered by the retiring president, Dr. Robert F. Weir, and by the president-elect, Dr. Andrew H. Smith. A paper will be presented on Specifics in Medicine and Specific Plans of Treatment other than by Single Drugs, by Dr. L. F. Bishop, which will be discussed by Dr. William S. Bainbridge, Dr. Simon Baruch, Dr. James K. Crook, Dr. Egbert Le Fevre, Dr. Beverly Robinson, Dr. R. E. van Gieson, Dr. Homer Wakefield, Dr. L. Weber, and others.

Another Million Dollars for Harvard Medical School.—John D. Rockefeller has given a million dollars to the medical school of Harvard University, the gift, however, being contingent upon the condition that other friends of the university donate half the sum given by himself. The president of the university says that there will be no difficulty in raising the \$500,000. Mr. Rockefeller's gift will be used partly for the construction of new laboratory buildings and partly as a fund for defraying the running expenses of the institution. This makes the second donation of a million dollars received by the medical school within the year, J. Pierpont Morgan having given that sum to the institution during the last commencement for the erection of new buildings. Under the will of Miss Ellen Proctor, of Brookline, Mass., Harvard Medical School is to receive \$50,000 as a fund to promote the study of chronic diseases and for the care of persons so afflicted.

To Increase the Efficiency of the Medical Department of the Army.—Last autumn a bill was drawn up and endorsed at a meeting of the medical officers of the United States stationed in Manila, intended to increase the efficiency of the medical department of the United States army. This bill, which was forwarded through the regular military channels for the consideration of the present Congress, reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, that from and after the approval of this act, so much of Section 18 of Act 4300, approved February 2, 1901, as provides as follows:

"Eight assistant surgeons-general, with the rank of colonel; twelve deputy surgeons-general, with the rank of lieutenant-colonel; sixty surgeons, with the rank of major, two hundred and forty assistant surgeons, with the rank of captain or first lieutenant," shall be and is hereby amended to provide as follows:

Ten assistant surgeons-general, with the rank of colonel; twenty deputy surgeons-general, with the rank of lieutenant-colonel; eighty surgeons, with the rank of major; two hundred and ten assistant surgeons, with the rank of captain or first lieutenant.

Provided, that all other provisions of the said Section 18, Act 4300, shall remain in force, and that nothing in this act shall be held or construed to change any other portion of said Act 4300, approved February 2, 1901.

Dr. William Henry Skene, son of the late Dr. Alexander J. C. Skene, was given a banquet by the Hospital Graduates' Club on January 30th. Dr. Skene will hereafter make his home in Portland, Oregon, where he was in practice when called back to Brooklyn by his father's fatal illness.

New York City Hospitals Now Controlled by Trustees.—On February 1st the control of the Bellevue group of city hospitals, which includes, besides Bellevue, the Fordham, Harlem, Gouverneur, the Emergency Hospital in Twenty-sixth Street, and, on its completion, the new hospital in Harlem, ground for which has been already secured, was formally transferred from the commissioner of charities to the new board of trustees provided for under the revised charter. As has already been stated in these columns, this board is composed of the following members: Dr. John W. Brannan, of 11 West Twelfth Street, president, appointed for a term of seven years; James K. Paulding, of 130 East Twenty-fourth Street, secretary, for the term of four years; Myles Tierney, of 317 Riverside Drive, for the term of six years; Samuel Sachs, of 31 Nassau Street, for the term of five years; Marcus Stine, of 34 Broad Street, for the term of three years; Theodore E. Tack, of 52 Broadway, for the term of two years; and Howard Townsend, of 32 Nassau Street, for the term of one year. The commissioner of charities will be an advisory member of the board without office.

The Morgue and the drug department in the Bellevue grounds are reserved under the authority of the Departments of Charities and Correction, the drug department furnishing supplies for all the institutions and not for the hospitals alone.

It is stated that no changes in the heads of departments are contemplated. Dr. Flavius Packer, who has had extended experience in State institutions and who has been recommended by Dr. Peterson, president of the State Lunacy Commission, has been placed in charge of the pavilion for the insane, on the grounds of Bellevue, with Dr. Gregory, of the Kings County Asylum, as his assistant. The present staff of attendants in this pavilion is to be replaced by skilled and experienced attendants, and a skilful and experienced alienist will be in constant attendance both night and day. One of the seven trustees is to visit each of the hospitals at least once each week.

The Medical Society of the State of New York held its ninety-sixth annual meeting at Albany on January 28th, 29th, and 30th, in the common council chamber of the city hall. The deliberations of the society were presided over by the president, Dr. Henry L. Elsner, of Syracuse, whose presidential address was referred to editorially in the last number of this journal. The following is a list of the papers presented:

Goitre, Medical and Surgical Treatment, by Dr. Thomas P. Scully, Rome; Phosphaturia, by Dr. James Pedersen, New York; Human Asymmetry, by Dr. W. S. Ely, Rochester; Malignant Tumors of the Periphery, their Pathology and Treatment, by Dr. Thomas H. Manley, New York; A Case of Sarcoma of the Tonsil, by Dr. Arthur G. Root, Albany; The Treatment of Pelvic Suppuration, by Dr.

Charles P. Noble, Philadelphia, Pa.; Gonorrhœa of the Prostate, by Dr. John Vander Poel, New York; The Use and Abuse of Atropine and other Mydriatics in Determining the Refraction of the Eye, as well as the Diseases of that Organ, by Dr. Frank Van Fleet, New York; Fractures of the Nose, by Dr. John O. Roe, Rochester; The Constitutional State versus Catarrhal Deafness, by Dr. Sargent F. Snow, Syracuse; The Educational Management of the Neurasthenic, by Dr. Edward B. Angell, Rochester; Discoveries in Pathology, by Dr. Mary Dixon Jones, New York; A New Method of Bisecting the Uterus in Abdominal Hysterectomy, by Dr. C. H. Richardson, Albany; The Traumatism of Pregnancy, by Dr. Denslow Lewis, Chicago, Ill.; The Clinical Relations of the Systolic Murmurs Heard at the Pulmonary Area, by Dr. Morris Manges, New York; An Epidemic of Typhoid Fever in the Backwoods of Maine, by Dr. E. G. Brush, Mt. Vernon; Some Uses of Liquid Air in Pathology, with Demonstrations, by Dr. Henry W. Cattell, Philadelphia, Pa.; On a Case of Strangulated Ovary and Tube, by Dr. A. T. Bristow, Brooklyn; Toxic Dosage in the Treatment of some Nervous Diseases, by Dr. William C. Krauss, Buffalo; Brachial Neuralgias and Arm Pains, by Dr. Charles L. Dana, New York; The Pathology of the Tissue Changes caused by the Röntgen Rays, by Dr. Carl Beck, New York; The Sideroscope, by Dr. Thomas R. Pooley, New York; Glioma of the Retina, by Dr. Edward L. Peck, New York; On the Position of the Eyes when at Rest, by Dr. Lucien Howe, Buffalo; The Small-pox Problem, by Dr. Ernest Wende, Buffalo; The Civilized Indian, his Physical Characteristics and some of his Diseases, by Dr. A. D. Lake, Gowanda; Indian Medicine, by Dr. Nelson W. Wilson, Buffalo; A Symposium on Paresis, including (1) The Ætiology of Paresis, by Dr. Arthur W. Hurd, Buffalo; (2) The Early Diagnosis of Paresis, by Dr. Francis X. Dercum, Philadelphia, Pa.; (3) The Comparative Frequency of Paresis, by Dr. Charles W. Wagner, Binghamton; (4) Pathology of Paresis, by Dr. Henry J. Berkeley, Baltimore, Md.; (5) Treatment of Paresis, its Limitations and Expectations, by Dr. Edward Cowles, Boston, Mass.; Ringworm, a Note on Its Treatment, by Dr. George Thomas Jackson, New York; A Case of Epilepsy with Possible Medico-legal Complications, by Dr. Frederick Sefton, Auburn; Acute Lymphatic Pseudo-leucæmia, with Report of Case and Autopsy, by Dr. John L. Heffron, Syracuse; The Changes of the Leucocytes in Disease as an Aid to Diagnosis and Prognosis, by Dr. Thomas R. Brown, Baltimore, Md.; An Unusual Case of Abscess of the Liver, by Dr. Edgar A. Vander Veer, Albany; Gunshot Wounds of the Liver, with Report of a Case, by Dr. E. W. Mulligan, Rochester; Concerning the Surgical Treatment of Peritoneal Tuberculosis, by Dr. John W. Whitbeck, Rochester; Unusual Herniæ, with a Report of Complete Hernia of the Bladder, Complicating a Strangulated Hernia, requiring Resection of the Bowels, by Dr. John B. Harvie, Troy; A New Symptom in the Diagnosis of Dystocia, Due to a Short Cord, by Dr. Samuel M. Brickner, New York; Pneumonia in Young Children, by Dr. W. P. Northrup, New York; A Contribution to the Surgery of the Chest, with a Clinical Report of Illustrative Cases, by Dr. Willis G. MacDonald, Albany; Partial Rupture of the Cæcum from Obstruction and Distention, Operation, Recovery, by Dr. William Edwin Butler, Brooklyn; Tendon Transplantation in the Treatment of Paralytic Deformities, by Dr. Arthur W. Elting, Albany; A Symposium of Diseases of the Pancreas, including (1) Physiology and Physiological Chemistry of the Pancreas, by Professor R. H. Chittenden, New Haven, Conn.; (2) Pathology of Pancreatic Diseases, by Dr. George Blumer, Albany; (3) The Diagnosis of Diseases of the Pancreas, by Dr. W. S. Thayer, Baltimore, Md.; (4) The Surgery of the Pancreas, by Dr. Roswell Park, Buffalo; (5) Clinical Indications for Surgical Interference in Acute Pancreatitis, by Dr. Joseph C. Bloodgood, Baltimore, Md.; Pneumogalatocoele of the Breast, by Dr. J. Milton Mabbott, New York; A Simple Method for Determining the Percentage of Milk in Home Modifications, by Dr. Rowland G. Freeman, New York; Colles's Fracture, by Dr. D. W. Houston, Troy; Obesity of Adolescence, by Dr. Heinrich Stern, New York; A Unique Case of Double Dacryo-adenitis, by Dr. D. H. Wiesner, New York; Puerperal Hæmorrhage, by Dr. George Seymour, Utica; What shall be Done with the Professional Midwife? by Dr. M. J. Lewi, New York; The Influence of Certain Diseases of the Nose and Throat on the Middle Ear, by Dr. Wendell C. Phillips, New York; A Further Contribution to the

Study of Summer Diarrhœa among Out-patients, by Dr. Charles G. Kerley, New York.

The Merritt H. Cash prize of \$100 was awarded to Dr. Lucien Howe, of Buffalo, for his essay on A Study of the Connective Tissues of the Orbit by a New Method.

The Committee on the President's Address submitted a report making the following recommendations:

(1) That the question of holding a semi-annual meeting this year, and subsequently, be left to the judgment of the president-elect and the comitia minora. (2) That the question of a separate examination in internal medicine, to be held by the State Board of Medical Examiners, be referred to the regents. (3) That the questions involved in Koch's paper regarding the communicability of bovine tuberculosis should be looked upon as inviting still further experimentation in this field before conclusions could be drawn, which would warrant any modification of existing methods of dealing with the disease. (4) That the various health boards of the State imitate, as far as possible, the work of the Milk Commission of the Medical Society of the County of New York. (5) That the society favor the establishment of a national board of health, with representation in the President's Cabinet. (6) That a committee be appointed for conference with the New York State Medical Association, and that Dr. Elsner be made the chairman of the committee, and be empowered to associate with himself four representative members of the society.

The recommendations of the committee were adopted unanimously without debate.

The following officers were elected for the ensuing year: President, Dr. Henry R. Hopkins, of Buffalo; vice-president, Dr. William A. Moore, of Binghamton; secretary, Dr. F. C. Curtis, of Albany; treasurer, Dr. O. D. Ball, Albany.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 1, 1902:

DISEASES.	Week end'g Jan. 25		Week end'g Feb. 1	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	22	11	33	11
Scarlet fever.....	363	25	351	29
Cerebro-spinal meningitis..	0	2	0	4
Measles.....	829	22	706	22
Diphtheria and croup.....	286	48	346	51
Small-pox.....	54	11	42	15
Tuberculosis.....	258	42	279	119

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending February 1, 1902:

MAYERS, G. M., Assistant Surgeon. Detached from the Naval Hospital, Cavite, Philippine Islands, and ordered to the *Isla de Cuba*.

OMAN, C. M., Assistant Surgeon. Commissioned assistant surgeon from December 18, 1901.

VAN REYPEN, W. K., Rear Admiral. Detached from duty as chief of the Bureau of Medicine and Surgery, Navy Department, and ordered home to await orders.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ended February 1, 1902:

Smallpox—United States.				
Arkansas.....	Little Rock.....	Jan. 20.....	17 cases.	1 death.
California.....	Los Angeles.....	Jan. 11-18.....	8 cases.	
"	San Francisco.....	Jan. 12-19.....	4 cases.	
District of Columbia.....	Washington.....	Jan. 11-18.....	2 cases.	
Illinois.....	Belleville.....	Jan. 18-25.....	1 case.	
"	Chicago.....	Jan. 18-25.....	8 cases.	
"	Danville.....	Jan. 18-25.....	1 case.	
"	Freeport.....	Jan. 18-25.....	3 cases.	
"	Galesburg.....	Jan. 18-25.....	2 cases.	
Indiana.....	Evansville.....	Jan. 18-25.....	4 cases.	
Iowa.....	Clinton.....	Jan. 18-25.....	5 cases.	
Kentucky.....	Lexington.....	Jan. 18-25.....	3 cases.	
Maine.....	Portland.....	Jan. 18-25.....		
Massachusetts.....	Boston.....	Jan. 18-25.....	44 cases.	6 deaths.
"	Cambridge.....	Jan. 18-25.....	3 cases.	1 death.
"	Lowell.....	Jan. 18-25.....	1 case.	
"	New Bedford.....	Jan. 18-28.....	6 cases.	
"	Somerville.....	Jan. 18-25.....	1 case.	
"	Weymouth.....	Jan. 11-18.....	1 case.	1 death.
"	Woburn.....	Jan. 18-25.....	1 case.	
Michigan.....	Detroit.....	Jan. 18-25.....	6 cases.	
Minnesota.....	Minneapolis.....	Dec. 28-Jan. 18.....	57 cases.	
Missouri.....	Hannibal.....	Jan. 11-18.....	1 case.	
Nebraska.....	Omaha.....	Jan. 18-25.....	54 cases.	
N. Hampshire.....	Nashua.....	Jan. 18-25.....	3 cases.	
New Jersey.....	Camden.....	Jan. 18-25.....	19 cases.	1 death.
"	Jersey City.....	Jan. 18-26.....	13 cases.	1 death.
"	Newark.....	Jan. 18-25.....	35 cases.	8 deaths.
New York.....	Binghamton.....	Jan. 18-25.....	1 case.	
"	New York.....	Jan. 18-25.....	54 cases.	11 deaths.
Ohio.....	Cincinnati.....	Jan. 17-24.....	17 cases.	
"	Middletown.....	Jan. 18-25.....	1 case.	
"	Toledo.....	Jan. 18-25.....	1 case.	
"	Youngstown.....	Jan. 18-25.....	4 cases.	4 deaths.
Pennsylvania.....	Altoona.....	Jan. 18-25.....	1 case.	
"	Norristown.....	Jan. 18-25.....		1 death.
"	Philadelphia.....	Jan. 18-25.....	90 cases.	19 deaths.
"	Pittsburgh.....	Jan. 18-25.....	2 cases.	
"	Reading.....	Jan. 20-27.....	1 case.	
"	Scranton.....	Jan. 15-22.....		1 death.
Rhode Island.....	Providence.....	Jan. 18-25.....	2 cases.	
Tennessee.....	Memphis.....	Jan. 18-25.....	16 cases.	
Vermont.....	Burlington.....	Jan. 18-25.....	31 cases.	
Washington.....	Aberdeen.....	Jan. 18.....	Prevalent.	
"	Coupeville.....	Jan. 16.....	2 cases.	
"	Hoquiam.....	Jan. 18.....	Prevalent.	
"	Tacoma.....	Jan. 12-19.....	3 cases.	
Wisconsin.....	Green Bay.....	Jan. 10-26.....	13 cases.	
"	Fond du Lac.....	Jan. 18-25.....	1 case.	
"	Milwaukee.....	Jan. 18-25.....	3 cases.	

Smallpox—Foreign.				
Austria.....	Prague.....	Dec. 28-Jan. 4.....	13 cases.	
Canada.....	Halifax.....	Jan. 11-27.....	1 case.	
"	Winnipeg.....	Jan. 1-12.....	6 cases.	
Colombia.....	Cartagena.....	Dec. 1-31.....		7 deaths.
France.....	Marseilles.....	Dec. 1-31.....		1 death.
"	Nantes.....	Jan. 4-11.....	3 cases.	
"	Paris.....	Dec. 15-31.....	6 cases.	
"	St. Etienne.....	Jan. 10-17.....	1 case.	
Gt. Britain.....	Glasgow.....	Jan. 4-11.....	4 cases.	
"	Liverpool.....	Jan. 4-11.....	3 cases.	
"	London.....	Jan. 4-11.....	872 cases.	56 deaths.
"	Newcastle-on-Tyne.....	Jan. 4-11.....	5 cases.	
Greece.....	Athens.....	Jan. 4-11.....	1 case.	
India.....	Bombay.....	Dec. 17-24.....		1 death.
"	Karachi.....	Dec. 15-22.....	14 cases.	3 deaths.
Italy.....	Naples.....	Jan. 4-11.....	12 cases.	4 deaths.
"	Palermo.....	Dec. 28-Jan. 4.....		1 death.
Russia.....	Odessa.....	Dec. 28-Jan. 4.....	4 cases.	2 deaths.
"	St. Petersburg.....	Dec. 28-Jan. 4.....	8 cases.	1 death.

Yellow Fever.				
Mexico.....	Vera Cruz.....	Jan. 11-18.....	3 cases.	2 deaths.
Cholera.				
Straits Settlements.....	Singapore.....	Nov. 30-Dec. 7.....		2 deaths.
Plague—Foreign.				
India.....	Bombay.....	Dec. 17-24.....		175 deaths.
"	Karachi.....	Dec. 15-22.....	55 cases.	43 deaths.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending February 1, 1902:

AGOSTINI, I. P., Contract Surgeon. The leave of absence granted him is extended one month.

MEARNS, EDGAR A., Major and Surgeon, is relieved from duty at Fort Adams, Rhode Island, to take effect upon the arrival and assignment to duty at that post of LOUIS W. CRAMPTON, Major and Surgeon, and will then proceed to Fort Yellowstone, Wyoming.

NEWGARDEN, GEORGE J., Captain and Assistant Surgeon, is detailed as a member of the board of medical officers appointed to meet at the United States General Hospital, Presidio of San Francisco, for the examination of candidates for admission to the Medical Corps of the Army, vice WILLIAM H. WILSON, Captain and Assistant Surgeon, relieved.

RAFFERTY, OGDEN, Major and Surgeon, is detailed as a member of the board of medical officers appointed to meet at the United States General Hospital, Presidio of San Francisco, for the examination of candidates for admission to the Medical Corps of the Army, vice ROBERT J. GIBSON, Major and Surgeon, relieved.

SHEPARD, JOHN L., Contract Surgeon, is granted leave of absence for twenty days, to take effect about January 29th.

THORP, CHARLES W., Contract Surgeon, is relieved from duty in the Division of the Philippines and at the United States General Hospital, Presidio of San Francisco, and will report to the commanding officer of the Fourth Infantry at San Francisco, for duty, to accompany that regiment to Fort Sam Houston, Texas, and, upon arrival at that post, to proceed to Fort Clark, Texas, for duty.

WICKLINE, WILLIAM A., Contract Surgeon, will proceed to Fort Lawton, Washington, for duty, to relieve HENRY S. KIERSTED, First Lieutenant and Assistant Surgeon, who will report for duty at the United States General Hospital, Presidio of San Francisco.

Obituary.

CHARLES H. BURNETT, M. D.

Dr. Charles H. Burnett, well known through his work as an otologist, died at his home, at Bryn Mawr, Pa., on January 30th, at the age of sixty-one. He took his degree as bachelor of letters at Yale in 1864, having as a classmate Dr. Albert K. Buck, who, like Dr. Burnett, has also distinguished himself in the field of otology. He graduated from the medical department of the University of Pennsylvania in 1866 and later prosecuted his studies abroad.

Dr. Burnett was the author of a text-book on *The Ear, Its Anatomy, Physiology, and Diseases*, which appeared in 1877, of a popular health primer on *Hearing and How to Keep It*, and of a work on *Diseases and Injuries of the Ear*. He was the senior editor of *An American Text-book of Surgery for Practitioners and Students* and was one of the editors of *An American Year-book of Medicine and Surgery*.

JOHN T. METCALFE, M. D.,

OF NEW YORK.

We must still speak of him as "of New York," though for nearly the whole of the last decade of his life, having retired from practice, he spent his summers in Cold Spring on the Hudson and his winters in Georgia; for it was in New York that he had his real career. He was the son of a physician, and was born in Natchez, Mississippi, in 1818. His first special training was for a military life. He graduated at the West Point Military Academy in 1838, and was appointed a second lieutenant of artillery, but was soon transferred to the ordnance corps. After two years' service, he resigned from the army and entered upon the study of medicine in Philadelphia. He took his medical degree from

the Jefferson Medical College, that nursery of so many great men in American medicine, and afterward studied in Paris, Vienna, Edinburgh, and Dublin. Then he settled down in general practice in New York and continued in the active prosecution of his profession, save for a period of ill health, up to the time of his retirement. He died in Thomasville, Georgia, on Thursday, January 30th, in his eighty-fourth year.

Dr. Metcalfe's educational advantages were the best that the times afforded, but in a preeminent degree may it be said of him that he was one of those great physicians who, like Stokes and Trousseau, are born rather than made; it was his intuition, more than what he had learned from others, that made him great. He was not of wide renown, for, although he held a professorship for a number of years and was connected with several hospitals, his private practice received almost his whole attention, and there were few beyond the circle of his New York contemporaries in the profession who had any opportunity to know of his transcendent strength in diagnosis and therapeutics; those who had that privilege, however, those who had had occasion to call him in consultation, never failed to be impressed with his acumen and sagacity.

It was by no means among his professional brethren alone that Dr. Metcalfe was rated high; the community at large, while realizing his value as a physician, fed on his wit and profited by his wisdom. In his social relations he was charming, and it is little to say that no man in town was ever more admired, whatever his station in life. If the new century favors New York with his equal, the town will indeed be fortunate.

Births, Marriages, and Deaths.

Engaged.

FREDERICK—CARPENTER.—In Germantown, Pennsylvania, Dr. Silas C. Frederick, of Wilmington, Delaware, and Miss Lucretia P. Carpenter.

Married.

CLARKE—MULLINS.—In San Francisco, on Wednesday, February 5th, Dr. John Roger Clarke and Miss Maud Mullins.

MCGETTIGAN—VALLEJO.—In San Francisco, on Wednesday, January 2d, Dr. Charles D. McGettigan, United States Army, and Miss Francesca C. Vallejo.

MORROW—JONES.—In Kansas City, Missouri, on Wednesday, January 15th, Dr. James Albert Morrow and Miss Isabelle Jones.

Died.

DUDLEY.—In Petersburg, Virginia, February 1st, Dr. W. A. Dudley, in the seventieth year of his age.

GRIMES.—In Cheyenne, Wyoming, on Sunday, January 26th, Dr. Robert Bunce Grimes, Jr., United States Army.

JACKSON.—In Victor, N. Y., on Sunday, January 26th, Dr. Cassius O. Jackson, in the forty-seventh year of his age.

PETER.—In Washington, on Tuesday, January 28th, Dr. Armistead Peter, in the sixty-second year of his age.

SHIVERS.—In Haddonfield, N. J., on Saturday, February 1st, Dr. Bowman H. Shivers, in the sixty-seventh year of his age.

SIMPSON.—In Pittsburgh, on Monday, January 27th, Dr. Theodore P. Simpson, in the sixty-sixth year of his age.

TYLER.—In New York, on Sunday, January 26th, Dr. Lachlan Tyler, in the fiftieth year of his age.

Pith of Current Literature.

*Journal of the American Medical Association,
February 1, 1902.*

Indications for and Utility of Altitude Treatment in Pulmonary Tuberculosis. By Dr. S. E. Solly.—The author believes that hæmorrhage cases do no worse at an altitude than elsewhere, and probably do better. At any rate, the fact of their bleeding is not of itself an argument against sending them to great altitudes. Another important thing is for physicians at home to study their patients thoroughly before sending them away for climatic change. He thinks the State institutions and other home sanatoria that are now springing up everywhere will be of immense value in this connection.

Adaptability of Southern California and Similar Climates to the Needs of Consumptives. By Dr. Norman Bridge.—Pointing out that most of the climatic benefit that ever comes to this class of patients is due to their ability to live practically out of doors a large part of the time, night and day, the author commends the climate of Southern California as being preeminent in its fitness for such a treatment.

Nineteen Years' Experience with Creosote in Tuberculosis. By Dr. James A. Burroughs.—Selection of creosote made by the double distillation of tar from beechwood is essential. Large doses continued indefinitely do not irritate the stomach, but improve digestion. Large doses are appropriated by the system, as shown by clinical observations. The drug in large doses is indicated in all cases of the disease, and, for permanent results, should be continued for months after the absence of all physical signs or constitutional disturbance. Creosote, in fine, according to the author, is not only the most rational treatment, but gives the best clinical results of any one agent familiar to clinicians.

Treatment of Acromegaly with Pituitary Bodies. By Dr. Sidney Kuh.—The results of a series of experiments in three recorded cases seem to offer a sufficient justification for further observations on the administration of powdered pituitary bodies in cases of acromegaly.

The Teaching of Practical Dietetics in Medical Schools. By Dr. R. O. Beard.—The author describes the method of instruction followed in this branch in the University of Minnesota, with the hope that this practical addition to the medical curriculum will commend itself to the intelligence of the profession, and, particularly, to the educator in medicine.

Three Cases of Paralysis of the Serratus Magnus and the Trapezius—Alar Scapula. By Dr. Augustus A. Eshner.

Dementia Preceding and Following Inebriety. By Dr. T. D. Crothers.—The author makes prominent the following general facts: (1) States of dementia precede inebriety and become both predisposing and exciting causes. (2) The continuous or occasional use of spirits is often followed by dementia in many forms. (3) All use

of spirits reveals certain well-marked degenerative tendencies. (4) Alcohol as a tonic is dangerous by increasing the toxines and conditions of poisoning in combination with starvation, and should never be used in brain and nerve psychoses or any other condition of neurosis. (5) Alcoholic psychosis in every form should be carefully studied before treatment can be given with any degree of accuracy.

Dyspeptic Asthma. By Dr. Max Einhorn.—The author finds that cases of dyspeptic asthma, as a rule, are amenable to treatment, and a rational régime with regard to the digestive apparatus is followed by good results.

The Immediate Diagnosis of Blastomycetic Dermatitis. By Dr. A. W. Brayton.

Sudden and Temporary Mental Aberration; Unconscious Automatism; Temporary Irresponsible States. By Dr. Samuel Ayres.—The author believes that it should be the duty of all physicians called to testify in murder cases where the mental condition is in question, to inquire most carefully as to the presence of any epileptic tendencies or the occurrence of epileptic attacks; and it should be remembered that the psychic equivalent may precede the ordinary convulsive attack; so that some criminal attacks may be the first evidence of any abnormality in the individual.

Rapid Sugar Testing with Haines' and Purdy's Solutions. By Dr. William H. German.

Traumatic Arterio-venous Aneurysms of the Subclavian Tissues, with an Analytical Study of Fifteen Reported Cases, Including One Operated upon. By Dr. Rudolph Matas.—(Concluded.)

Philadelphia Medical Journal, February 1, 1902.

Result of X-ray Diagnosis and of Operation in Injuries from Foreign Bodies in the Eye. By Dr. William M. Sweet.—The author concludes that the x ray offers the most certain method of detecting and locating foreign bodies in the eye, and should be used in all cases before magnet extraction is attempted. Early extraction offers the best chance of saving the eye. The more extended use in the future of the larger magnet in cases of steel in the vitreous chamber to draw the metal to an opening in the sclera, after its position has been accurately determined, will probably achieve better visual results than have been obtained in the past with the small magnet introduced into the vitreous. Extraction by forceps, employing normal salt solution to replace any vitreous lost, when a fibro-cellular covering envelops the fragment of iron or steel, or when the body is of copper or glass. Extraction is a safe operation, and under proper precautions is free from the dangers of panophthalmitis or meningitis.

Precancerous Keratosis Probably Due to X Rays. By Dr. James C. Johnston.

Treatment of Epithelial Skin Cancers and Sycosis Non-parasitica with the X Ray. By Dr. J. F. Rinehart.

The Accuracy of the Negative Röntgen Diagnosis in Cases of Suspected Calculous Nephritis and Urethritis. By Dr. Charles Lester Leonard.

Medical News, February 1, 1902.

On the Value to the Physician of Modern Methods of Diagnosis. By Dr. Henry L. Elsner.—See abstract of *Boston Medical and Surgical Journal* for January 30th.

Note on the Glycosuria Following Experimental Injections of Adrenalin. By Dr. C. A. Herter and A. H. Richards, Ph. D.

Sanitary Aspects of Nicaragua versus those of Panama. By Dr. J. Edward Stubbert.—The author points out: (1) That the natural conditions of the Central American, or Nicaraguan, route are far more conducive to health than those along the Panama route; (2) the endemic diseases of the Panama route are far more fatal than those along the Nicaraguan route; (3) during the time of actual construction, while there would necessarily be an increase of sickness, the mortality would be remarkably below that on the Panama route; (4) after the completion of the canal, the regions bounding the Nicaraguan route would be capable of development by the Anglo-Saxon, while he could not safely live along the Panama line.

A Word on Specialization in Medicine and Surgery. By Dr. William M. Polk.—While the tendency of all specialization is to narrowness and to exaggeration of minutiae, the safeguard is a broad foundation, a thorough knowledge of the principles governing the whole field, and a practical acquaintance with their expression as witnessed in disease, and their application as required in remedial measures.

American Medicine, February 1, 1902.

On the Value to the Physician of Modern Methods of Diagnosis. By Dr. Henry L. Elsner.—See abstract of *Boston Medical and Surgical Journal* for January 30th.

Erysipelas in the Negro. Report of a Case of the So-called Spontaneous Type. Summary of the Literature on the Subject. By Dr. R. P. Stoops.—From the author's case and from the literature he concludes that the negro possesses no special immunity. The impression prevailing to the contrary is due to the fact that negroes do not apply to the hospitals for treatment, and physicians who have had such cases have not, as a rule, reported them. The onset is attended with enlargement of the cervical glands, sore throat, and high fever. The swelling generally begins around the nose or mouth. No cutaneous flush is visible in a very dark negro. Hardened projections can be felt at the periphery of the inflamed area. The blebs are very distinct. Desquamation begins as inflammation subsides, and may be complete in one place while the erysipelatous process is active in another. The general symptoms are those that accompany most of the acute fevers.

The Passing of Drug Giving. By Dr. John Madden.—The author entertains the hope that perhaps the average layman will some day learn the importance of giving his physician the task, not merely of making him well, but of keeping him from becoming ill; not of administering

drugs to him, but of so judiciously advising him that his need for drug swallowing shall be decreased tenfold.

"The Vexed Question of Vaccination" Again: Have We a Standard Glycerinated Virus? By Dr. F. J. Runyon.—Referring to glycerinated lymph, the author asserts it to be a dangerous virus for general use, and a virus calculated to bring discredit upon the life-saving discovery of vaccination.

A Durham Tube in the Right Bronchus. By Dr. E. D. Ferguson.

The Abandonment of Digital Examination by the Vagina in Labor. By Dr. W. A. Briggs.

Boston Medical and Surgical Journal, January 30, 1902.

President's Address to the Medical Society of the State of New York: On the Value to the Physician of Modern Methods of Diagnosis. By Dr. Henry L. Elsner.—The author concludes with the assertion that the moral force of scientific methods in medicine is the greatest factor in modern medical practice.

Suggestion in Medicine. By Dr. George C. Smith.—According to the author, many physicians, if they consider the physical side of their patients at all, believe that it may be ignored; others, though recognizing it, feel that it would require too much of their time; while still others think that only the neurologist can do this kind of work. In this article the author emphasizes the need of thorough psychological preparation for the medical school, and the danger of bad suggestive therapeutics.

A Case of Raynaud's Disease. By Dr. George S. C. Badger.

Vaccination and Small-pox. By Dr. S. H. Durgin.—According to the author, we are having too many cases among those who are supposed to be sufficiently vaccinated. He believes that absolute immunity to small-pox should be secured by vaccinating a child when very young, and repeating the operation until it will no longer take effect. At the age of ten or twelve years, the process should be repeated. As a matter of interest, he mentions that humanized lymph has been used in the Republic of Mexico for ninety-seven years. The children from whom the lymph is taken are well selected, the lymph is well cared for, and furnished free of expense. There is no revaccination and no small-pox among the vaccinated.

Suffolk District Medical Society. Section for Clinical Medicine, Pathology, and Hygiene. By Dr. Henry F. Hewes.

Medical Record, February 1, 1902.

Carbonate of Creosote in Pneumonia. By Dr. W. H. Thomson.

Ringworm: A Note on Its Treatment. By Dr. George Thomas Jackson.—While it is easy to cure ringworm of the non-hairy parts, it is difficult to cure ringworm of the scalp and beard,

especially the former. In a preparation composed of an ounce of goose grease, to which has been added a drachm or more of the crystals of iodine, the author has found a most effective remedy. It is to be applied twice a day until it produces reaction, as shown by a little swelling of the patch; then, once a day will be sufficient.

Progress in Veterinary Medicine in Its Relation to Public Health. By Dr. William Herbert Lowe.—The author observes that no dairyman should give medicine to a cow, and allow the milk to be used, especially for children. The use of various preparations of mercury, arsenic, zinc, iron, iodine, purgatives, and other medicines, may easily cause fatal results. The author thinks that practitioners of human medicine might, in certain maladies of their patients, especially of children, administer medicine to their patients through the agency of a cow by her milk.

Veterinarians should be appointed on boards of health, as well as physicians and others, for no small part of preventive medicine and sanitary science belongs essentially to the veterinary profession.

Case of Acute Articular Rheumatism with Pyæmic Temperature, Treated by Antistreptococcic Serum. By Dr. R. J. Chipman.—In reviewing the history of this case it seems impossible to ascribe the sudden remission of symptoms to mere coincidence.

Early Mechanical Effects of Altitude of the Rocky Mountain Plateau in Pulmonary Tuberculosis. By Dr. J. E. Courtney.—The processes inaugurated in the lung by great altitudes are compared by the author to the stretching and revivifying of indolent surfaces. Nature's surgery of the lung, a species of curettage previous to the institution of the healing process. Quantities of bacilli are removed; the foci for the generation of toxins, for reabsorption of pyæmic material, and the chief source of irritating cough by accumulating mucus, are cleaned out. The stagnant and toxine-laden air in the bronchi and vesicles is evacuated, and oxygen admitted.

Gunshot Wound of the Stomach. By Dr. George P. Jessup.

Gall-stones Complicated with Empyema of the Gall-bladder. By Dr. H. T. Miller.

A Case of Galactorrhœa. By Dr. Frederic Griffith.

Circumcision for the Relief of Acne. By Dr. W. C. Ussery.

Protozoa in Gangrenous Stomatitis. By Dr. W. Moser.—The author suggests, in the treatment of gangrenous stomatitis, an application of pure carbolic acid, followed immediately by alcohol, as is done in the case of infected abscess cavities.

Lancet, January 18, 1902.

Ocular Pain: Its Significance, Varieties, and Treatment. By P. Dunn, F. R. C. S.—Among the points brought out by the author are the following: The absence of pain in inflammatory conditions of the eye may be looked on as a favorable sign.

Thus, the pain of a glaucomatous attack is the index of the peril to which the eye is subjected, and marks out the line of treatment. In the case of iritis, so long as the pain continues no improvement can be expected; on the other hand, the cessation of pain indicates the commencement of the retrocession of the disease and the progress toward recovery.

Ocular pain varies in intensity and with the disease; very little pain occurs in connection with conjunctival affections, the conjunctiva being sparsely endowed with common sensation. Any irritation of the cornea, however, causes most intense pain, which persists until the cause is removed. Iritis may or may not be painful; when the ciliary body is involved there is always tenderness of the globe on palpation. The pain in syphilitic iritis is generally persistent; it continues throughout the day and night until relieved by local treatment, such as leeching. In rheumatic iritis the pain is usually very severe, being much worse at night. Dry heat is the best local method of treatment. Much of the intense pain of acute glaucoma is due to the compression to which the ciliary processes are subjected during the attack. Iridectomy furnishes the only satisfactory method of treatment.

Typhoid Fever in South Africa. By Dr. A. Elliot and Dr. J. W. Washbourn.—The authors have collected the statistics of 262 cases of typhoid fever occurring in South Africa. There were 36 deaths, a mortality of 13.7 per cent. Sixty-one of the 262 cases suffered from relapse, but in 36 of these the primary attack was not under observation. The average interval was 10.8 days. Two patients had 2 relapses, and one had 3. There were no deaths among the subjects of relapse. In 12 cases there was a history of a previous attack—an incidence of 4.5 per cent. One patients had had 2 previous attacks and died during the third. One hundred and eighty-six patients had not been inoculated against the disease; of these 20 died, a mortality of 10.7 per cent. Twenty-five had been inoculated; of these, 4 died, a mortality of 16 per cent. Of 59 members of the hospital staff who had been inoculated, 4 contracted the disease.

Hæmorrhage occurred in 16 of the 262 cases; 6.1 per cent. Of these, 8 patients died, a mortality of 50 per cent. Phlebitis occurred in 15 cases; 5.6 per cent. The left leg was affected 10 times, the right leg 4 times, and both legs twice. There were 10 cases of pneumonia, an incidence of 3.05 per cent. Of these, 5 patients died, a mortality of 50 per cent. There were 10 cases of pleurisy and 6 cases of peritonitis. Perforation occurred in 6 cases; 2.2 per cent. After mentioning the other rarer complications, the authors conclude that the type of typhoid fever met with in South Africa does not differ in any essential respects from that met with in England and America. The only complication which appears to be specially prominent is phlebitis.

Note on the "Blood Relationship" of Man and the Anthropoid Apes. By Dr. H. S. F. Grünbaum.

On the Advisability of Removing the Appendix Vermiformis after Suppuration Caused by Appendicitis. By W. H. Battle, F. R. C. S.—The author thinks that there is only one exception to the rule that the appendix should be excised in all cases

after the patient has recovered from the suppuration, if it was not found possible or advisable to remove it when the abscess was opened. This exception is when the appendix has sloughed off and is lying free in the pus or comes away during the healing of the abscess. The removal of the appendix at a second operation, when the parts are quiet, will give a better chance to the patient in many cases than a removal unwisely attempted or persisted in at the first operation.

Izal in the Treatment of Phthisis. By Dr. F. W. Tunnicliffe.

Observations on the Nature and Treatment of Pernicious Anæmia. By A. McPhedran, M. B.

Friedreich's Ataxia. By Dr. G. Rankin.—The author reports a group of cases of Friedreich's ataxia, occurring in the same family. The patients are three sisters, aged respectively twenty, eighteen, and eleven years, who belong to a family of four, the remaining member being a boy aged sixteen years, whose general health is excellent, but who stammers to a marked degree. Friedreich's ataxia is essentially a family, as distinguished from a hereditary, disease; it attacks several members of the same family or generation, isolated cases being comparatively rare. Obviously it can seldom be a directly hereditary disease, because it is usually so far advanced before the marriageable age is reached, that marriage is out of the question. There is nothing definitely known as to the ætiology of the disease beyond its dependence upon congenital conditions of the spinal cord. None of the suggested causes (alcohol, syphilis, etc.) are adequately sufficient to explain its occurrence. Syphilis may be definitely excluded as a direct cause.

Pathologically, Friedreich's ataxia depends upon a sclerosis of the spinal cord which invades the posterior, lateral, and often the anterior columns. In many cases the cord is smaller than normal, and this deficiency in size may involve the medulla and pons as well as the cord. Cases are recorded in which the cerebellum also has been atrophied. The sclerosis of the posterior columns is usually complete throughout the entire length of the cord, and that of the lateral columns extends outward and forward so as to involve the direct cerebellar and the anterior pyramidal tracts. The cord lesion is thus much more extensive than in ordinary tabes. The two diseases with which Friedreich's ataxia is most liable to be confounded are locomotor ataxia and disseminated sclerosis. It may be distinguished from locomotor ataxia by the age of the patient, the existence of the disease in other members of the family, the altered speech, characteristic foot deformity, tendency to spinal curvature, muscular tremors, and choreiform twitchings, and by the absence of visceral crises, Argyll-Robertson pupils, lightning pains, and other sensory phenomena. The gait differs also in the two diseases. In Friedreich's ataxia the nystagmus is more marked and developed at an earlier period in the disease than in disseminated sclerosis; the speech, though slurred and deliberate, is not so syllabic; the muscular tremor is not rhythmical nor of the unmistakable intentional type; and the gait possesses none of the spastic element of the disseminated case. Disseminated sclerosis is not a family disease, and it rarely

develops in persons under twenty years of age. The foot deformity and spinal curvature of Friedreich's disease are not present in disseminated sclerosis.

The prognosis of the disease is hopeless. Its progress is usually slow, often lasting over a long period of years. No remedies have any apparent effect in arresting its course; the most that can be done is to maintain the general health as far as possible.

Report and Commentary on School Sanitation and Hygiene as Provided for in the Following Five European Countries—viz., France Represented by Paris, Italy by Milan and Florence, Belgium by Brussels, Germany by Stuttgart, and Switzerland by Zürich. By Dr. S. A. Tidey.

British Medical Journal, January 18, 1902.

Observations on the Surgical Treatment of Obstructive Jaundice from an Experience of Over 200 Cases. By A. W. M. Robson, F. R. C. S.—In all chronic jaundice cases the first and most difficult question is that of diagnosis. The following causes must be considered: 1. Common duct cholelithiasis. 2. Chronic pancreatitis. 3. Simple stricture of the common bile duct. 4. Inflammatory adhesions causing pressure on the hepatic or common bile ducts. 5. Hydatid of the liver. 6. Gummata of the ducts. 7. Chronic catarrh of the ducts. 8. Cancer of the common bile duct. 9. Cancer of the head of the pancreas. 10. Cancer of the liver. 11. Cirrhosis of the liver. 12. Other rare causes, such as aneurysm, or tumors of other organs.

Surgery holds out a good prospect of cure in the first five causes enumerated. The author mentions the following points as aids in diagnosis. Painless chronic jaundice suggests either chronic catarrh due to cancer of the liver, or occlusion of the ducts by growth, and, if this is associated with distention of the gall-bladder and rapid loss of weight, cancer of the head of the pancreas will probably be found. Enlargement of the liver is much more common in obstruction due to cancer than in that from gall-stones, but it may occur in either. The presence of ascites is suggestive of malignant disease; as a rule, it negatives any radical operation on the bile ducts. The element of time is of importance in diagnosis; jaundice with malignant disease runs a very short course. The jaundice of gall-stones is rarely continuously the same, whereas the jaundice of obstruction due to growth steadily increases or tends to become absolute. Fat in the motions with glycosuria and very rapid wasting, is suggestive of pancreatic trouble. Ague-like symptoms more frequently accompany gall-stones in the common duct than malignant disease of the ducts or of the head of the pancreas.

Adhesions in the neighborhood of the gall-bladder, and a contracted gall-bladder are suggestive of gall-stones. A rigid right rectus abdominis and tenderness one inch above and to the right of the umbilicus is as suggestive of gall-stone trouble as is McBurney's point of appendicular inflammation. Treatment depends upon the diagnosis: 1. If the diagnosis is doubtful, an exploratory operation is advisable, provided the general condition of the patient renders it probable that such a procedure *per se* apart from what is to follow will not hasten death. 2. If malignant disease is positively diag-

nosticated, operation, with some few exceptions where it is possible to completely remove it, can do little good, or at the best can probably only prolong life for a short time. 3. If gall-stones, or, in fact, any of the first five enumerated causes be diagnosed, operation is decidedly advisable if the patient is at all in a condition to bear it.

A careful study of the causes of mortality in these cases shows the two greatest dangers to be hæmorrhage and shock, and the two next serious causes exhaustion and sepsis. The author had a mortality of 14.5 per cent. up to January 1, 1900. Since then it has only been 7.4 per cent. These figures are for choledochotomies.

Case of Excision of Clavicle for a Round-celled Sarcoma. By George T. Beatson, M. D.

On Blinding of the Retina from Exposure of the Eyes while Watching an Eclipse of the Sun. By S. Snell, F. R. C. S.

A Report of Nine Cases in which Haab's Magnet was Used for the Extraction of Foreign Bodies from the Eye. By W. T. H. Spicer, F. R. C. S., and A. F. MacCallan, F. R. C. S.—The authors, after reporting their series of cases, arrive at the following general conclusions as to the extraction of foreign bodies from the eye: 1. If a magnetizable particle is present in the globe, the patient experiences severe pain when brought up to the magnet. The magnet is therefore of valuable diagnostic service. 2. Localization by the x rays is extremely important; yet, where there is delay in their application, the authors recommend immediate extraction of the foreign body by Haab's magnet without precise localization, in (1) cases where there is much inflammation; (2) recent traumatic cataracts. Here delay is dangerous. 3. If there is a recent wound, the foreign body should be removed through it by means of the magnet. If the wound is firmly healed, it is necessary to make an opening for its exit. 4. In all cases it is most essential that entanglement of the particle in the iris and ciliary body should be avoided. Gradual nearing and increase of strength of the magnet guard against this accident.

The Relation of Glaucoma to Thrombosis of Retinal Veins, with Notes of Cases. By E. H. Jones, M. B.—The author reports the case of a man aged fifty-nine years, which illustrates the fact that glaucoma may occur as a sequel to unilateral thrombosis of the central retinal vein, associated with arteriosclerosis, but without albuminuric retinitis.

Reflections on Ophthalmic Work in the Army. By Dr. J. Grimshaw.

Ambulatory Treatment of a Ruptured Tendo Achillis. By J. L. Thomas, F. R. C. S.

Bullet Wound of the Motor Region of the Brain; Bullet Retained; Successful Extraction. By Dr. D. Drew.

Excision of Spina Bifida and Encephalocele. By Dr. J. Lithgow.

A Possible Predisposing Cause of Cancer. By H. Mason, M. B.—The author has made a statistical study of 427 fatal cases of cancer, and sums up his news as follows: 1. The cancer death rate has

increased during the last sixty years, synchronously with the development and extension of the water-closet system of drainage. 2. The infection of the alimentary system is as high as 55 per cent. The food which is kept in the cellars would be the first to become infected by any germs in the subsoil due to faulty drainage. 3. People over forty years of age are more subject to cancer, as they become more confined to their dwelling as age advances. 4. Females are more subject to it than males, because of their domestic duties exposing them more to any poisonous influences that may arise from faulty drainage. 5. Consecutive houses in the same street are often found to be cancer houses, due to their having the same faulty system of drainage. Many such houses have beneath them disused cesspools or decayed brick sewers. 6. A large percentage of these cancer houses (17 per cent.) are end houses of rows, or corner houses of streets, where any defect in a drain would be most likely to be severely affected by sewage. 7. The older houses are more likely to become cancerous than the modern ones, the drainage system being much less perfect. 8. The houses built on a porous subsoil are much more likely to become cancerous than those built on clay.

Two Cases in which the Activity of Phthisis was Excited by Operations for Local Tuberculosis. By A. J. Rodocanachi, F. R. C. S.—The two cases here reported illustrate well the danger that phthisis may be rendered active or general tuberculosis excited by an operation for strictly localized tuberculosis, such as fistula in ano, etc.

Case 1. A man, aged forty years, was operated upon for a painful tuberculous affection of the metatarso-phalangeal joint. He had no physical signs of phthisis in his chest. Although the wound healed well, signs of pulmonary phthisis appeared, and the patient died exhausted in a few months.

Case 2. A man, aged twenty-two years, had a large mass of glands in the right groin and a smaller mass in the left. He had a cough, and signs of apical tuberculosis, but no tubercle bacilli were to be found in the sputum. The glands began to suppurate and were excised. The disease in the chest thereupon made rapid progress, and the patient died within a month.

Centralblatt für Gynäkologie, January 4, 1902.

Choice of Operations for Myomata.—Professor R. Olshausen, in an elaborate article, says that abdominal operation is to be preferred to vaginal section and that the latter is uncalled for except in a few instances. The former permits, in all cases, a more radical and complete operation. He advocates the limitation of supra-vaginal amputation to cases in which it is desired to perform an enucleation and to enucleate larger growths as well as several small ones, as is customary. The article is replete with matter interesting to the specialist.

Prevention of Ventral Hernia by Doubling Over the Abdominal Parietes.—Dr. L. Heidenhain gives the details of this operation.

Two Laparotomies for Spontaneous Uterine Rupture During Labor. By Dr. A. Törngren.

January 11, 1902.

The Tenth Month of Pregnancy.—Professor B. S. Schultze makes a plea for reckoning the date of expected confinement by the month of twenty-eight days, which corresponds to the menstrual life of the woman, rather than by the month of the year. This would make the pregnancy of 280 days, a ten-month affair, as it should be, and would end much of the confusion now widely prevalent.

Pregnancy in a Bicorned Uterus. By Professor Krönig.—A clinical report.

Birth in a Double Bicorned Uterus. By Dr. Koslenki.

Puberty, Hypertrophy of Both Breasts.—Dr. E. Pflanz reports such a case.

Münchener medicinische Wochenschrift,
January 7, 1902.

Orthodiagraphic Examination of the Heart. By Professor Moritz.

Experimental Studies on Hæmolysis.—Dr. Max Mathes has experimentally shown that in the serum there are substances which have the power of absorbing the hæmoglobin of dead blood-cells of its own blood. It possesses, therefore, an immunizing power under certain conditions. In the digestion experiment, one can distinguish between living and dead erythrocytes. Ehrlich's immunizing bodies are not capable of killing the red blood cells; but with the use of Hayem's solution, dead red blood cells are dissolved, so that this solution takes the place of an immunizing body.

Experiences with Silk Tendons. By Dr. Fritz Lange.

Subcutaneous Gelatine Injections in Melæna Neonatorum.—Dr. Holtschmidt reports five cases with recovery, in which subcutaneous injections of sterilized gelatine, heated to 98° F., were injected. No other treatment was used and no ill effects were noted. About fifteen cubic centimetres were used in each case.

Treatment of Ruptured Uterus. By Dr. Gustav Wiener.—A report of two cases successfully operated on in which the uterus was first packed with gauze from the vagina and thoroughly tamponed by way of the abdomen. The organ was then sutured and the abdomen closed.

Biology of Fat. By Dr. Georg Rosenfeld.

Œsophagoscopy and Gastrosocopy. By Dr. Georg Kelling.

Berliner klinische Wochenschrift, December 23,
1901.

Symptomatology and Treatment of Cervical Ribs.—Dr. M. Borchardt says that, when cervical ribs are present, they produce no disturbances in the vast majority of instances. When they do cause trouble, however, it is usually in the form of a circulatory disturbance on account of their presence near the subclavian artery. An operation should be undertaken only if a subclavian

aneurysm becomes very troublesome or dangerous. If the ribs produce symptoms on the part of the brachial plexus, operation is indicated and is usually very successful, if performed before atrophy has appeared. Cervical ribs may appear in combination with syringomyelia, and this must be excluded before an operation is undertaken for the relief from brachial symptoms, especially if recurrent paralysis and disturbances of sensation are present.

What Tuberculous Lesions are most Amenable to Surgical Treatment in Sanatoria.—Professor Sprengel divides these cases into four groups. The following cases he considers suitable for hospital treatment: Tuberculous glands, tuberculosis of the long and short bones, except the vertebræ, osseous and articular tuberculosis in elderly persons, the open forms of the same in younger persons, and genital tuberculosis. He would recommend to sanatorium treatment all cases in which doubtful results might be obtained by surgical treatment, such as a closed spondylitis, a closed tuberculosis of the hip in children and a closed tuberculosis of the joints of the upper extremities. He would send to homes for chronic tuberculosis incurable cases, such as hip tuberculosis in persons over twenty-five years of age, the open forms of spondylitis and the majority of cases of multiple tuberculosis.

Symptoms and Treatment of Chronic Pulmonary Distension (Vagus Neurosis). By Dr. G. Zuelzer.

Hæmatometra in an Atresic Supplementary Horn of a Double Uterus. By Professor Abel.

Gazzetta degli Ospedali e delle Cliniche, December
1, 1901.

Researches on a Neurotoxic Variety of the Pneumococcus of Fränkel. By Dr. Guido Tizzoni.—Inoculations of virulent cultures of the pneumococcus were employed to immunize rabbits and guinea-pigs. Such immunization was found to be practicable under proper precautions. The author found, however, that this immunization was more easily accomplished as against the fever and the marasmus of pneumococcus infection, than against the nervous lesions. He succeeded in obtaining a serum that had both bactericidal and antitoxic properties, neutralizing in various proportions the different toxins formed in the cultures. The serum is therefore of value as an antitoxic and antipyretic remedy. It is also an important antineurotoxic substance, which may find application in the infections of the nervous system.

On the Hæmolysin of Certain Bacteria (Streptococcus, Pneumococcus, and Typhoid Bacillus). By Dr. N. Pane.—Virulent cultures of the streptococcus produce during their stage of development a hæmolytic substance (hæmolysin) demonstrable *in vitro* in the presence of the red corpuscles of the rabbit, but in the filtrate of the cultures this substance is very unstable. The red blood corpuscles of rabbits immunized against this hæmolytic action of the streptococcus by injection of streptococcus toxins resist the hæmo-

lytic action aforesaid. The pneumococcus and the bacillus of typhoid fever do not produce a hæmolyisin which can be demonstrated in the presence of the red blood corpuscles of the rabbit.

On Toxic and Infectious Jaundice and Weil's Disease. By Dr. Alberto Michelazzi.—The author reports three cases which show, in his opinion, that the same cause, whether toxic or bacterial, may give rise to various degrees of jaundice, from mild simple icterus to the more severe form with its special symptoms—Weil's disease. The latter may, therefore, be considered, not as a separate morbid entity, but as a more severe form of recurring jaundice, the greater severity of which is referable simply to the greater vulnerability of the organism of the individual affected and to the greater virulence of the toxine or bacterium actively involved in the causation of the disease.

Hepatoptosis, Simulating a Movable Kidney on the Right Side, Treated by Hepatopexis. By Dr. Renato Pianori.—A woman, aged thirty-four years, who had been exposed to severe exertions for a number of years, complained of attacks of pain in the right loin and epigastrium, together with paroxysms of vomiting recurring daily, which, according to the patient ceased upon the ingestion of small quantities of food. The pains were evoked by movements and exertion of any kind, and the vomiting was preceded by a sense of something sinking within the abdomen. After two years of palliative treatment, she was operated upon, and a nephropexy was performed. The operation gave no relief, and the patient was admitted to the hospital suffering from the same symptoms. The diagnosis of movable kidney on the right side, recurring after nephropexy, was made, and an exploratory operation was performed; whereupon it was found that the accused kidney was in its proper place permanently fixed. On examination under ether it was found that what was thought to be the movable kidney was in reality the liver, and a laparotomy was accordingly performed. It was found that the right lobe of the liver had markedly sunk, and that it had rotated outward, so that the gall-bladder was at the anterior axillary line. The liver was sutured with five interrupted stitches comprising the entire thickness of the gland at four centimetres from its border to the parietal peritonæum at the level of the costal margin. The recovery was uneventful, speedy, and complete. The case is noteworthy on account of the insidious beginning of the disease, the symptoms simulating movable kidney, and the fact that the liver was pierced with sutures with impunity.

An Enormous Ovarian Cyst; Radical Operation; Recovery. By Dr. Achille Franchini.

A Contribution to the Therapeutics of Sydenham's Chorea. By Dr. R. Jemma.—During the past year Bozzolo has tried lumbar puncture in cases of chorea in which all medication had been found of no avail. The author used this method as a therapeutic measure in two children with severe chorea, and concludes that lumbar puncture is of benefit in these cases. Nearly all the choreic symptoms disappeared almost immedi-

ately after the rhachicentesis, and those which still remained became milder in degree. Lumbar puncture, therefore, calms the choreic movements for a more or less prolonged period, and arrests the graver phenomena of the severe types of chorea. The author, however, continued the administration of considerable doses of arsenic during the treatment, and advises that this be done to increase the chances of cure. The pathogenesis of chorea being obscure as yet, it is impossible to give a satisfactory explanation of the mechanism of lumbar puncture in this disease. Probably as in other diseases, it acts by diminishing the intracranial pressure.

Fratch, December 22, 1901 (January 3, 1902, New Style).

On a Peripheral Reflex Centre of Gastric Secretion. By Dr. L. B. Popelsky.—The author's experiments, of which he gives an outline in this preliminary communication, show that the centre for the secretion of gastric juice does not lie in the brain, in the spinal cord, or in the celiac plexus, but in the stomach itself, in the walls of which histologists have long ago discovered a series of nerve ganglia. Therefore, in the stomach, as has been some time ago shown for the pancreas, the principle which was expressed in 1896 by the author holds good; namely, that peripheral nerve cells may play the rôle of independent nerve centres capable of reflecting impulses.

The Early Infantile Mortality in Connection with the Birth-rate at the St. Petersburg Lying-in Asylum. By Dr. V. P. Joukovsky.—An analysis of the 16,730 histories of labors that occurred in the asylum during the past four years, showed that 1,991 infants died before birth, during labor, or during the first week of life (a general mortality of 11.72 per cent.). Of these, 756 were miscarriages, 390 premature infants still-born, 312 mature infants still-born, 306 premature infants that died during the first week, and 219 mature infants that died during the first week—a total of 1,466 deaths before birth, and 525 after birth. The still-births were 4.14 per cent. of the living children, and the infants that died constituted 3.38 per cent. of those that remained alive. The author found on comparing the statistics of these two classes, that among the premature infants 39 per cent., or nearly one third, were born dead, while the still-births among mature children formed but one forty-eighth of the total number, or about 2 per cent. In the remaining premature infants, 33.5 per cent. died during the first week, while among the mature children the mortality during the first week was only 1.5 per cent. Among the premature infants, the total mortality was 54 per cent., while among the mature it was only 3.5 per cent. Concerning miscarriages, the author notes that, as in other institutions, the number of miscarriages at St. Petersburg has steadily increased within the past few years. The St. Petersburg asylum is intended principally for unmarried women, and a charge is made for married women which, to a certain extent, keeps them away. There are, therefore, a large number of illegitimate births.

A comparison of the mortality between the legitimate and illegitimate children showed the astonishing fact that the illegitimate infants more frequently lived through the first week. Among the married, the number of miscarriages constituted 6.8 per cent. of births, while among the unmarried this number was only 2.3 per cent. In the same way, there was a larger percentage of premature labors, still-births, and deaths, during the first week among legitimate children than among the illegitimate, though both classes were recruited from the same social ranks. The mortality of illegitimate children was, however, greater on leaving the hospital, on account of the lack of care which they receive.

The Mathematical Theory of Probabilities Applied to the Question of Infectiousness of Eclampsia. By Dr. G. V. Kolossoff.

A Case of Cysticercus Cellulosæ Beneath the Retina. By Dr. V. P. Kalaschitsky.—This condition is very rare, as Schroeder has not found more than two cases in 370,000 patients treated in the St. Petersburg Eye Infirmary during the last thirty years. Two months before examination the patient noticed a *musca volitans* in front of the right eye, and about a month later, was unable to see with that eye. The ophthalmoscope showed externally and beneath the optic disk, at a distance of about two and a half diameters from the latter, a rounded bluish swelling with sharp outlines, which, on careful examination, seemed streaked with red vessels, and had a prolongation that was light yellow in color and pear-shaped. Later the cyst grew and pushed forward into the vitreous body, and movements were noted in the yellow projection which seemed to be the head of a cysticercus. The patient confessed to having eaten raw pig's ears, with the bristles merely scraped off, an article of diet which he considered a delicacy. The patient refused operation and disappeared from observation.

A Case of Cæsarean Section in Multiple Incised Wounds of the Uterus. By Dr. S. A. Nikonoff.—This noteworthy case is reported because it shows what proper technics will do in a desperate condition. A girl, sixteen years old, was brought to the hospital bleeding profusely from fourteen incised wounds, two of which penetrated through the lung, and three into the peritonæum. She had been found on a boulevard in Sevastopol in an unconscious condition, and was brought in with all the symptoms of profound shock. The largest of the three abdominal wounds was over twelve centimetres long and situated in the median line below the umbilicus, directed from the right and above to the left downward. It penetrated through a pregnant uterus and showed the protruding shoulder of a foetus. The second abdominal wound was almost transverse, about eight centimetres long, allowed a mass of intestines and the arm of a foetus to escape, while the third wound, situated under the right costal margin showed a projecting portion of omentum. There were, in addition, a deep gash on the upper lip, from the angle of the nostril downward, a wound fifteen centimetres long penetrating to the bone beneath the left crest of the ilium, and fourteen incised wounds of the wrists which occasioned

severe bleeding. An operation was immediately performed. The author did not wash the abdomen, as he was afraid to wash infectious material into the peritonæum, but simply wiped the edges of the wounds with sterile cotton and alcohol, and covered everything with sterile towels soaked in salt solution. The large wound was utilized and Cæsarean section first performed, the wounds in the uterus sutured, and the toilet of the peritonæum made. The intestines not having been wounded, they were returned to the cavity, and, after copious irrigation with saline solution, the abdominal wound was closed completely. The other wounds were treated according to the indications, and sutures were applied wherever necessary. The operation lasted almost two hours, and the patient was taken off the table almost pulseless, but under the use of stimulants, hot bottles, etc., revived, and made a slow and uneventful recovery. The child had sustained five or six wounds and was dead when removed from the womb. The wound in the left pleura gave rise to a pleurisy which lasted eight days. The author concludes that in cases of this kind, rapidity of operation is more important than asepsis.

A Case of Fracture of the Penis. By Dr. N. A. Ivanoff.—The fracture in this case occurred as a result of masturbatory movements of unusually violent character. The patient suddenly heard a cracking sound and felt an acute pain, and fainted. When he recovered consciousness the pain had passed away and he fell asleep. On the following morning he awoke to find the organs swollen and œdematous. On examination, the penis was found to be pyriform, bent with the curve downward, and the glans hidden completely by the prepuce. The point of fracture was located in the corpora cavernosa at the outer third of the organ. The treatment consisted of rest in bed, applications of cold, and a supporting bandage. The hæmatoma was gradually absorbed and the organ regained its normal shape.

Atropine in Intestinal Obstruction. By Dr. N. M. Feinberg.—The author reports a case of intestinal obstruction in which atropine administered subcutaneously according to Batsch's method had a very marked beneficial effect, and prevented the necessity of operating. In this case the patient was sixty-seven years old, and the cause of the obstruction was probably atony of the intestines. Where mechanical obstruction is diagnosed, an operation should be urgently advised. In cases like this one, however, atropine, if given in proper doses, carefully watching the patient the while, may be tried with a fair probability of success.

On the Question of the Treatment of Intestinal Obstruction with Injections of Atropine by Batsch's Method. By Dr. A. S. Medem.—This is still another case in which atropine was used successfully in intestinal obstruction. In this instance atropine was tried, inasmuch as there were no facilities for operation. Alternating doses of atropine (2 milligrammes, about $\frac{1}{32}$ of a grain) and high enemata were given, and on the second day a movement of the bowels was obtained. From that time on, the patient began to recover rapidly. Three injections only had been used in this case when the bowels began to move.

Our Subscribers' Discussions.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows]

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

X.—How do you treat puerperal convulsions? (Answers due not later than March 10, 1902.)

XI.—How do you treat pneumonia in children? (Answers due not later than April 10, 1902.)

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Russell A. Hibbs, of New York, whose paper appears on page 177, in our issue of February 1st.

PRIZE QUESTION NO. VIII.

IN FRACTURES

OF THE UPPER THIRD OF THE FEMUR.
HOW DO YOU MANAGE THE TENDENCY
OF THE UPPER FRAGMENT TO
TILT FORWARD?

(Concluded from page 217.)

SUSPENSION IN THE DOUBLE-INCLINE POSTURE.

Dr. Albert Flewellyn Hall, of Fulton, N. Y., sends the following:

Means which afford invariable success in the prevention of the tendency of the upper fragment to tilt forward in fractures of the upper third of the femur have never been devised, and it is highly improbable that they will ever be found. Nevertheless, the fact remains that excellent results are obtained in many instances of fractures of this character with the means at our command, and this assurance should be an inspiration to the surgeon to endeavor to overcome the difficulties which each individual case may present.

In this fracture, the lower fragment is usually drawn upward, behind, and to the inner side of the upper fragment. Occasionally other positions are assumed. The upper fragment is forcibly drawn forward and abducted by the powerful contraction

of the psoas and iliacus muscles. It is therefore evident that muscular spasm is the chief obstacle to successful reduction and efficient control of the fragments. In strong, muscular subjects deformity and considerable shortening may occur, and sometimes under the most skilful management the result is very unsatisfactory. Reduction should not be undertaken until muscular spasm has been completely overcome through the use of a suitable anæsthetic, and it should be remembered that finesse, rather than force, must be relied upon for success.

Correct approximation and fixation of the fragments should be effected while the patient is anæsthetized, and particular attention should be given to the proper posturings of the limb, for unless the position insures proper muscular repose, displacement is apt to follow. A certain amount of abduction and flexion of the thigh upon the trunk is necessary, the degree depending upon the amount of muscular spasm to be overcome.

An excellent plan is to place the limb in that position which, in the opinion of the operator, will induce the greatest possible amount of muscular relaxation, then partially withdraw the anæsthetic and note the result. If displacement is not favored, secure the limb in this posture by means of a reliable fixation dressing. The permanent dressing, in order to be effective, must overcome shortening—so far as may be possible—prevent anterior bowing of the thigh, and insure against outward rotation of that portion of the extremity below the seat of fracture. The dressing or apparatus which fulfils these conditions accomplishes all that can reasonably be expected by fixation and extension.

The appliances which have given the best results involve some form of the double-inclined plane with rest and extension, or by means of suspension. Suspension of the limb by means of the Nathan Smith splint and bandage is a reliable form of dressing and gives excellent results in many cases. Dr. W. L. Estes, of Bethlehem, Pa., has devised an anterior splint made from roofing tin, which involves the principles of the Smith splint. The material for the splint is obtainable almost anywhere, and it is so simple in design that a novice will experience no difficulty in constructing one. The splint should be of one half the width of the thigh and should extend from the level of the umbilicus to the ankle. It is easily curved and can be quickly adjusted to meet the requirements of a case as regards sufficient flexion of the hip and knee joints, as well as a proper degree of abduction of the extremity. The limb should be encased in a well-fitting flannel bandage extending from the foot upward. The groin and thigh should be properly padded. The splint is given the desired form and applied to the anterior surface of the limb and secured by several layers of

plaster bandages sufficient to immobilize completely the hip and knee joints. Wire loops or rings may be incorporated with the dressing for suspending the extremity. Over the seat of fracture a short coaptation splint may be superimposed upon the long splint, to prevent its yielding and afford greater security against anterior bowing of the thigh.

After the plaster dressing has set, the extremity should be suspended in a position of moderate abduction. The fracture should be inspected at least once a week and its condition carefully noted. Careful comparative measurements should be made to determine the degree of shortening, and the traction regulated to meet the exigencies of the case. Coaptation should be maintained by correct posturing of the limb, and if separation of the fragments has occurred, we should remove the dressing at the site of fracture, adjust, correct faulty limb posture, and dress again with plaster bandages. The x ray may be brought into requisition in the treatment of these fractures, and in those exceptional cases where reduction cannot be maintained the fragments may be united by silver wire and the above-described dressing applied.

Many surgeons employ the double-inclined plane apparatus with thigh extension (Agnew), while a few employ the long external splint with short coaptation splints and extension, the extremity being elevated and abducted sufficiently to allay muscular spasm and maintain efficient reduction.

In children, Bryant's method of vertical extension gives the best results and insures cleanliness. More could be said, but the limit imposed having been reached, there remains only the brief statement of fact that the dressing described at the outset is simple, effective, and easily obtained, and therefore possesses merits not found in the more complicated dressings which have been devised for the prevention of the tilting of the upper fragment in thigh fractures of the upper third.

AN INTERNAL SPLINT IN THE MEDULLARY CANAL.

Dr. Hugh T. Nelson, of Charlottesville, Va., instructor in clinical surgery in the University of Virginia, writes:

In a paper read before the Tri-State Medical Association of the Carolinas and Virginia at its session in Charlotte, N. C., in February, 1898, the writer advocated what then seemed to him the best method of obviating the tendency of the tilting of the upper fragment in fractures at and near the junction of the upper and middle thirds of the femur. Recent experience has confirmed his views in regard to what he believes to be a method originating with him; a method which was highly endorsed by Dr. Bahnsen, of North Carolina, at the recent session of the Association of Southern Railway Surgeons.

In fractures of the upper third of the femur the action of the psoas and iliacus muscles tilts the upper fragment forward, and at the same time rotates it outward. It is impossible to maintain proper apposition of the fragments by almost any form of apparatus heretofore devised.

Buck's extension apparatus is practically worthless, and if pressure on the lower end of the upper fragment is made, by means of an anterior splint, necrosis of the superjacent soft tissues is apt to result. The encasing of the entire limb in gypsum is open to the same objection, even if the material is well carried up around the body of the patient.

The *double-inclined plane* is often unsatisfactory, whether gypsum, wood, or felt is used, since with so short an upper fragment, even though the lower fragment is lifted up so as to assume the direction of the upper, apposition is rarely attained to such a degree as to prevent serious deformity. The ingenious contrivance of the late Dr. Nathan R. Smith, of Baltimore, is but a modification of the double-inclined plane, and is probably the best in its line.

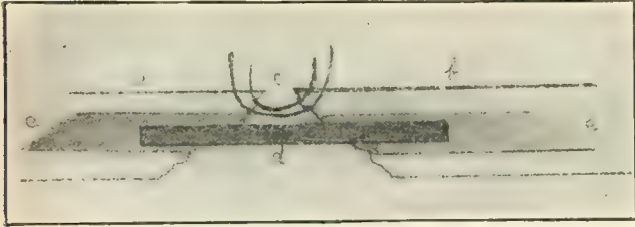
Since the advent of aseptic surgery, there can be no trouble in carefully making an ocular investigation of the fracture one has to deal with and in treating it by one or more of the methods of bone suture. Some of these are, however, open to serious objection, and particularly if there is comminution of portions of bone, we may have shortening or other deformity. Senn's decalcified bone rings have on one occasion produced necrosis of a large vessel and a fatal result.

Simply suturing the fractured ends with either silver or steel wire is a practical method, but may leave angular deformity. This can be easily obviated by the introduction into the medullary cavity of a metal rod of suitable length, before the wires are twisted.

A case will best illustrate. Three years ago, a colored youth employed in digging a well fell a distance of forty-two feet, sustaining a compound, comminuted fracture of the right femur above the junction of the upper and middle thirds. The fracture was observed with the Röntgen apparatus and treated with Buck's extension. Six weeks in bed resulted in non-union, and then a gypsum splint, giving the effect of a double incline, was employed with no better success.

Having tried my own method in several fractures of other bones with perfect results, I determined to try it in this case. The soft tissues were freely divided on the external aspect of the femur over the seat of fracture, a piece of bone involving nearly the entire thickness of the shaft at its thickest portion and tapering toward each end—three inches in length—was removed, as it was evidently undergo-

ing necrotic changes. This left an interval of considerable size between the two fragments when their tips were approximated. Then a steel rod, six inches long and one fourth of an inch in diameter, was worked into the medullary cavity, first of the lower fragment, which was then brought up to the point of contact with the upper fragment; then with pliers the rod was brought up into the medullary cavity of the upper fragment, and two silver wires were passed through the approximated thinned extremities.



a, Upper fragment; *b*, lower fragment; *c*, silver wires in situ, ready to be twisted; *d*, steel rod inserted an inch and a half in each extremity, crossing the triangular space from which the third fragment was removed; *e* *c*, medullary cavity.

The wires were then twisted and their free ends inverted so as to tuck down under the bones and prevent irritation of the soft parts. A perfect result followed, and the method can be pursued in every case of fractured femur where the ordinary means of maintaining correct apposition of the fragments fails to accomplish good results.

A diagram is appended.

The limb was, after operation, enveloped in a copious cotton dressing and the whole snugly enclosed in a gypsum dressing.

THE SINGLE-INCLINED PLANE AND A SIDE-SPLINT.

Dr. James Johnston, of Bradford, Pa., writes as follows:

In all fractures of the femur I secure the patient to a framework made of two boards, which, when rested on a bed with level side and foot pieces, allows the indications in this accident to be met and permits of easy treatment of any complications, including the tendency of the upper fragment in fracture of the upper third to tilt forward.

The bottom board is five feet long and ten inches wide. It lies flat on the side-board of the bed at an angle of 15° and extends over the foot-board. It is chamfered where it passes under the glutæus and has a pulley for a drop-weight at its lower and outer corner. The other board is five feet long and seven inches wide. It is a side splint and is fitted rigidly to the bottom board, extending nine inches higher and crossing it at an angle of 15° , from its inner to its outer border, being parallel with the side-board of the bed.

The only additional fitting for the mechanism is an ordinary surcingle nailed to the outer edge of the bottom board, which passes under and about the pelvis of the patient just below the crest of the ilium, over the top of the side-splint, which is strong enough to hold the weight, and buckles, forming a supporting sling. This side-splint is heavy enough to endure a twisting strain, and the whole is maintained in place by the crossfitting of the bottom board. The surcingle is the first part of the dressing to be fitted. The next is the counter-extension from the top of the side-splint in the armpit to the crotch. These two pieces cross one another at right angles and fix the pelvis firmly against the side splint.

When the extension dressing is prepared, I stand at the foot with my knees against the end of the bottom board, which controls the counter-extension, and, being in an advantageous position, I make all the necessary manipulations to effect reduction and extension and let the leg out of my hands to be cared for by the weight, of the efficiency of which I assure myself before letting go.

The side-splint is provided with openings throughout its length, whereby additional slings may be placed at any point, and it extends below the foot to prevent eversion.

This method of fixation tilts the hips to the opposite side and abducts the injured limb, which is useful in all fractures of the femur and is especially so in fractures of the middle and upper thirds.

Firm padding, well quilted, must be used for the trochanter and crest of the ilium where they are held against the side splint, and in arranging this it is necessary to see that the trochanter is in its proper position and well supported.

When the pelvis is fixed, the trochanter in its proper position, reduction, abduction, and extension accomplished, if the upper fragment tilts forward, it is necessary simply to hold it in its place by pressure.

A bandage may be passed around the thigh, it is free from dressings at this point, and the bandage may contain a splint.

A sand-bag may be laid over the refractory fragment and rested against the side-splint, which will hold it in whatever way it may be placed.

Or any other attachment that may be necessary may be rigged to the side-splint at this point. With a strong, wide, high, immovable board alongside of the fracture, any surgeon with a trifle of ingenuity may do as well as the gentleman of olden days who said that with a fulcrum he could move the world. The special advantage of this dressing, for this purpose, is that it provides the fulcrum.

THE DOUBLE-INCLINED PLANE WITH ELASTIC EXTENSION.

Mr. D. Edgar Hottenstein, of Philadelphia, student of medicine, writes as follows:

Displacement of the fragments in fractures is due to muscular action. The muscles arising from the pelvis, both within and without, and inserted into the femur are powerful in their action, and in fracture of the upper third of the femur cause displacement which is reduced with difficulty. The upper fragment is chiefly displaced, being tilted forward and at the same time everted and drawn outward.

In order to understand the proper management of this displacement, it is necessary to consider the action of the muscles passing from the pelvis to the upper and lower fragments. The upper fragment has attached to it the psoas, the iliacus, the pectineus, the adductor brevis, and the muscles of the gluteal region. The lower fragment gives attachment to the adductores magnus and longus and is also subject to the action of the rectus, the biceps, the semimembranosus, and the semitendinosus.

Of all these, the action of the psoas and iliacus is the most important. Normally these muscles act either from above or from below. Acting from above, they flex the thigh upon the pelvis, and on account of the obliquity of their insertion into the inner and back part of the bone rotate it outward. Their action from below necessitates the fixation of the femur, consequently in fracture of the femur these muscles account for the forward tilt and to some extent for the outward rotation. The pectineus and adductor brevis assist in flexing the thigh; they are also adductors, but this action is overcome by the action of the gluteal muscles, so that the upper fragment is drawn outward.

The lower fragment is drawn inward by the adductores magnus and longus, and owing to the obliquity of their insertion into the linea aspera they rotate the thigh outward. It is also drawn upward by the rectus in front and by the biceps, semimembranosus, and semitendinosus behind. In consequence the limb is shortened.

This fracture cannot be reduced by direct traction, for by it the muscles inserting into the upper fragment are not affected. The lower fragment must be brought to the upper by the careful adjustment of the double-inclined plane, and then traction should be applied at the knee in the line of the long axis of the bone by means of adhesive straps on the thigh and by raising the pulley at the foot of the bed. In this way the action of the muscles is met. The contraction of those causing the shortening is overcome and the ends of the fragments are brought into apposition.

Letters to the Editor.

NEW YORK, January 27, 1902.

To the Editor of the New York Medical Journal:

SIR: Permit me to correct a printer's error which I noticed in my letter, "The Termination -itis," published in your journal for January 25th. Dr. H. Zimmerer, the distinguished explorer of Asia Minor and Syria, is not, as it reads in the text of aforesaid letter, professor of philosophy, but professor of *philology*. Allow me to add that Professor Zimmerer is a rare exception among the German philologists, in so far that he can *speak* Greek, that he has not confined himself, as his colleagues generally do, to the study of the written tradition of the Greek language, but that he is familiar with the oral as well. And since I have this opportunity, allow me also to add a quotation, words of the greatest value, from a letter of Professor Waldeyer, which I received last week: "Ich stimme Ihnen zu, wenn Sie für Reinigung unserer medizinischen Sprache und Verbindung mit dem Neugriechischen eintreten; auf anatomischem Gebiete werde ich, so viel ich vermag, dahin wirken." (*I am with you when you stand up for purification of our medical language and its connection with New Greek; in the anatomical sphere I shall, as much as I am able, work in this direction.*)

A. ROSE, M. D.

Book Notices.

Burdett's Hospitals and Charities, 1901. Being the Year-book of Philanthropy and the Hospital Annual. By Sir HENRY BURDETT, K. C. B., etc. London: The Scientific Press (Limited); New York: Charles Scribner's Sons, 1901. Pp. 1,050.

The annual volume of this excellent publication maintains the high standard of its predecessors. In addition to the usual tables and detailed information, there is a chapter on Royalty and Charity, in which the author pays tribute to the influence of the late Queen Victoria and of the royal family on English charities. In a chapter on medical and lay administration of hospitals, reference is made to differences of opinion which have caused trouble in England, as they have here, and the solution of the difficulty is thus handled: "The interests of the honorary medical staff of a hospital, collectively and individually, are best secured by the system which constitutes the medical staff, through its committee, a sort of House of Lords, and so secures for the medical profession the authority and recognition which enables their mature judgment and experience to have full weight in the conduct of the affairs of every hospital where this plan is pursued."

The author renews his argument for a paid medical staff for all hospitals, a goal that will be difficult to reach so long as the boards of governors can get professional men to do the work for nothing. In this matter the remedy will be difficult, in view of prevalent public and professional opinion.

The chapter on the nursing department and its cost invites attention to a most important matter and to the "growing tendency on the part of some in au-

thority to unduly increase the numbers of the nursing staff and to add to the expenditure upon this one item sums which can be and ought to be saved." In something more than a score of years there has been an increase in cost of nearly 200 per cent. in many London hospitals in this matter, and the author urges that an average maximum sum for each occupied bed should be the recognized unit of expenditure upon the nursing department.

This work is invaluable to all interested in hospitals and charities, and the information given in regard to such institutions in the United States adapts the book to American as well as English readers.

BOOKS, ETC., RECEIVED.

A Manual of Clinical Diagnosis by Means of Microscopical and Chemical Methods for Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M. D., Baltimore. Fourth Edition, thoroughly Revised. Illustrated with 139 Engravings and 19 Plates in Colors. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. xxiv-17 to 599. (Price, \$3.75.)

A Manual of Practical Anatomy. By the Late Professor Alfred W. Hughes, M. B., M. C. Edin.; F. R. C. S. Edin., F. R. C. S. Eng.; Professor of Anatomy, King's College, London, etc. Edited and Completed by Arthur Keith, M. D. Aberd.; F. R. C. S. Eng.; Lecturer on Anatomy, London Hospital Medical College, etc. In Three Parts. Part I. The Upper and Lower Extremities. Illustrated with 38 Colored Plates and 116 Figures in the Text. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xix-274. (Price, \$3.)

Directions for Class Work in Practical Physiology. Elementary Physiology of Muscle and Nerve and of the Vascular and Nervous Systems. By E. A. Schäfer, LL.D., F.R.S., Professor of Physiology in the University of Edinburgh, etc. With Diagrams. New York, London, and Bombay: Longmans, Green & Company, 1902. Pp. 76.

Mosquito Brigades and How to Organize Them. By Ronald Ross, F. R. C. S., D. P. H., F. R. S., Walter Myers Lecturer in Tropical Medicine, Liverpool School of Tropical Medicine. New York and London: Longmans, Green & Company, 1902. Pp. 100.

Outlines of Anatomy. A Guide to the Methodical Study of the Human Body in the Dissecting Room. By Edmund W. Holmes, A. B., M. D., Demonstrator of Anatomy, University of Pennsylvania, etc. Second Edition. The New Era Printing Company, 1902. Pp. 6 to 185.

Le cancer du sein. Étude clinique statique. Par A. le Dentu, Professeur de clinique chirurgicale à la Faculté de Médecine, etc. Avec 8 figures intercalées dans le texte. Paris: J. B. Baillière et fils, 1902. Pp. 123.

Guide de l'examen gynécologique. Par le Docteur L. Léon Archambault. Paris: A. Maloine, 1902. Pp. 116.

The Kew Cowl Tests. Preface by Percy Fairfax Nursey, C. E., Past President of the Society of Engineers, etc. London: Hickson, Ward & Company, 1902. Pp. 43.

Transactions of the Washington State Medical Society for the Year 1901.

Miscellany.

The Inutility of the Kraske Operation.—Edebohls (*American Journal of Obstetrics*, August 1901) considers the various purposes for which the Kraske operation, with its various modifications, has been recommended, and concludes that in the surgery of women everything that can be done equally well, or even better, without interfering with the integrity of the coccyx or sacrum. The removal of rectal neoplasms and the glands concerned may be better performed by the perineal operation when low down, or by an anterior cœliotomy, with or without a perineal entrance also,

when high up. The author reports the following case:

A married woman, aged thirty-four years, mother of five children and again pregnant in the fourth month, required the removal of an operable cancer of the rectum which, according to her history, had existed for three or four months past. Examination showed a tumor mass occupying the upper end of the rectum and the lower end of the sigmoid, and confirmed the existence of a pregnancy of four months. The lower end of the cancer was some twelve centimetres distant from the anus; the bowel and the tumor were fairly movable upon the surrounding parts; there was, however, almost complete obstruction, with large accumulation of fecal matter above the tumor.

Operation February 26, 1901. After thorough dilatation of the anal sphincter, irrigation of the rectum with 1:3000 sublimate solution, and tamponing of the cleansed vagina with iodoform gauze, the patient was placed in the Trendelenburg posture and the abdomen was opened by a 15-centimetre incision carried through the left rectus abdominis muscle. The large uterus with the contained foetus was removed in one piece with both tubes and ovaries—a typical panhysterectomy. The sigmoid flexure was next tied with a strip of iodoform gauze at a little distance above the tumor, the knot being arranged with a view to its easy undoing through the anus after the completion of operation. Eighteen centimetres of bowel were resected, embracing eight centimetres containing the cancerous mass situated at the junction of sigmoid and rectum, together with about seven centimetres of healthy bowel above, and about three centimetres of healthy bowel below, the tumor. Removal of the sacral glands and of all fatty and connective tissue posterior to the resected bowel, clean down to the periosteum covering the sacrum, was next performed, and was followed by end-to-end anastomosis of the sigmoid with the rectum, the sigmoid being invaginated into the rectum and the invagination maintained by two rows of interrupted sutures of ten-day catgut, twenty sutures in each row. The two rows of sutures were placed about two centimetres apart and maintained in apposition the outer surface of the upper two centimetres of the cut rectum and the same extent of the outer surface of the cut sigmoid, leaving about two centimetres of the tied end of the sigmoid to project free into the lumen of the rectum. The sutures embraced the outer coats of the bowel only, none of them penetrating the mucosa. This proved the only really difficult part of the operation, the delicate suturing of the bowel having to be accomplished deep down in the pelvis at a considerable distance from the anterior abdominal incision. A small strip of gauze was adjusted about the bowel at the line of suture and the end led into the open upper end of the vagina. The abdominal incision was tightly closed. The strip of iodoform gauze tied around the lower end of the sigmoid was then untied through the anus and removed, free evacuation of the bowels occurring soon thereafter.

Convalescence was uneventful, with primary union of the wounds of the abdominal wall and

bowels. The patient left her bed two weeks, and hospital four weeks, after operation. Microscopical examination of the tumor, made by Professor Henry T. Brooks, proved it to be an adenocarcinoma.

The author draws the following conclusions: The inherent defects and drawbacks of the Kraske operation render it justifiable only when the indications in a given case cannot be met equally well, or better, by some other operative procedure.

In any and every given case of disease affecting the pelvic viscera of women, of whatsoever nature or wheresoever located, we have at our command operative procedures superior to the Kraske operation.

Tumors and intractable ulceration of the rectum calling for resection of the whole or part of that viscus form the chief field still disputed for the Kraske operation.

Resection of the entire rectum, or of any part of the rectum, can be accomplished in a perfectly thorough and surgical manner by perineotomy, by incisions lateral or posterior to or circumscripting the anus, by various combinations of these procedures, or by an operation devised and recently practised by the author, without the necessity of recourse to resection of the coccyx or sacrum.

The writer's operation was devised to obviate the necessity for a Kraske operation, and successfully carried out, in a case of carcinoma affecting the upper end of the rectum in a woman four months pregnant. The operation consisted in removal of the uterus, resection of the cancerous bowel, and end-to-end anastomosis of sigmoid and rectum, all performed at one sitting through an anterior abdominal incision.

The advantages of this operation over the Kraske operation, so far regards technics, after-treatment, and comfort of the patient, are apparent.

Superiority over the Kraske, in cases of high carcinoma of the rectum, is further claimed on the following important points:

1. A preliminary colostomy and, in favorable cases, a secondary operation for the closure of the artificial anus becomes unnecessary.
2. Removal of the sacral glands and of all affected tissue posterior to the rectum can be accomplished with greater facility and thoroughness.
3. The liver can be examined for secondary cancerous nodules immediately after opening the abdomen, and, if such nodules be found, the abdomen can be closed without inflicting further unnecessary operative injury upon the patient.

The unavoidable conclusion to be drawn from the above premises is that the Kraske operation is never justifiable in women.

Physicians and Speculation.—At a dinner of physicians given by the Alumni of the Charity Hospital of New York at the New York Athletic Club, on January 22d, Mr. Charles B. Bergstresser, of Dow, Jones & Co., publishers of the *Wall Street Journal*, commenting on a recent disaster to the fortune of a well-known doctor caused by speculating in Wall Street, said: "A physician ought not to speculate on a margin account in Wall Street. The

physician should be an investor, paying outright for the securities he buys and buying only the best. He, of all men, cannot afford to have his peace of mind disturbed by the dangerous risks of Wall Street. Part of the healing process in a patient's mind is the cheer of the doctor's countenance unruffled by the harrowing cares of a losing speculation in Wall Street. It is right, however, that a doctor should devote some time each day to a study of investments and keep posted on markets so that he, too, may take advantage at times of beneficent laws operating there. One law is that 'value governs price.' When, therefore, the price of a good security is distinctly below value, it is right that the doctor should avail himself of that knowledge and make his own money work as it should in yielding him the best possible returns at a minimum of risk. Physicians as a rule have little money to lose, but they all have enough money to make them use it with the same diligent attention to its welfare as they give to the activities of their profession. Their money is simply their own labor stored up. It should not be neglected."

Bacteria and Tobacco.—Dr. Richard Travers Smith (*Dublin Journal of Medical Science*, January) in an interesting paper, *An Apology for Bacteria*, says:

"Time will only permit mention of one more industrial application of bacteria, for the list is hopelessly long to attempt completion. The one I shall choose is the manufacture of smoking tobacco, since its widespread employment appeals to the senses of both smokers and non-smokers. Before tobacco leaves are sent to the manufacturers they are fermented in heaps. Subsequently they are cured in a great variety of methods, in all of which fermentation is largely employed. The fermentations necessary to produce smokable tobacco are the work of bacteria. These bacteria have been the subjects of extensive experimentation, from which it has been concluded that the flavor of tobacco, far from being entirely attributable to the plant itself or the locality in which it is grown, is largely in the hands of bacteria. Dexterous manipulation of the varieties of bacteria isolated from tobacco in process of curing has enabled the industrial bacteriologist to impart the flavor and aroma of Havana cigars to tobacco leaves hitherto less highly prized."

Anopheles in a Region from which Malaria has Disappeared.—Sergeant (*Annales de l'Institut Pasteur*, October 25, 1901; *British Medical Journal*, January 11th) has found anopheles in large numbers along the banks of the Essonne, where malaria was once common, but from which it has now disappeared. Larvæ were in the low-lying country near the river, and often in the artificial reservoirs. He discusses the question of the cause of the disappearance of malaria coexistent with the persistence of the specific mosquitoes. He considers it due to the following causes acting simultaneously: Drainage and planting of the river banks, improved hygiene, and, to a certain extent, the use of quinine. He looks upon the presence of anopheles as a danger to the inhabitants, soldiers, and others coming from malarious districts, and infected with the hæmamoeba might distribute the latter by infecting the anopheles.

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Original Communications.

THE MANAGEMENT OF CEREBRAL HÆMORRHAGE, AND ITS ABORTIVE TREATMENT.*

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The subject of brain-hæmorrhage is one of interest to every practitioner. Most medical men, certainly those in general practice, are now and then brought face to face with such cases. Nor is there probably one of us who has not seen some relative or friend the victim.

The varieties ætiology, symptomatology, the vital matter of a correct diagnosis, all are important, though they can not be taken up here. Nor is it my purpose to discuss older methods, but to say a little about more or less novel helps in these most distressing cases.

Prophylaxis.—It may not be amiss to say a word about prevention. In fact, as in most disorders, this is the highest art.

We are rarely asked about this until the occurrence of premonitions or a previous attack. Nephritis should always be thought of and looked for. That and syphilis are the causes of nearly all cases up to the time of life when other signs of declining vitality are manifest, although local softening, certain conditions of the blood, and some other factors, at times favor it.

In persons of advanced years or those giving evidence of senility, all excessive strains, mental quite as much as physical, should be avoided. Shocks, jars, brain-tire, and severe muscular exertion, are here included; while constipation, indigestion, "rush of blood to the head," insomnia, and prolonged worry, are matters that must be attended to. It is well known that hæmorrhagic apoplexy is not so common in extreme old age, doubtless because elderly persons are usually shielded from these severities. We may say of idiopathic cases, that the trouble arises from individuals not curbing their activities as their physical powers wane. It is our function to help our patients keep these two matters abreast.

If, however, for any reason, an immediate onset is feared or there is excessive arterial tension, vascular sedatives may be temporarily in order as preventives.

The Attack.—Various factors that I wish to make clear can well be shown by illustrative cases. We need not bother ourselves too minutely with the pathology. Suffice it to know that we have to deal with a vascular rupture, and that it may be assumed to be of an artery.

CASE I.—A lady, about fifty-six years old, of heavy build but previously of robust health, essayed to walk two miles uphill, on a cold winter day, and against a very stiff wind. No scheme, perhaps, could be devised that should more thoroughly test the arteries. There was the effort of walking, of walking uphill, of struggling against a strong wind; and, in addition, the chilling of the surface by the sharp cold air and the increased impediment of weight and female dress, especially when facing a breeze. If not calculated to try men's souls, it was at least calculated to try their brains. It was not a proper thing for any person over fifty to attempt, and not for a good many persons under that age. The patient's arteries must have been in fair condition, for she nearly succeeded. She was approaching the summit of the last grade when she was seen to falter, lean against some support, and then sink to the ground. She was immediately taken into a house and placed in an easy position. The warm atmosphere and, in fact, the sudden change from every trying condition to the reverse, sufficed to promptly check the attack. In a few hours she was so far relieved that it was decided to move her home. Here was the second error, as the first seizure ought to have been the strongest warning. Although the patient was carried, this removal was naturally attended by some jolting, a certain amount of effort on her part, and a reexposure to cold and wind. The result was an immediate and disastrous recurrence. This time, full hemiplegia and the deep apoplectic condition developed, from which only a slow and incomplete recovery was possible.

We can, I think, see in this course of events a very perfect play of ordinary physical forces, and the yielding of the weakest spot. Had such recklessness been avoided, she presumably might have lived long before developing apoplexy or might have escaped it altogether.

CASE II.—A lady, aged sixty-six years, always accustomed to good health, had for a long period been under great mental tension, worry, and care.

*Read before the Associated Physicians of Long Island, at their Garden City meeting, October 19, 1901.

One morning, without marked immediate cause unless extra anxiety, she suddenly became aphasic, much agitated, and weak. She was seen within a few minutes by a physician, who placed her in a reclining position, eased the clothing, and gave, perhaps, a little calomel. The attack did not progress, all urgent symptoms seemed to subside, speech improved, and she was left with the strict injunction to remain quiet. In an hour or so, however, she rose, went upstairs to the closet,—and brought on an immediate relapse. This time, paralysis of the right arm and half of the face, and more pronounced general symptoms, were added. By the prompt use of depressants this was immediately arrested, and in time a fairly good recovery made.

Here again we see that simple physical causes, viz., climbing stairs and the efforts at relief of the bowels, brought on the return of a just stopped cerebral hæmorrhage. The lessons of these two cases, and similar ones are plentiful, seem so evident and clear as hardly to call for comment.

It is generally held that there is little to be done in these cases, that a show of what is termed "masterly inactivity" is best, except in minor ways; in fact that the process might as well be left to run its course.

Now, on the contrary, it can not be too insistently urged that prompt and proper treatment is here of radical importance. Nowhere in the domain of medicine is there greater need of clear ideas, of revised teaching. In many cases the end may come too soon or we are too late in reaching the patient. For that, we may not be responsible; but often, fortunately, we can act to good purpose. I refer here strictly to the time of the seizure. It is especially in the slower, or so-called ingravescent forms, that the greatest success can be achieved.

While, in very rare cases, the bleeding vessel may be a vein, it is practically always an artery, and it is to the arterial form that my recommendations are directed.

The first and main principle that I wish to advocate is the use of powerful, quickly-acting muscular and vasodepressants.¹

It is perfectly clear that a vessel will not bleed unless there is force behind the current to drive the blood out. Now, if you reduce that force, you just as certainly favor cessation. This depends on a mechanical axiom so simple and direct that its applicability must be evident to all. And I have seen its effectiveness so often and strikingly demonstrated that I can not advocate the measure too strongly. It is directed to what we may call the main chance.

It is sometimes feared lest depressants favor cerebral thrombosis in these persons past middle life.

But, used for the purposes and with the limitations here given, I have never seen the least suggestion of harm. On the contrary, I have at times blamed myself for being too cautious.

The standard depressants still continue to be gelsemium, aconite, veratrum. The first is decidedly my favorite. The fluid extract should be started with a ten-drop dose, and continued in from five to ten-drop doses, as indicated. Gelsemine is now pretty generally available and is more convenient as well as, presumably, more exact. Begin with a dose of from one-tenth to one-eighth of a grain, and continue in one-twentieth of a grain doses. Aconitine is my next alternative, and is efficient. Start with from one hundredth to one fiftieth of a grain, the latter dose being usually required at first. This preparation can be readily obtained for hypodermic use.

Initial doses often need to be large, or else rapidly repeated until the physiological effect is produced. It is sometimes surprising how much we have to give in these particular cases before the pulse shows any yielding, especially early in the attack. After the severe apoplectic state has developed, the pulse may be anywhere.

In its most important phase, *i. e.* during the onset and progress of the effusion, this is emergency work. We must distinguish clearly and act quickly. Much delay, even in favorable cases, and the evil is consummated. At the same time, I believe it usually wiser and better to take a few minutes to examine and weigh the facts before resorting to active measures. A little time can thus be advantageously taken up in also arranging details of position and clothing, seeing that the extremities are warm, etc. This circumspection is the more advisable, as the methods to be employed in embolism and thrombosis are so directly the opposite of those in hæmorrhage.

It may be asked, Why is not this plan applicable to other forms of intractable hæmorrhage? It is; although rarely are the conditions so favorable. Within the brain a certain amount of outside restraint is soon encountered, and that permits us to control the outflow, short of actually stopping all current in the vessel.

The late Dr. S. E. Fuller (*American Journal of the Medical Sciences*, 1888, April) recommended for uncontrollable hæmorrhage after amygdalotomy that the patient be placed "in an upright position to encourage fainting." He cited cases, including one of his own observation, to show that fainting was a most effectual hæmostatic in that condition. It was, perhaps, this work of Fuller's, more than anything else, that originally suggested to me the principle of depressants in these cerebral cases. And McNaughton (*Transactions of the Medical Society of the State of New York*, 1901, p. 350) has recently

¹This method was briefly described in the writer's work on *Circulation in the Central Nervous System*, Philadelphia, 1897, pp. 159, 161, and somewhat more fully in *Strauss's Encyclopædia of Practical Medicine*, 1898, Vol. II., pp. 129, *et seq.*

recommended a like plan in cases of ruptured ectopic gestation sac, as against the usual methods, if any palliative means are to be attempted.

The general plan of immobilization includes other measures as well as depressants. When surroundings permit, the patient should be cared for at the place where seized. I have repeatedly pre-empted a parlor, a dining room, or a library. An embargo should be promptly placed on any interruption, noise, or disturbance. A set of cushions or a cot-mattress can be secured almost anywhere, and the patient made somewhat comfortable, even on the floor. Transportation must, if possible, be postponed until we feel confident that it is permissible. We can not guard too carefully against an immediate recurrence from the same vessel.

Should the case be of traumatic, instead of idiopathic, origin, much the same principles hold good. A moderate use of depressants is indicated after most injuries to the head. Although there is a greater chance here that it is of sinusal or venous origin, we can not determine this, and have to assume the usual arterial source.

A variety of other measures have, as you know, been proposed for the acute condition. Some are at times in order, although not radical.

Purgatives may be needed, yet, after all, it is not well to have our patient disturbed by a bowel-movement while the ruptured vessel is still bleeding. In this respect, also, present teaching should be modified to favor temporary immobilization. Calomel, as it is somewhat of an intestinal antiseptic, rather soothing to the stomach, and not hasty in action, can most safely be given.

Phlebotomy is more than replaced by the depressants. Position is of importance, viz., reclining to an extent that fully relaxes the muscles and yet does not depress the head, and for most persons a resting on the right side. When compelled to use quieting remedies, give bromide or a coal-tar product, but never any opiate.

The use of gelatin internally, either subcutaneously or possibly by the mouth, seems to be attracting attention for its hæmostatic qualities in all concealed hæmorrhages. It acts simply by increasing the coagulability of the blood. For injection in the human being, 250 cubic centimetres of a one-per-cent. solution in normal saline fluid, is recommended. By the mouth one observer has given 200 cubic centimetres of a ten-per-cent. solution daily, though there can hardly be any necessity for fixing such a narrow limit. Although a method of some promise for cerebral cases, it must be slower in action than that by depressants. Of course, there is no objection to essaying it as an adjuvant, if thought necessary. Should its use by the mouth be proved as efficient as when administered hypodermically, it will re-

main to be considered whether its continual consumption as a prophylactic in those cases where such is needed may not be in order.

Relief of Symptoms.—In the acute stage a number of symptoms often are sufficiently disturbing to need attention.

For the headache that so frequently attends the attack, antipyrine or its allies in small doses does well, is also rather soothing to the stomach, and is the safest agent where plain bromides fail. Much the same applies to the special restlessness that often threatens to harm as much as any muscular effort. Still, for this, the depressants—by controlling the main process—act best. Convulsions are rare, but may call for the administration of a few whiffs of chloroform; and catheterism may be necessary to empty the bladder.

In a recent case, a day after cessation of the hæmorrhage, the patient accidentally injured the nose in a way to cause a free loss of blood. Speech immediately returned and considerable relief to the head was experienced, evidently due to the local depletion. This suggests a methodical trial of nasal scarification in suitable cases.

It is also understood that, where nephritis, syphilis, or alcoholism is in play we must remedy that factor to the best of our ability.

Don'ts.—Don't give stimulants. Their use in such cases is most reprehensible. So often we see them freely given, notably the alcoholic. The patient is prostrated, and the lay mind naturally turns to tonics and bracers—about the worst thing that can be done.

Don't resort to saline injections. During the acute stage a limitation of fluids is in order.

Don't use the depressant diaphoretics, such as ipecac, pilocarpine, or apomorphine. They tend to nauseate, an inclination otherwise too common, and, in the degree of attempts at vomiting, most undesirable.

Don't prescribe digitalis. I have repeatedly seen it bring on another attack. It is a dangerous drug in any individual with a liability to apoplexy, and for this, if for no other reason, of questionable utility in nephritics. Where anything of the sort must be used, strophanthus is in my experience far safer.

Don't resort to opiates. They are likewise contraindicated.

Don't try nitrites, as their use in any form is here out of place.

Don't permit any muscular exertion on the patient's part; and moving by others should be limited as much as possible.

Subacute Stage.—The proper time for reenlisting the energies of the patient is a very important, though little considered, question. When should the patient be allowed or urged to begin sitting up?

This can now be determined pretty accurately. A couple of years ago, a German physician called attention to the advantages of an earlier rousing of



FIG. 1

the patient than had been customary. I will give my own conclusions.

As above pointed out, it is as a rule advisable that the sufferer keep as quiet as possible for the first few days, lest further effusion occur from the same vascular rupture. In about a week, however, and sometimes sooner, we may assume that the rent has become permanently obstructed. Then it becomes of advantage to pursue the opposite course in this respect. Vascular depressants in lesser dose may be continued if the arterial tension demands it. But the

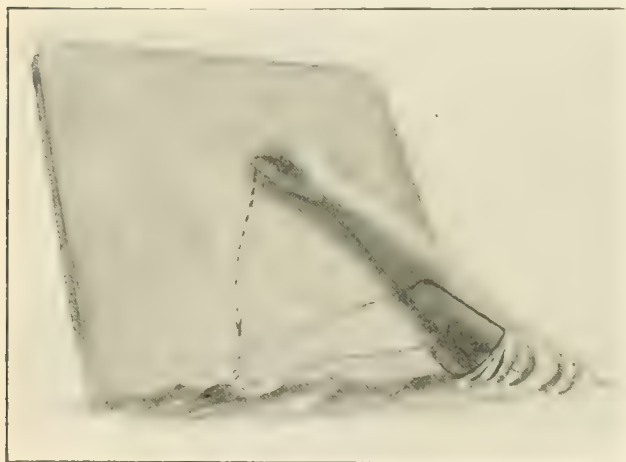


FIG. 2

patient's brain-condition is improved then by gradually getting him to sit up for brief periods. The time is increased from day to day until he is in a fully sitting position as much of the day as possible. In this way the circulatory conditions in the brain become more active and return more fully to normal, the individual's hope is aroused, there is better sleep, the remaining tracts do not fall into disuse, and we see much more satisfactory progress. Too often, especially in institutions, these people are allowed to remain listless abed, and thus a secondary dementia is favored. With the resource of depressants where indicated, this early change has proved quite practicable. The chief trouble, if the attack has been

very severe, is in arranging so as to support the feeble body from gliding down again into the recumbent state. I do not recall any case of recurrence from this plan, and the amount of benefit marks it as a real advance in our resources.

The Chronic Stage.—The last point I wish to make has reference to the state after acute and sub-acute conditions have subsided. It is often hopeless enough. Nature may help some. The uses of nux vomica, massage, electricity, etc., are well known, but leave much to be desired.

The chief benefit I find is from cultivating in the person the use of whatever power remains. It is best shown in cases of complete paralysis (monoplegias, hemiplegias). If, in such a case, we can



FIG. 3.

show the patient that there is still a trace of motion somewhere in the affected part, and how to get at it, ambition is aroused and his aid secured in developing this for all it is worth, so to speak. For instance, in case of a paralyzed arm, you overextend the fingers and wrist, turn the hand and forearm on the side, so that a minimum of muscular power will suffice to cause a visible amount of flexion, and then insist on the patient making the effort. Keep at this up to a point short of tiring, until he has succeeded. Next day it goes better. This is often a great incentive to the patient to do more and to work at it on his own initiative. He has, so to speak, re-



FIG. 4

learned the mental process, or regained the nerve-path, necessary to success (Figs. 1 and 2).

Or, if it is the lower extremity, the leg is placed on a smooth lateral incline, tilted to the point of almost allowing the leg to slide off. The patient is then induced to wiggle it sufficiently to accomplish this. Or the same plan can be applied to extending the leg or arm. These movements can be varied or adapted to the different muscles and parts of the body (Figs. 3 and 4).

Of course, all this depends on the fact that some conduction paths or fibres remain, though, perhaps, at first slightly injured. If we can recall them to activity—and this can best be done early—we have accomplished all in our power.

In closing, let me again urge the great advantage of prophylactic and abortive treatment. The means are simple and within the reach of every physician. Their timely application rests, not with the special worker, but with the general practitioner, the one who sees the patient first.

THE X RAY IN THE DIAGNOSIS, AND WIRING IN THE TREATMENT, OF FRACTURES.

By CHARLES GRAEF, M. B.,

VANCOUVER, B. C.

I read with interest, in a recent issue of the *Journal*, a series of reports on Fractures—their Diagnosis by X Ray and Treatment by Wiring.

I had, at the time of reading, a case which presents features of interest in this connection, and I venture to record it with you.

The patient, a man forty years of age, foreman of a cannery on a remote part of the British Columbian coast, was struck on the back of the left elbow joint with a club by a vengeful Japanese.

He was attended by the nearest available medical man, who diagnosticated "a fracture of the ulna near the upper extremity," and placed the arm in splints at a little less than a right angle.

Two weeks after this, the patient returned to his home and consulted his own physician, who pronounced it "a dislocation of the elbow joint without any fracture," removed the splints, and directed the patient to exercise the part freely, advising him to carry a pail of sand in his left hand to facilitate matters.

This was faithfully persisted in for three weeks, when the patient declined to continue longer and consulted me.

His arm was then flexed at an angle of between ninety and one hundred degrees, when held at rest, and he had perhaps five degrees of passive movement; the joint was swollen and painful; the muscles of the limb weak; the member quite helpless so far as active movement was concerned.

A diagnosis of fracture of the olecranon was easily made, as the parts were quite movable, a clicking crepitus obtainable, and a protrusion of the lower end of the upper fragment plainly visible and to be felt on examination.

A skiagraph, of which I enclose a print, proved this conclusion to be correct.

Next day I cut down on the seat of injury, removed the loose bands of connective tissue between the fragments, freshened the bone surfaces, and, after flushing the joint and wound with hot normal saline solution, drew the portions of bone into apposition and wired them with stout silver wire, afterward strengthening the junction with tendon sutures through the soft tissue about the point of junction; closed the wound and placed the arm in a fully extended position on an anterior splint of steel.

Two weeks later, I took the arm down and removed the stitches from the wound, which had healed without the slightest unfavorable reaction.

At the end of the fourth week I began daily passive motion and massage, removed the splint, and directed gentle active movement during the fifth week after operation.



It is now two months since I first saw the patient. He has gained steadily in motion and use of the limb, has strong union at the fracture, and is beginning to use the arm more and more freely, as he is now able to straighten the arm and actively flex it to nearly a right angle.

Perseverance will, I hope, restore the arm to nearly its former usefulness, even if the mobility is not perfect.

Aristotle Shows the Analogy between Mental and Physical Perversions.—In considering the nature of Pleasure, Aristotle (*Nicomachean Ethics*, X. iii) says: "But to those adducing the disreputable among pleasures, it may be said that such are not pleasant things; for even though they be pleasant to those who are badly disposed, it must not [therefore] be supposed that they are pleasant except to these, just as neither those things which seem wholesome or sweet or bitter to the sick [are really so to others] nor those things really white that seem so to the subjects of ophthalmia."

SOAPS OF LIME AND MAGNESIA IN URINE.

By GEORGE E. PFAHLER, M. D.,

PHILADELPHIA,

ASSISTANT CHIEF RESIDENT PHYSICIAN IN THE PHILADELPHIA HOSPITAL.

This sediment being found rarely, but in a variety of diseases, may have *some* clinical significance. It occurs as colorless, highly refractive crystals, which in form resemble tyrosine, but which possess distinctive characters of their own. They are larger and the individual spicules are more tapering than those of tyrosine. The accompanying illustration will show their form. They are soluble in acetic and hydrochloric acids, in ammonia, and slowly in water and in decomposing urine.

I have found these crystals in the feebly acid urine of three cases in considerable numbers. The first case was one of acute mania. The urine



Soaps of calcium and magnesium from urine of a case of abscess of liver; also found in acute mania and empyema.

was obtained by catheter during an outbreak, and after standing a short time showed these crystals.

The urine was examined repeatedly afterward, but never again during an outbreak, and failed to show this sediment.

The second case was one of abscess of the liver. The patient's temperature and general condition were those of a septic process. The urine was passed normally, and after a few hours showed these crystals. The patient was removed from the hospital a few days later, so that this was the only specimen obtained showing the sediment.

The third case was one of cocaine poisoning. The specimen showing these crystals was the first obtained after the profound toxic symptoms. They were not found in subsequent specimens.

Von Jaksch has had the opportunity of examining these crystals only once, finding them in considerable abundance, and in the feebly acid urine of a woman with severe puerperal septicaemia.

The toxic nature of these cases may have some bearing upon the formation of the crystals, and justify my making this brief report.

AGE OF FIRST MENSTRUATION ON THE NORTH AMERICAN CONTINENT.

By GEORGE J. ENGELMANN, M. D.,

BOSTON.

(Concluded from page 228.)

3. RACIAL INFLUENCES. My dispensary records are indicative of the many nationalities to be found in this country; of the 4,385 of whom I have record, 2,315 are natives (53 per cent.), 695 (16 per cent.) negroes, and 1,375 (31 per cent.) foreign born—the latter beyond the scope of this investigation. We are here to study the American, so that I shall consider only those born in this country, whether of native or foreign parents, and represented in numbers sufficient to admit of valid deductions; these are the Irish, German, and French, and in Canada the English; hence we have the native American, or the American of American parents, and English Canadian, Canadian born of English parents (or ancestry), the American born of Irish parentage, and also the American of German parentage; but as there are comparatively few American born of French parentage in this country, I am obliged, in order to present this nationality, to consider the American or Canadian not directly of French *parentage*, but of French *ancestry*, and it is remarkable how long the racial influence prevails among this people, as my figures will show. In the consideration of this question I shall confine myself altogether to my own observations, which, of course, include all collected at my solicitation especially for this investigation.

Some figures with regard to the Americans of Irish parentage among the laboring class of Boston, by Dr. Chadwick, are the only facts of this kind ever before culled.

The native American is somewhat more precocious than the average of the special class to which she may belong. With 14.3 years as the mean age of first menstruation for the laboring class, for *all native Americans* it is 14.1 years and 14.2 for the native American of the laboring class; later, 14.5 for the American of Irish parentage of that class, somewhat less, 14.43, if we include school girls, a trace of hereditary influence being apparent (*Chart IV.*) as it is clearly evident in all other nationalities. All observations concerning this group so markedly concur that I shall cite them to show the perfect correspondence between my results from all parts of the country. In Baltimore alone we find a slightly earlier pubescence for all classes of whites. In St. Louis I

find 14.53 years to be the mean for the Irish-American; in Ottawa it is 14.57 (Table VI.), and in

TABLE VI.—RACIAL INFLUENCE.

American born.											
	American parentage.			English Canada.		Irish parentage.		German parentage.		French parentage.	
Engelmann, St. Louis.	1120	14.1			209	14.5	360	14.5	56 13.4	
Chadwick, Boston.	1454	14.2			678	14.4				
Coyteaux-Prévost, Ottawa.	68	14.3	217		14.5	306 13.6	
Lapthorn Smith, Montreal.	384	14.3	678		14.4	564 13.7	

activity or vigor with migration, which I must consider more fully in connection with the great fecundity of the Canadian French, who in this respect differ strikingly in functional characteristics from the French in their native land.

The average age of first menstruation in France, more especially in the smaller cities, is 14.6, with 15 throughout a great part of the country, and in the extreme south, in Marseilles, 13.8. Coming from France, with an average annual temperature of perhaps 53° F., to a colder country, to Canada, with a climate like that of St. Petersburg, an average annual temperature of 40°, pubertal development is more precocious, instead of being retarded. When we come to St. Louis and New Orleans the climate

ince of Quebec. Traces of race remain, but slight, among all but the French, as the preceding data have shown, and the American born of foreign parents attains puberty at very near the same age as the native American girl, delayed only a trifle in those in whom puberty is later in their native country, the French being the only exception, as they not only approximate the American standard, but become even more precocious than the native American, and retain the newly acquired habit throughout generations. The French here considered are more or less remote, while the Irish and German are all born in this country of parents who are themselves of foreign birth, so that among the Germans and Irish the national traits are still vigorous, but will undoubtedly be

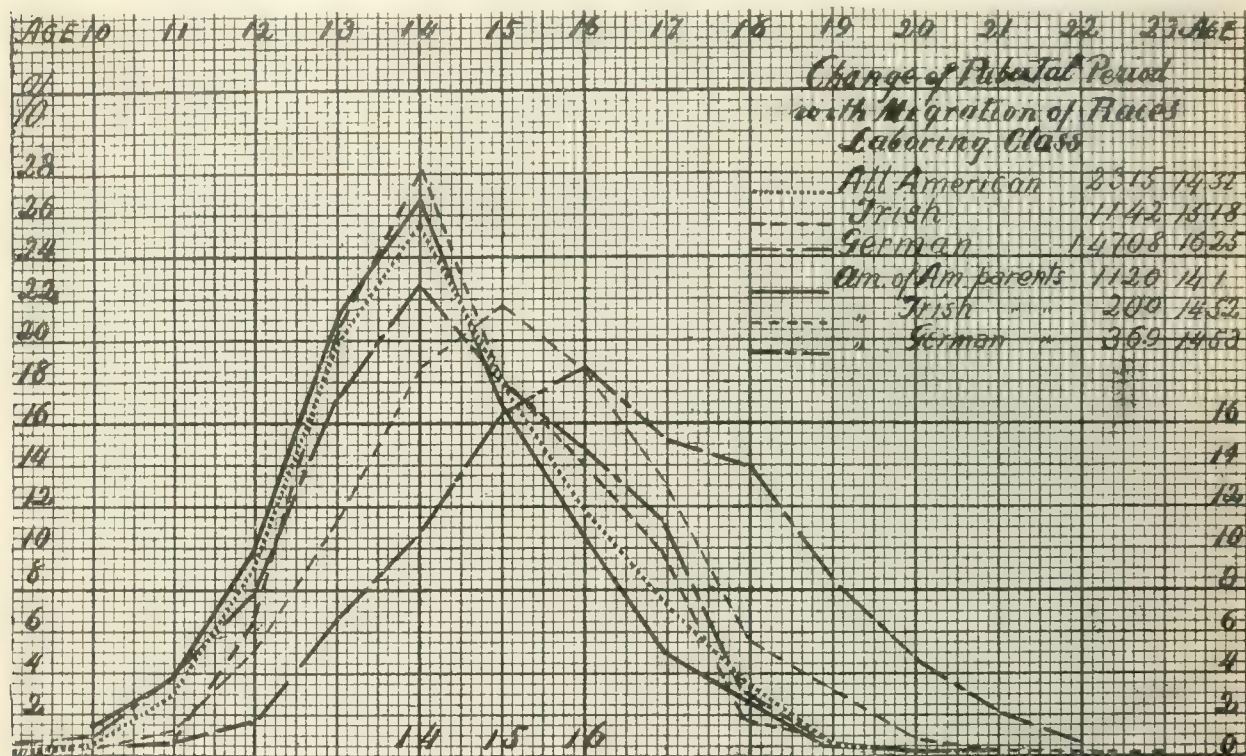


CHART V

is more like that of France, but the period of pubescence like that of the French Canadian, and even more precocious. Canada is so much colder than France, and yet development is much earlier, a striking change, like that in the fecundity of those same people, lower in France than it is in any other country with the exception of the United States, it is at its highest in the same people transplanted to their new surroundings and their cold Canadian home.

The fecundity of the French Canadian is greater than that of any other people, fully 5 children to the family throughout all the French counties, and in some regions as high as 9.2 children to each married woman, as I have found from a study of 1,000 families in the records sent me by Dr. Pelletier, Secretary of the Board of Health of the Prov-

obliterated in a few generations; the French have not been so much assimilated, as shown by the decided difference in the age of pubertal development which has persisted throughout many generations. This strikingly exemplifies the well-known fact that the French are poor colonists; that they retain their characteristics, and do not amalgamate with the people to whom they have migrated and among whom they live.

Racial characteristics, though slight, are distinctly noticeable, even in the United States, in the first generation among all nationalities here noted, but are seen least in the process of Americanization and amalgamation which takes place so strikingly in this country, marking a characteristic difference between the immigrant to the United States and to the older

European countries, where all national traits persist in the new-comer and no approximation to the people of the country in which they have settled takes place.

4. CLIMATIC INFLUENCES. These observations extend from Louisiana (though there for the blacks only) to Canada, over 16° of latitude, from the 29th° to the 45th°; from New Orleans, with a mean annual temperature of 70°, to Ottawa, with 40°—almost colder than St. Petersburg; yet I can observe absolutely no effect upon the time of pubertal development which might be ascribed to climatic influence; but I must again recall the fact that I have as yet no data from the Southern States and Mexico—nothing south of Baltimore, St. Louis, and Cincinnati, 38° north latitude—and I am free to say that the scant numbers received from New Orleans (55 cases at 12.4) lead me to infer that in these regions puberty is actually more precocious. The French element, which leads to development at 13.6 years in Canada, is well marked, and may influence still earlier pubescence in the far South; hence my results, as far as the whites are concerned, are valid only for the Middle and Northern States and Canada.

TABLE VII.—CLIMATIC INFLUENCE.
Age of Development in Different Climates.

	Latitude.	Mean annual temp.	Age at first menstruation. (American born.)					Negroes.
			Laboring class.	Higher class.	Born of Amer. parents.	Born of Irish parents.	Born of French parents.	
Ottawa,	45° 20'	40° F.	14.2	..	..	14.5	13.6	
Montreal,	45 30	41 "	14.2	14.1	..	14.5	13.7	
Boston,	42 40	48 "	14.3	..	13.7	14.4	..	13.2
New York,	39 40	51 "	..	14.2	..	..	..
Baltimore,	39 20	55.2 "	14.0	13.9	..	..	..	14.04
Cincinnati,	39 00	55.1 "	..	14.0	13.9	..	..
St. Louis,	38 38	55 "	14.8	14.2	14.2	14.5	13.4	14.07
New Orleans,	29 00	69 "	..	..	..	..	..	14.06
Jamaica and Barbados,	13 and 18	80 "	..	..	..	..	..	15.60

¹Labor class. ²Higher class. ³Normal school. ⁴School girls.

In making this comparison it is necessary to consider the same social class under the same surroundings, and it may be well first to take the largest, the *laboring class*, as observed in dispensary practice, not distinguishing the nationalities, and considering all American born. The age of first menstruation in this class in Ottawa is 14.2, in Montreal 14.16, in Boston and St. Louis 14.3; in Baltimore alone as early as 14. We may say in Canada 14.2, in the northern and central portions of the United States 14.3—a slightly earlier coming of functional life in Canada, notwithstanding the colder climate, to which attention has already been directed, as due to the precocity of the French element.

If we consider precisely the same elements under the same conditions, thoroughly homogeneous groups, the pubertal period is the same—for the

American of French descent in Canada 13.6, in St. Louis 13.4. The American and Canadian of the laboring class of Irish parentage reaches puberty at 14.45 years in Montreal and Ottawa, with its mean annual temperature of 40°; at 14.43 in Boston, with 48°, and 14.5 in St. Louis, with 55°. (*Table VII.*)

Higher classes. The menstrual function appears for the first time at 14.23 years among the well-to-do element of the population in New York, at 14 in Cincinnati, at 13.9 in Baltimore, and at 14.25 among the same class in St. Louis; later, in a warmer climate, but the difference is slight and one practically to be ignored, $\frac{1}{100}$ of a year; but as all my figures correspond so fully, I feel that we may readily explain this later puberty in St. Louis by the large admixture of the German element, which is a retarding one as distinctly as the French tends to precocity.

My records of the negro are obtained in St. Louis, Baltimore, and New Orleans, and between these cities there is no extreme difference of climate—ten degrees of latitude, from 39° to 29°, and a variation of temperature from 55° in St. Louis and Baltimore to 69° in New Orleans. The age of pubertal development in the negro in St. Louis is 14.07, in New Orleans 14.05, and in Baltimore 14.04, an unappreciable difference hardly due to climate. As already stated, there are two groups of the 884 observations from New Orleans: 384 are from the lowest class of dispensary practice, at 14.09, and 500 partially among the higher (a number of school girls) at 14.03. I believe that any difference which may exist is due to the admixture of school girls, to the somewhat greater mental stimulus. The only available statistical study of functional development in the negro is that of Robertson—77 cases from Jamaica and Barbados of the very lowest class. I have classed them as semi-civilized, and 15.6 years is the mean age of pubescence. These islands are within thirteen degrees of the equator, and the climate is tropical, with an annual mean of 80°. The negroes in that region have usually been brought from a similar latitude and climate on the west coast of Africa, where development takes place at about the same age. It is for this reason only that I mention the small number, as the observation is thus partially corroborated and deserving of notice, especially so in comparison with the earlier development of the more civilized American negro in a colder climate, 14, and among the educated and best situated, further north, in Boston, still earlier, 13.2.

Climatic influences seem to have no marked effect whatsoever, and this is certainly the conclusion to which we must come after a review of the large material here collected. We find precisely the same conditions if we consider the same group mentally, socially, and racially, whether it be in Montreal, in Boston, in New York, in Cleveland, or in St. Louis;

the climatic differences between these points in no way affect the age of pubertal development, as it is unquestionably shown by the absolute coincidence of the age of first menstruation in the same group in these climatically widely differing localities.¹

B. SEMI-CIVILIZED OR NATIVE RACES.

We have noted the peculiar precocity of pubertal development acquired by the women of the races immigrant into this country, black as well as white, and I shall now endeavor to establish, as far as this is possible, the conditions of functional life existing among the native races, the semi-civilized races indigenous to the country, the Indian and the Esquimaux, of whom the Indian is to us by far the most interesting, not only as the most numerous, but as being the only assuredly native race and the original habitant of the very regions now occupied by the white race here studied.

We have known but very little of the functional characteristics of Indian women, and it is high time that such information be secured if serviceable results are to be deduced from a comparison of developmental precocity among immigrant and native races, as the Indian is now undergoing a change, more far-reaching in its influence upon the economy than the change of country or climate experienced by the immigrant, it is the change of conditions and habits of life which is a most important factor in determining pubertal development, and its influence is clearly evident in the earlier puberty of the more refined school girl, both negro and Indian, than that of the mother, whose early life was one of a more primitive character.

I. THE AMERICAN INDIAN.

A study of the age of first menstruation in the United States would indeed be incomplete ethnologically without a consideration of the Indian, the original inhabitant of this country, the true native American, trifling though this be in practical significance.

Those who have been here termed "native American" are themselves practically but foreigners, differing only from the American of German, of Eng-

lish, or of French parentage by the fact that many generations, centuries, have elapsed since the migration of their ancestors from foreign lands to this American continent, and that such prolonged residence in distant lands does not of necessity alter racial characteristics is demonstrated by the Germans in Transylvania, who even at the present day, regardless of this shifting about, regardless of change of home and climate, retain the functional characteristics of their ancestors who migrated nearly one thousand years ago, in 1143, from the lowlands of the Rhine to this rugged mountain country, and have in nowise changed their period of pubertal development, but still continue in the habits of their progenitors in this respect as they do in other characteristics. The age of pubescence is 15, as it is at the present day in the villages of the Rhine, whence their ancestors came, as I find it in authoritative numbers among the Germans of St. Louis, although in some parts of the empire, in Bavaria and Prussia, development is by one year later.

The Germans of Transylvania to the present day retain the habit of their race as exemplified by the people of the Rhine, and have in no way varied or approximated to that of any of the various nationalities in whose midst they live—Gypsies, who develop earlier (13.8), Armenians likewise (14.5), Hungarians later (15.2).

Not so in this country. Here an American nation has developed a people with national and racial characteristics distinct from those of the various nations from which they sprang—with a distinct individuality marked, too, in the period of pubertal development. This has assumed a distinctly individual, racial type, and, strange to say, resembles that of the native American, the American Indian, more than that of their European progenitors. Unfortunately, I cannot here present all the facts essential for a comparison of functional conditions of the original inhabitant, the primitive red race, with the present American, the acclimated conglomeration of Caucasian immigrants.

Statistical data are scarce. From present authorities who have lived among the Indians, studied and written about them, I can obtain nothing, either as to the Pueblos or the Plains Indians; but energetic friends will in this direction soon supply the lacking material, I am assured. From the more civilized Senecas, Oneidas, and Tuscaroras of the Cattaraugus reservation in New York State I have received some data—23 cases, school girls—indicating precocious development at the early age of 12.1 years, which is verified by the only figures I can find previously recorded—82 cases collected by the indefatigable Robertson, giving 12.04 as the age of pubescence, but of which of the many tribes, differing greatly in their habits of life, he says not; 266 cases, Seneca, Oneida

¹Since writing this I have received the records of Dr. J. Whitridge Williams, from Baltimore, which show 14 to be the age of puberty in that city among the hospital and dispensary patients, and 13.9 in private practice. This fact, together with the slightly earlier age of 14.01 among the better class in Cincinnati, and an indication of a much earlier age in New Orleans, lead me to suspend judgment somewhat, as an absolutely positive statement cannot be made until I have full records from the extreme Southern States.

It is possible that decided climatic differences may to a slight extent influence pubescence, comparing the same race and the same class. I can positively state, however, that climate is a most unimportant and secondary factor, as is readily seen by a comparison of the early puberty of the subarctic Indian (12.6) and the Esquimaux (12.14) with that of the negro of Jamaica or Barbados, and also of the same negro in his African home (15.6)—an early puberty in the far north and late near the equator. In consideration of these extremes the differences between the age of development of American girls in Baltimore and St. Louis or Boston are trifling, and may well be explained by other than climatic influences. In Maryland the foreign population is less predominant, hence puberty may be earlier. Then, again, the patients in the Johns Hopkins Hospital may be of a somewhat better class than those in many other institutions—all factors which may well account for the slightly earlier development. If climate has any effect whatsoever it is in this country certainly but slight and hardly worth considering.

and Tuscorora Indians from the Cattaraugus reservation sent me by Dr. Lake, mostly older women whose early life was a more primitive and natural one, indicate more retarded development, at 13.2 years.

Early travelers make varying statements as to the age of development among the American Indian, which, however, in the main agree with the facts I can substantiate. Edwin James gives the twelfth year as the mean age of pubescence; Dougherty says that the Omahas develop between 12 and 13; the Pottawattamies of Lake Michigan at 14; according to Keating, who accounts for the later arrival at womanhood of the Sioux and Dakota girls, between 15 and 16, by the raw climate of their homes. Rush is the only writer whose vague statement of the eighteenth and twentieth year seems without foundation. The Alaska Indian is said to mature from 14 to 17, and this corresponds fairly with observations culled for me, naming the fifteenth year.

Until statistical data are received, I shall accept the statements made to me by Eagle Eye, a Winnebago, captured as a child, and adopted by the tribe among whom he has lived and married, and married repeatedly; a keen, observant, and thinking man, whose observations I value far more than those of the passing traveler, as he cannot fail to be cognizant of conditions existing, since the Indian still observes the coming of the period as an important event in the girl's life, by ceremonies of various kinds; and these are determined purely by the appearance of the flow, not by the whim of the family, as among the Siamese, the Wanjamuesi, and other African tribes, who have extensive festivities lasting for days among the rich and powerful—marking the event by change of costume or cutting or change in manner of wearing the hair. These afford no indication of actual pubescence, as they are performed at such times as suits the wishes or plans of the parents, mostly long before the advent of the period, in order to give the child the semblance of nubility and to declare her marriageable.

The American Indian still observes the ancestral custom, and *isolates the girl, and this is only done upon the first appearance of the flow*. She is sent away from the village to the woods, where she sings religious songs and fasts, but she is watched at a distance by an older female relative. She is at once removed from the routine of daily duty and drudgery, and is given some instruction as to the import of this occurrence. She cannot well lay the foundation for future suffering, for a depleted physique and an irritable nervous system by dancing and tennis, or by study and cramming for high-school examination, like her much favored civilized sister.

I have mentioned the ceremony among the Indians upon the first appearance of the flow to emphasize

the positiveness of such observation; no doubt can exist as to the fact of pubertal development, and the age of the girl is, approximately at least, well known to every villager who has watched her from childhood; time and age of pubescence must be known to every member of the tribe, so that we cannot but accept the statements made by one who has spent a lifetime in the very midst of the people.

The more southerly Indians—Pueblos, Pimas, Lagunos, Maricapas, Zunis, the Digger Indians, and Apaches—who are spoken of as “vegetable eaters,” mainly because they do not subsist on beef, develop between the twelfth and fourteenth year; the more northerly and the Plains Indians, Sioux, Omahas, Blackfeet, and Cheyennes, are less precocious, and mature between the fourteenth and sixteenth year. These are called “meat eaters.”

This places the age of pubescence for the American Indian between 12 and 16, with a general average of 14, like that of the American of the present day, that composite of European nationalities whose functional life has been changed by transplantation to the new world, and seems to have assumed the periodicity of the original inhabitants.

My faith in these statements, and my limited statistics, are, moreover, confirmed by the correctness of other observations with regard to different phases of functional life, which are substantiated by my statistics from other countries: thus, that puberty is precocious in the lascivious, with early intercourse of the sexes and low morality; later in the virtuous, who esteem the honor of woman. This is noticed as influencing the time of development in individuals and in tribes. Among the Digger Indians, dirt-eaters, degenerates of the lowest type, we should expect a late pubescence, as they are all ill-fed, mentally and physically retarded; but, on the contrary, they mature earlier than the Pimas, Pueblos, and other southern Indians of a higher type, which is ascribed to their low morality—the promiscuous sexual life, with an early and free intercourse of the sexes.

Subarctic Indians. Pubescence among the Red Race is retarded as we progress northward, though to substantiate this I have but some few facts from the Alaska Indians; still further north, as we near the pole, it would seem that the Indian, like the Eskimo, matures earlier. This, I should say, is established beyond question. Matthews has collected the facts from 500 subarctic Indians, in the Hudson Bay territory. Here, notwithstanding our deep-rooted but fallacious belief in the retarding influence of cold, development takes place at 12.6, an early puberty characteristic of primitive peoples of the far north, which I can substantiate by many equally positive observations, though none in such numbers.

Until disproved by reliable statistical data in sufficient numbers, we must accept the facts so far ascertained, which, moreover, seem reasonable and harmonize with previous records. Fourteen is the mean age of pubertal development for the American Indian, as it is for his white brother; 12.5 among the great majority, varying among the southern tribes from 12 to 14, and among the northern from 14 to 16, but *more precocious in the far north—not later*, as was the universal belief; and in this, too, conditions here found harmonize with those existing elsewhere, as the same is true in the Eastern Hemisphere—retarded development in the more northern regions of the temperate zone and greater precocity as the Arctic circle is neared.

I hope ere long to have detailed statistical data to substantiate farther the observations here presented.

2. THE AMERICAN ESKIMO.

All facts point to the precocious development of this Arctic race, although the only statistical data available, by von Haven, do not substantiate this; all other observers record a comparatively earlier puberty. Matthews asserts that puberty among the Eskimo, both among male and female, is, if anything, earlier than among the subarctic Indians, which he shows to be 12.6 for the female. Schliephake says that the Cumberland Eskimo develop between 13 and 14. Turner gives 14 as the age among the Eskimo of Labrador, in the Ungava district, which is corroborated by my own information from the Alaska Eskimo at Point Barrow, where pubescence is even more precocious, at 13, or between 12 and 14, earlier than it is among the subarctic Indians in that region, who do not extend so far north.

All observations, from the Pacific as well as the Atlantic borders of the Arctic regions of this continent, are unanimous in affirming the early puberty of the native Eskimo, apparently more precocious the farther north we go.

3. THE NEGRO.

I here again refer to the black race, to the plantation negroes of Jamaica and Barbados, to note the retarded development of this people in a tropical region, where in a lower state of civilization they may well be termed semi-civilized. Upon these islands and on the coast of South America in the equatorial belt development takes place, according to the painstaking investigation of Robertson, at 15.6 years among these lowest of plantation negroes, as it does in their African home, while throughout the Southern States of the Union, under better mental and physical conditions puberty is earlier, at 14 among the lower classes, and still earlier, 13.2, among the daughters of the better situated as found in the higher schools in the north, regardless of the colder climate, in Boston schools, 13.2.

The facts here briefly cited I desire to emphasize, as they are indicative of an early puberty at the pole and retarded development near the equator, conditions diametrically opposed to all that has hitherto been taught and accepted. They show, too, the hastening effect of educational influences, of a higher development, and that in colder climates.

IV.—RESUME.

A careful review of the facts presented shows the exceptional position of American women, as to the time of functional development, very much *more precocious than the women of other continents in the same region of the temperate zone, more precocious than the peoples from whom they have sprung*—an average age of 14 on this continent and of 15.5 in Europe—the present inhabitants of this country are more like the true native American, the American Indian, who matures at an earlier age than the people of any other land in the temperate zone. Then, too, there is but little difference between the extremes in this country—at most one year, from 13.5 in the girl of highest refinement and education, to 14.5, which is the period for the American born of Irish and German parentage among the laboring classes; practically the difference is only 0.5 year—13.8 among the mass of school girls to 14.3, the average age for the great body of laboring women.

Climate does not appreciably influence pubertal development within the temperate regions of the North American Continent; the age of first menstruation is the same (14.3) among the laboring classes in Ottawa, Montreal, Boston, and St. Louis;* women of the same class and group attain puberty at the same age, whether in the northern regions of Canada or the warmer climates of the Middle States. Racial characteristics, well-marked in European countries, here rapidly fade away, barely noticeable in the very first generation.

The native American is more precocious than the American born of foreign parents; but the latter, while somewhat later than the girl of American parentage, much more closely approximates her than she does the woman of her native country. The difference due to social status as indicated by the laboring class of the dispensary and the better situated from private practice is inappreciable—14.2 and 14.3—while in European countries this causes a difference of fully two years in the time of pubertal development—frequently more.

Climate here has practically no influence; race, very little; mentality, surroundings, education, and nerve stimulation stand out prominently in this country as the factors which determine precocity.

*The slightly earlier pubescence in Baltimore I am not yet prepared to explain, as the records have been but recently received and are perhaps insufficient in numbers.

ADDENDUM.

Some extremely important data have been received since this paper has been in press, and I greatly regret the impossibility of giving due consideration to these valuable and interesting observations, although they in no wise alter results. On the contrary, they but confirm and emphasize previous deductions.

Two hundred and twenty-six Seneca, Oneida, and Tuscorora Indians from the Cattaraugus reservation, reported by Dr. Lake, are mainly older women whose early life was that of the native Indian far removed from the influences of civilization and very different from that of their more progressive daughters in the agency schools, and puberty is over one year later, 13.2.

Some negro school girls, daughters of the better situated colored families of Boston and vicinity, are reported to me with the precocious development to be expected, 13.2 years; among the negroes of the laboring class of the South it is 14, and on the plantations of Jamaica and Barbados 15.6.

This confirms, for the red and black races, all that has been observed among the whites as to the effect of culture and education in hastening pubertal development, but the result is more striking still because the difference between the lower-class negro of the Southern States and the school girl among the better situated in northern cities is far greater than it is among the whites, and so also is the difference in educational and social status greater between the Indian girl of the agency school and her mother, who has passed her youth in the primitive life of the American Indian of earlier days; precocity of development is in consequence correspondingly greater among the Indian and negro school girl of the better classes, as compared with the lower orders, than among the whites of the same classes.

Two hundred and thirty observations among the well-to-do of the white population of Baltimore, just received from Dr. Williams, show the same relation in time of development to the laboring class of that city, as noted elsewhere, 13.9 and 14.0, both more precocious by 0.3 year than the some classes in all other cities from which I have records, even of those in the same latitude and with the same mean annual temperature.

This is the only discrepancy, and a trifling one in all the observations here recorded, and this is, I take it, due to the fact that the American element preponderates in Baltimore and that the patients of the Johns Hopkins Hospital, here representing the laboring class, are of a somewhat higher order than those in similar institutions in other cities, consequently with an earlier pubescence.

TREATMENT OF LOBAR PNEUMONIA.*

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To write a paper on the treatment of pneumonia, recalls the predicament of the author of the treatise on "Snakes in Ireland," who was obliged to begin that famous classic with the sentence, "There are no snakes in Ireland," and from that unsatisfactory foundation, proceed to develop his theme. Similarly, there is no treatment for pneumonia, in the sense that any treatment can be a specific for that common disease. With the discovery of specific bacteria which definitely placed pneumonia in the group of infectious diseases, our hopes were raised that the serum therapy, which had proved so useful in other infectious diseases, might play an important part in the management of pneumonia. Certain enthusiasts went so far as to assert that serum therapy was a specific, the same as Behring's anti-toxine serum in diphtheria, and that no physician should be excused for failure to use it (1). Others, more conservative, were content to claim for it a very hopeful outlook (2). The Italian observers, however, continued to assert that "a case of pneumonia, no matter how grave, treated in time with a sufficient amount of serum, must surely recover" (3). Surely, this were a consummation devoutly to be wished, but Dr. Alexander Lambert treated twelve cases with a mortality of twenty-five per cent. and could not see that the use of serum either shortened the disease or held in check the pneumonic process (4). At present, the best that can be alleged for serum is that it does not interfere with other treatment, nor is it harmful in any quantity, at any stage of the disease (5). Of 141 cases collected by G. E. Tyler (6), death occurred in 20, a mortality of about 14 per cent. Tyler was impressed with the absence of toxæmic symptoms in his cases, and Lambert also believes that the serum is useful in preventing the development of a pneumococcus septicæmia. In my own practice in the Bellevue Hospital, I have never been able to convince myself that serum had any value.

The routine counting of the blood cells has taught us that in pneumonia a scanty leucocytosis is unfavorable, a moderate leucocytosis of good prognostic import, and that an excessive leucocytosis means some complication, especially empyema. Since serum therapy increases the leucocyte count, its advocates claim value for it on this score also. For the same reason, von Jaksch (7) has suggested the use of other agents which increase leucocytosis, such

*Read before the Society of Alumni of Bellevue Hospital, December 5th, 1901.

as pilocarpine, acetanilide, antipyrine, and nuclein. Pilocarpine is inefficient (8), the others are dangerous or useless. In most fatal cases of pneumonia death occurs from enfeebled action of the heart caused by the toxæmia due to the pneumotoxine produced by the pneumococcus; therefore, any remedy or measure which weakens the heart adds to the fatality. In some cases death results from deficient aeration of the blood due to the extent of lung hepatization; therefore, any agent which facilitates oxygenation of the blood makes for recovery. On these two principles hang all the chances of recovery and it is evident that they cannot be met in every case by any specific; instead, the patient must be given the best environment to fight a dangerous and treacherous foe. Venesection still has its defenders, but would seem to be undesirable in the stage of hepatization in a person whose blood has already been called upon to supply an exudate which consumes from two to four pints, as estimated by Bollinger (7).

The patient should be placed in a cool, well-ventilated room. A bodily temperature under 104° F. requires no special antipyretic measures, but a moderate elevation of temperature is to be welcomed as having a useful function to perform in the body in the presence of an infection (13). A temperature above 104° F. may require a compress of linen cloth wrung out of water at 60° F. and applied around the chest; if associated with delirium, an ice helmet is ordered in addition. Besides reducing temperature, hydrotherapy in pneumonia helps to counteract dangerous relaxation of the peripheral vessels, due to paralysis of the vasomotor nerves. This relaxation puts the heart in the position of a locomotive whose driving wheels rest on a slippery track. The application of cold restores the peripheral resistance, or puts sand on the track, and enables the driving power of the heart to be exerted and the circulation to be maintained (9). This is one of the great values of the cold bath in typhoid fever, but that is another story.

Besides temperature, pain, cough, or dyspnoea may require attention in the first stage of pneumonia. Snug bandaging will help all three, and Dover's powder will be a valuable adjuvant. Water, especially the carbonated waters, should be given as freely as possible, to favor kidney elimination of the poison.

When hepatization has occurred, the heart is in for the fight of its life, and demands assistance. After twenty-one years of share in this fight, in hospital, private, and official practice, and after trial of many vaunted remedies, my faith remains pinned to four things; to wit, strychnine, nitroglycerin, alcohol, and oxygen. The average case of moderate severity will do well with two of these, strychnine and nitroglycerin.

My practice is to order $\frac{1}{60}$ grain of each, in a teaspoonful of wine of pepsin of the *National Formulary*, every two hours, with milk six ounces and Apollinaris water two ounces, on the alternate hour, and plain cold water in the intervals, *ad libitum*. Strychnine is not only a stimulant to the heart, but also to the vasomotor system, and, with nitroglycerin, so regulates the peripheral circulation that the sand is on the track, and the locomotive is not racked by ineffectual efforts to turn the driving wheels. When these remedies fail to hold the case, and the pulse goes up to 120, the first sound of the heart becomes weak, and the patient is in danger of passing into the state of low muttering delirium, with dry, brown, and fissured tongue and carphologia and subsultus tendinum, then whiskey is ordered, good old whiskey if it can be obtained. If a pneumonia patient needs whiskey at all, he needs it badly and he needs it often. Half-ounce doses, frequently repeated, will do more than larger quantities at longer intervals, as alcohol is eliminated rapidly. I believe that alcohol in pneumonia has a triple use: It reduces temperature by increasing heat loss by evaporation and radiation; it lessens heat production; and, most valuable of all, it supplies a fuel or food to be burned up instead of the tissues. It has one drawback; alcohol tends to promote relaxation of the peripheral capillaries and to favor stagnation in them, with consequent interference with metabolism and also with damming back of the blood upon the right heart. This risk must be accepted and met by the conjoint administration of vasomotor stimulants, like strychnine.

Regarding the use of oxygen in pneumonia, I must confess that no logical explanation can be given of its undoubted help in tiding desperate cases over the crisis. If it does no more than relieve the mind of a patient suffering from oxygen hunger and encourage him to continue the fight for life, its use is justifiable. It does not, of course, increase carbonic excretion, and will fail when the nerve centres cannot be sufficiently stimulated to avoid paralysis from this cause. It is well to have it in the sick chamber, and to give small doses before the time of crisis, especially in cases of extensive lung involvement. In fact, recent observations seem to show that the pneumococci of Fränkel do not thrive in pure oxygen, and that the inhalation of the gas might prevent the spread of the disease to healthy parts, and might probably prove inimical to those cocci which had already gained a footing in the lungs (10).

Many good clinicians at the present day believe that we can sufficiently impregnate the blood with a substance inimical to the growth of the pneumococcus to forestall or cut short the local process in the lungs (11). The salicylates and creosotes have

been used with this idea, and, as usual with new methods of treatment, deductions have been drawn from a limited number of cases. One advocate of the use of carbonate of creosote affirms that he can, at will, arrest, and then reproduce, the subjective and objective symptoms of pneumonia by first giving and then withholding this drug (12). In the face of such therapeutic faith as this, how can we be drug nihilists? Other and more temperate writers, however, have made out a case for creosote which indicates it as deserving of trial. Digitalis is a remedy about which a good deal has been written in the treatment of pneumonia. Its use has always seemed to me to be based upon a misconception. It is believed to strengthen and slow the heart, but this effect in pneumonia would only be like unto that of spurring a willing horse against a dead wall, or, to use again the simile of H. A. Hare (13), of making more steam in a locomotive which is already racking itself upon slippery rails. Digitalis has, in addition, its own disadvantages of slow action, frequent gastric disturbance, slow elimination, and faintness, delirium, and mania, when given in the large doses recommended by Petresco (14) and others. It should also be kept in mind that digitalis loses much of its regulating power over the heart in the presence of high fever (19).

A more recent measure, advocated for desperate cases of pneumonia, is the rectal or subcutaneous injection of normal salt solution, either used alone or preceded by venesection. By venesection we attempt to relieve the tendency to right-heart failure and to remove a certain amount of toxine-laden blood, and at the same time, by means of the salt solution, we try to increase the pulmonary circulation, accomplish dilution of the toxins that remain, and increase the oxygen-carrying capacity of the blood (15). Clement A. Penrose published the first work on this matter, and states that such infusions are most valuable (16). When lobar pneumonia is complicated by acute nephritis with threatening uræmia, or by an acute exacerbation of a chronic nephritis (a type very frequent in Bellevue Hospital), venesection with saline infusion will accomplish much good. It is indicated in sthenic cases with forcibly acting heart. I am in accord with D. E. Keefe (17), however, in his statement that, without preliminary venesection, it is never safe or justifiable to make any considerable addition to the circulating fluids at the acme of an acute disease like pneumonia.

Despite these recent advances (?) in the treatment, pneumonia still continues to exact its quota of thirty per cent. of deaths in hospital practice. The results in private practice are much better because better environment and facilities usually obtain. The longer one treats pneumonia, in either class of

patients, the more one feels that every case is a law unto itself, differing according to time, place, sex, age, temperament, previous health, habits, and degree of infection. Patients may be divided into three groups: those whose infection is so mild that they require only good care and not drugs; cases so malignant and with toxæmia so overwhelming that all measures will fail to cure them; and a third group, which is capable of cure under skilful, watchful therapy. The chief cause of death in uncomplicated cases is degeneration of the myocardium. The main factors in this degeneration are toxæmia and mechanical obstruction from extent of lung involvement. Our objects of treatment are to eliminate poisoning and to sustain the heart and patient. Since the lungs, and usually the kidneys, are seriously crippled by the disease, our available avenues of elimination are the bowels and skin. The familiar five and fifteen (calomel, 5 grains; sodium bicarbonate, 15 grains), followed by saline laxatives, and repeated judiciously during the progress of the case, will attend to the gastro-intestinal system. The skin may be acted upon by water, cold, tepid, or hot, each according to its special indications, and according to the stage of the disease. The peripheral circulation and resistance are kept up by the vasomotor stimulants, strychnine, alcohol, and nitroglycerin. In private practice, local treatment of the chest wall is expected by the patient and his relatives. It is cruel and unnecessary to disappoint them, but it is more cruel and more unnecessary to blister, poultice, or bake a patient's thorax, under the idea that an underlying pneumonic exudate is thereby influenced.

The limits of this paper preclude a consideration of the many little points in the personal surroundings, diet, and nursing of a pneumonia patient in private practice. One point not sufficiently emphasized in the text-books, however, is the liability of pneumonia to spread to other members of the family. This is particularly apt to occur when a patient is nursed by near relatives. The loss of sleep, the mental anxiety, and the grief of the watchers increase the vulnerability of their systems to invasion by the pneumococcus. Dr. Beverley Robinson has called attention to this point and endeavors to meet the situation by constantly vaporizing creosote in the sick chamber (18). Osler recommends careful disinfection of pneumonic sputum and disinfection of any house in which several cases of pneumonia have occurred in rapid succession.

Although I have stated herein that four agents always come to mind with me when called to a case of pneumonia, I would not have it understood that I treat cases of pneumonia by any routine. It is the patient with the pneumonia, and not the pneumonia with the patient, that must be treated every time.

Drugs in this, as in all other diseases, are like painters' colors, useless unless mixed—with brains.

Of 115 cases of pneumonia treated in my service at Bellevue Hospital since January 1, 1898, 82 patients were discharged cured. The fatal uncomplicated cases numbered 21, or 18.3 per cent. The remaining 12 fatal cases, 10.4 per cent. of the whole number admitted, presented the following complications: Alcoholism, 3 cases; meningitis, 2 cases; empyema, 2 cases; submersion, septicæmia, tuberculosis, nephritis, and hypertrophic cirrhosis of the liver with cholæmia, of each 1 case. These figures refer exclusively to croupous or fibrinous pneumonia, and the class of people who are obliged to enter Bellevue Hospital. Much better results can be expected in pneumonia occurring in well-fed, temperate, private patients, among whom not only is the tendency of primary uncomplicated lobar pneumonia toward recovery, but toward recovery generally in spite of injudicious and unnecessary medication. This hospital mortality approximates very closely to that given by Osler (20) as occurring in the Johns Hopkins, Pennsylvania, and Boston City hospitals, in an aggregate of 2,271 cases. As against this, E. D. Newell (21) reports 30 cases with 29 recoveries, in which treatment was by calomel, magnesium sulphate, and strychnine. These cases occurred in Louisiana negroes living in open-air cabins, and form a striking contrast with a previous series of cases, under the same conditions, treated by the same writer with digitalis.

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42 EAST TWENTY-NINTH STREET.

THE ACTIVE PRINCIPLE OF THE SUPRARENAL GLAND IN GENITO-URINARY WORK.

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Long ago I noticed an analogy between the effects of topical applications to the mucous membrane of the conjunctiva and to that of the genito-urinary organs, or, at least, to such portion of it as is ordinarily treated locally. What acts well upon the one is very likely to be beneficial to the other, and they bear solutions of a given strength about equally well or badly, as the case may be.

Consequently, the successful use, by ophthalmologists especially, of the active principle of the suprarenal gland as a constrictor of blood vessels has led me to expect that it might be a valuable and additional aid in the management of certain conditions of the genito-urinary tract, acting as a hæmostatic, either with a permanent effect in view, or merely as a temporary expedient.

I believe that suprarenal-gland extract serves a useful purpose under certain circumstances by assisting in locating the source of blood in hæmaturia. For instance, in case of doubt as to whether the blood originates from the kidneys or from the bladder, the thorough application of a solution of the active principle to the mucous membrane of the bladder, by causing at least a temporary cessation of the bleeding, would make the distinction clear at once. An immediate cessation of the hæmaturia would mean that the seat of the bleeding had been reached by the solution. Naturally a continuance of the hæmaturia would be only negative evidence, and not conclusive, that the blood came from the kidneys, as it is quite possible that the suprarenal extract would not always and in all kinds of cases at once stop bleeding from the bladder; so this would not be a rule working both ways. In other words, an immediate clearing up of the urine after the application of suprarenal gland principle would be positive evidence of a bladder lesion, while the absence of any effect whatsoever would be only of relative

or corroborative value in fixing the location upon the kidney. In cases in which doubt could occur as to whether the bleeding came from the urethra or from beyond, the gland principle would also be useful, but this is of far less importance, as a differentiation is usually easily made.

Also, it is my opinion that this product is destined to be of assistance in facilitating cystoscopic examinations. It is well known that, in a large proportion of cases in which it becomes necessary to use the cystoscope, a proper examination cannot be made at will on account of the presence of blood in the bladder; this, of course, causes opacity of the contained fluid and obscures vision. Frequently a good deal of time is lost in attempting to check the flow temporarily by means of rest in bed, the administration of ergot and sedatives, etc. I have not, as yet, had occasion to test the principle of the suprarenal gland in this manner, but the effects I have already obtained make it reasonable to suppose that, in the majority of cases in which the blood comes from the bladder itself, the proper use of it would temporarily control the hæmorrhage, independently of the exact cause, and permit the satisfactory use of the cystoscope. A possible objection is that the natural, or rather actual, condition of the mucous membrane would be somewhat masked by the effect of the application, but, nevertheless, a good deal of information could frequently be obtained; and again, in cases in which a permanent lesion is supposedly present, the examination could be repeated and timed approximately so as to be made when the suprarenal effect was passing away, yet before the hæmorrhage recurred.

By reducing the engorgement in certain cases of stricture of the urethra, thereby relieving the irritability and facilitating the passage of instruments, the suprarenal gland principle seems to serve a useful purpose. As yet I have not used it extensively in this manner, but I am sure that at times a larger instrument can be passed after its use than could be done without. A corroboration of this observation comes from the experience of some of my oculist friends, which is identical, so far as its effect upon the introduction of sounds into the nasal duct is concerned. It is rational to suppose that it will prove of a certain value in this way, and the suggestion of its use for this purpose has already been made.

Another type of case in which I am experimenting with this principle, and in which I deem it worthy of trial, is that troublesome sequel of urethritis in which we have a slight, but persistent mucous discharge, after all infection or stricture has been disposed of, due at times to persistent local congestion produced by some chronically engorged blood vessels of the urethral mucous membrane. Applications of solutions of the suprarenal gland principle produce a

blanching of the membrane and relieve the engorgement, at least for a time. By their repetition we can hope to give tone to the relaxed capillaries, regulate the blood supply, and ultimately arrest the supersecretion of mucus, which it is usually such a tedious process to get rid of. I have obtained some good results, but it will take careful and continued observation to decide how much we can count on this agent in such cases. Also, in order that any observation may be of value, the condition must be accurately determined.

The urethroscope should be used for diagnosis; also for applying the suprarenal solution when it is deemed necessary to apply it in rather strong solutions to special areas of congestion. When it is thought best to affect the entire mucous membrane, we can resort to irrigations of milder solutions.

The curative power of this principle in hæmorrhage from the bladder, and the method of applying it to the inner surface of that organ, are well illustrated by a case coming recently under my observation:

CASE.—A. L., a white agriculturist, aged about seventy years, came to the New Orleans Sanitarium from his plantation, to seek relief from hæmaturia and retention of urine. He had had a moderate degree of hypertrophy of the prostate for several years and I had previously attended him for cystitis and urinary retention. He had been well for about three years, having had, however, during that interval, the necessity of using the catheter a few times himself when he had allowed his bladder to become distended. In this instance, when a guest at a supper, he had some wine and had remained quite a long time at table. When his attention became directed to his bladder, he found himself unable to relieve it, attempted self-catheterization unsuccessfully, summoned a local physician who also failed to reach the bladder, and came here; he had fever and chills. Owing to my absence, he was first seen by my friend, Dr. F. W. Parham, who successfully catheterized him and gave him proper attention until my return. I found him still requiring catheterization and with his urine bloody, the blood evidently coming from the bladder. Catheterization was continued at regular intervals, followed by careful irrigation of the bladder with hot boric solution. His condition improved, he ceased having chills, and his temperature became normal. The bleeding only moderated, notwithstanding the greatest care I could exercise, and the manner of it convinced me that it was due to a slow oozing from the surface of the bladder walls. He was anxious to return home, yet he and I were both unwilling that he should leave while his urine remained bloody, although he was urinating spontaneously. I did not care to use astringents, owing to the possibility of their leading to irritation and clot formation, so decided to try adrenalin.

I prepared a solution of the chloride of this active principle, of about 1 to 20,000, by properly diluting with normal salt solution, a solution of 1 to 1,000. After rinsing out the bladder with boric solution, I

moderately filled that organ with the suprarenal solution through a Nélaton catheter, allowed it to remain about five minutes, then permitted it to escape slowly. The effect was all that could be expected. The patient voided clear urine from this time, about 9 a. m., until after midnight, when the urine showed a pink tinge which slowly deepened. In the morning, I repeated the process, making the solution only 1 to 24,000. Again the urine became clear, and this time remained so all day and all night. The next day, I allowed the patient to walk about, and toward the second night, the urine again became pinkish. I made one more irrigation, completely filling the bladder with a 1-to-30,000 solution. The urine cleared again and remained all right. The patient was warned as to the risk of allowing his bladder to become distended and given permission to go home.

To summarize: The active principle of the suprarenal gland may be of service in the presence of engorgement or congestion of any part of the urinary mucous membrane within reach, whether there is bleeding or not; in some cases it may act only as a temporary expedient, in others it may be permanent and curative.

Its cost is a little in the way when comparatively large quantities are necessary, but it is to be hoped that, as the demand grows, the manufacturers will see their way clear to a reduction in price.

HOW TO SEE THE STOMACH CURVATURES WITH OUR NAKED EYES, WITHOUT THE AID OF INTRAGASTRIC INSTRUMENTS OR INFLATION.

By MARK I. KNAPP, M. D.

NEW YORK.

ATTENDING PHYSICIAN OUT-DEPARTMENT, AUSTRO-HUNGARIAN
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Of the several methods employed for the physical examination of the stomach, the first one—inspection—has been treated in a very stepmotherly way. But a few words, a sentence or two, and the subject is dismissed as inferior to any other method. It is spoken of as a sort of adjuvant to other methods of examination. And, indeed in my article on *The Physical Examination of the Stomach* (*New York Medical Journal*, March 31, 1901) I followed the “consensus of opinion” in declaring, “as a rule it gives little information”; but, following this, I say, “on the other hand, it may prove a very valuable aid.” Usually, inspection is given some thought when the patient has not been blessed with an overabundance of fat. But when the adiposity has transgressed the recognized boundaries of economic propriety, other methods than inspection are resorted to. Outside of one other method—palpation—the methods ordinarily employed, have ob-

jections. These objections are: The having to enter the stomach with an instrument or by the methods otherwise employed, changes the position and axis of the viscus. The stomach, weighted with water for gastrodiaaphany or inflated with air or gas, is not the stomach when not so interfered with. Palpation is true, but it is an art that must be acquired by patient and constant practice. To the experienced palpator there exists no difference as to the thickness of the abdominal parietes for the purpose of feeling for superficial abdominal organs. But, even above palpation, which must never be neglected in examinations, I place inspection. For the purpose of inspection of the stomach, the thickness of the abdominal wall is of absolute indifference. The greater curvature of the stomach and also the lesser curvature—in gastropnoxis—can be seen with absolute and unerring distinctness upon the wall of the abdomen, no matter how thin or thick, without the aid of anything else than our naked eyes. No carbon-dioxide production in the stomach, air inflation, gastrodiaaphany, or sound palpation is necessary, and the results of inspection, when that art has been acquired, are absolutely true and unerring. I shall here confine myself only to describing the “seeing of the curvature” of the stomach, although by seeing in the same way, the existence of an enlarged liver, of a displaced and enlarged spleen, of a displaced, tumefied kidney, or of abdominal, superficial tumors, can be diagnosticated with the exactest precision.

For the purpose of such inspection, the patient bares his abdomen and lies down on a table in the usual dorsal position. The examiner now stands, either at the side, or at the shoulder, of the patient so as to have, either to look up to the stomach region, or down to it. He now brings his eyes on the same level with the prominence of the patient’s abdomen and watches abdominal respiration with one eye or both. The patient now breathes in a normal way and the examiner follows certain lines which he sees move up and down with the respiration on the abdominal surface. The curvatures of the stomach will be seen distinctly as very fine lines moving under the skin with the respiration. We watch these lines for a few respirations, note where they stop each time, and mark with ink the spot where such lines constantly stop. These are the lines produced by the curvatures. An acute observer will not fail to notice that there is also a distinct difference in the plane of the abdomen where the curvatures are seen. To corroborate, we percuss in the following way: The closely apposed index and middle fingers of the left hand are placed on the abdomen so that the ink line, representing the curvature, is between these two fingers. Now we percuss, very gently, over each finger without separating them

and without removing them from where we have placed them. If the line marked on the abdomen exactly corresponds with the curvature, the difference in the percussion resonance over each finger will be heard. As very gentle percussion is required, the use of the stethoscope will be found of material value. For that purpose the stethoscope does not necessarily have to be placed over the stomach, but can be placed anywhere on the abdomen. Where there is a doubt as to the identity of the organ over which we percuss, we may resort to inflation, not of the stomach, but of the colon. Inflation of the colon is not met with the same objection from the patient as inflation of the stomach. This inflation of the colon is carried out in the ordinary way. A double rubber bulb has attached to its long tubing any kind of a short nozzle, which may be either the common, short, hard-rubber rectal nozzle, or a nozzle improvised from a short piece of glass tubing, the ends of which have been smoothed, either with a file, or by heating it to a red heat. The colon having been inflated, we again percuss in the way just described. The inflated air must not be left in the colon, but allowed to escape, which is done by disconnecting the nozzle from the tubing and leaving it in the anus until the air has escaped.

136 EAST SEVENTY-EIGHTH STREET.

THE EYE, EAR, AND THROAT SEQUELÆ OF TYPHOID FEVER.*

BY L. D. BROSE, M. D., PH.D.,

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OCULIST AND AURIST TO ST. MARY'S HOSPITAL.

In presenting the subject of the eye, ear, and throat sequelæ of typhoid fever, I shall attempt through the relation of a few cases to give my own experience rather than minutely to relate what has been published by others. As an instance of retrobulbar optic nerve inflammation, I will cite the following case:

A young man, twenty-three years of age, sent to me December 12, 1899, by Dr. G. C. Smith, of Poseyville, Ind. The doctor wrote that he had attended this patient during a severe spell of typhoid fever that had its beginning August 28, 1899. Since the fever attack his sight has been poor. My record of the first examination is that there is no evidence of past or present external eye disease. Vision in the right eye is $\frac{15}{120}$ and in the left eye $\frac{15}{70}$. He reads Sn. D = 3 poorly. With the ophthalmoscope the optic discs are seen to be of pale color, especially the temporal half, while around this border of the nerve are a few fine pigment changes. The field of vision discloses a central scotoma for colors in both eyes. Under potassium iodide and hypodermic injections of strychnine recovery was

complete at the end of three months with the restoration of normal vision.

The next patient suffered great loss of vision through hæmorrhage into the vitreous of both eyes.

A young unmarried woman, eighteen years of age, was sent to me by Dr. T. J. Montgomery, of Owensville, Ind., who stated that he had treated her during an attack of typhoid fever, beginning October 18, 1899, and lasting until the middle of the following December. On November 29th, while looking at the wall during the day time, the room suddenly began to grow dark and her sight has remained poor ever since. At the time of sight failure she was fever free. My first examination of her condition was made March 13, 1900, when it was found that she was unable to count fingers beyond from one to two feet. The external eye appearances were normal. With the ophthalmoscope nothing could be seen of the eye fundus, and only in the extreme periphery of the interior of the eye could a red reflex be obtained. In fact the case was one where almost literally neither the patient nor the doctor saw anything. A treatment with potassium iodide in increasing doses was instituted, together with mercurial inunction, and at times pilocarpine or sodium salicylate to produce diaphoresis. Improvement of sight was slowly brought about and the patient, who is still under observation, has now a vision of $\frac{15}{c.c.}$ and comes and goes alone to and from my office. The first sign of improvement was noted in the enlargement of the peripheral red reflex, and then the blood vessels near the eye equator were seen. Through additional reabsorption of the vitreous exudate I await further recovery of sight, but because of an added retinitis proliferans the amount of restoration will be far below normal. The patient sees best when directing the eyes slightly to one or the other side of the object looked at; this enables her to see around the dense central mass in the line of direct vision.

All parts of the eye and its appendages may suffer disease in consequence of an attack of typhoid fever. The external eye, however, is oftenest involved, and during the typhoid state, with great hebetude, the lower part of the cornea is specially prone to suffer from desiccation and subsequent infection. Catarrhal conjunctivitis is of frequent occurrence, usually, however, of a mild type and yielding to simple collyria of borax or boric acid. During convalescence, and at a later period, phlyctenular disease of the conjunctiva or cornea may arise and, if unchecked, may develop into a sloughing corneal ulcer. Iritis, chorioiditis, and vitreous suppuration are not nearly so frequently met with as after relapsing fever. Cataract is also a rare development. Bull states that hæmorrhage into the retina during the height of the fever is not of infrequent occurrence, being most common during the third week. The altered condition of the blood, with the weakened state of the blood-vessel walls, is a ready ex-

*Read before the Ohio Valley Medical Association, November 12, 1901.

planation for the frequent hæmorrhages under the skin and into other parts of the body, and it is perhaps due alone to the mental condition and blunted sensibilities of the typhoid fever patient that other observers have not frequently corroborated this statement of Dr. Bull's. The optic nerve may be affected through a basilar meningitis, through hæmorrhage into the nerve-sheath, or through toxæmia, the result of the typhoid poison, producing temporary or permanent impairment of sight, depending upon whether the neuritis is followed by atrophy or not of the nerve fibres. Weakness of the lens muscle and asthenopia are of frequent occurrence during and after convalescence, but actual paralysis of either the intra-ocular or extra-ocular muscles, unless there has been an accompanying meningitis, is exceedingly rare. Recently, I have had under treatment an interesting case of paralysis of the muscles of accommodation.

Fred G., aged sixteen years, a large, manly fellow for his age, was treated by Dr. Fullenwider, of Mount Vernon, Ind., during August of the present year for a mild case of typhoid fever, without complication. During convalescence he was troubled with catarrhal conjunctivitis, associated with spasmodic closing of the eyelids. On October 21st he found he was unable to read and consulted an optician, who gave him a pair of plus lenses, which helped for a day or two.

October 25th he consulted me, when I found the following condition: In both eyes catarrhal conjunctivitis, with occasional spasmodic lid closure when exposed to a bright light. The pupils of normal size and responsive to light. The right eye sees $\frac{1}{30}$ and the left eye $\frac{1}{60}$. With the right eye he reads Sn. D = 1 and with the left eye Sn. D = 2 fairly well. On placing + 1. spherical lens in front of the right eye vision became $\frac{1}{30}$ and with + 4. spherical he reads Sn. D = 0.5 well. The left eye sees $\frac{1}{30}$ with + 1.5 spherical combined with + 0.5 cylinder axis 180 and Sn. D = 0.5 by substituting + 5.5 spherical for the plus 1.5. There was no detectable lesion in the eye fundus and the external eye muscles were normal. Under potassium iodide and a collyrium of boric acid and bichloride of mercury, at the end of twelve days he saw $\frac{1}{30}$ with either eye and read Sn. D = 0.5 without a lens.

The middle ear shows a predilection to inflammation during typhoid fever. However, during the fever, the symptoms occasioned by the slighter forms of middle-ear catarrh are masked, so that attention, as a rule, is not directed to the ears until convalescence has set in. Bezold gives three ways by which ear infection occurs: 1. By direct propagation of a nasopharyngeal inflammation to the middle ear through the Eustachian tubes; 2. by transmission of septic matter from the nasopharynx to the ear; 3. by embolism of the blood vessels of the mucous lining of the middle ear. Purulent middle-ear inflammation with involvement of the

mastoid is less frequent than non-perforative middle-ear catarrh, and as an example of this severe disorder I may relate the following case:

Mrs. T. F., twenty years old, was convalescent in St. Mary's Hospital, Evansville, from a severe attack of typhoid fever during the spring of 1895, when she developed severe pain in the left ear, followed soon by bloody otorrhœa. In a couple of days the discharge became very profuse and of a mucopurulent character. I was now asked to see her and found, not only the ear swollen and painful, but likewise the skin over the mastoid reddened and sensitive to pressure. After cleansing the external auditory canal the drum was found highly inflamed, bulging posteriorly and with a small perforation at the apex of a teat-like swelling. The ear was directed to be cleansed with hot boric-acid solution and pledgets of absorbent cotton inserted into the meatus and changed many times during the day and night. A Leiter cold coil was used over the mastoid. The discharge and earache continued, together with fever and increased swelling over the mastoid, and so on May 31st, after ether anæsthesia, the mastoid cells were laid open with chisel and hammer and the pent-up pus liberated. The patient bore the anæsthetic so badly that at one time it had to be suspended and our efforts directed to recussitating her from asphyxia. The wound was packed with iodoform gauze; over this, absorbent cotton was placed, and the whole retained by roller bandage. The ear canal was closed with a pledget of absorbent cotton. At the time of changing the primary dressing, on the third day, all otorrhœa had ceased and the patient made a rapid recovery.

The prognosis of middle-ear suppuration after typhoid fever is much more favorable than after most of the other infectious diseases. Still, death may result from meningitis, owing to caries of the tegmen tympani, or by transmission through suppurative sinus phlebitis, or through septic embolus. The internal ear may be the seat of primary involvement and the hearing be lost through hæmorrhage or infiltration into the membranous labyrinth. Deafness in the early stage of typhoid fever may rapidly ensue without discoverable ear lesion and the hearing again be wholly recovered in convalescence through a lesion of the centre of hearing. At the commencement of typhoid fever there may be some erythema of the pharynx, and the tonsils may be swollen. Strümpell considers as specific of this fever whitish elevated patches which appear on the faucial surface of the tonsils and soft palate and later ulcerate. As these patches only occur in cases of a severe type, and last from a week to ten days, they possess some prognostic importance. Typhoid fever may commence as a seeming laryngitis, that is, the local symptoms up to the end of the first week may so mask the general febrile condition that not until the manifestation of other characteristic signs of typhoid fever can the diagnosis be made with a certainty. Post-mortems show that of those dead

of typhoid fever, from 10 to 12 per cent. have had some form of laryngeal disease. It is still a debated question, however, whether the larynx is involved primarily through a localization of the typhoid virus analogous to the follicular disease in the small bowel, or whether the disease is of a secondary nature. The character of the laryngeal disease may be catarrhal, infiltrative, or ulcerative. Catarrhal inflammation occurs, as a rule, during the first and second week of the fever, and when followed by desquamation of the epithelium gives rise to erosions and ecchymoses. The lateral free borders of the epiglottis are specially prone to these erosions, upon the floors of which the bare cartilage is often seen. Of a much more serious nature are the infiltrations and ulcerations. In the regions where follicular structures are found, namely, at the base of the epiglottis, on the ary-epiglottic folds, over the inner surfaces of the ary-tænoid cartilages, and upon the anterior surface of the posterior laryngeal wall, the infiltrations and ulcerations are apt to assume a circumscribed type much like the glandular disease in the ileum. Bacteriological investigation has thus far failed to detect the presence of typhoid bacillus in these swollen and ulcerated follicles. Laryngeal ulcers, as a rule, do not affect the ordinary course of the fever, and in favorable cases heal without leaving any evil results. However, when the ulceration results in sloughing or extends in depth and results in abscess formation with perichondritis, stenosis of the larynx may occur, attended with permanent dyspnoea and suffocative spasms. Paralysis of the laryngeal muscles is not of frequent occurrence, and the following case is an example with a favorable outcome:

Maggie L., unmarried, twenty-two years of age, had typhoid fever in the fall of 1899, for which she was treated by Dr. R. T. Venneman, of Troy, Ind. The attack was severe and of eight weeks' duration. During the third week of fever she lost her voice and had not been able to speak above a whisper up to the time she consulted me, on July 3, 1900. A careful laryngoscopic examination showed the larynx free from all disease and the movements of the vocal cords perfect, save during attempted vocalization, when they vibrated but little; neither could they be closely approximated in the region between the vocal processes. It was not possible to make the patient speak above a whisper. I looked upon the paralysis as myopathic, and due to a catarrhal laryngitis during the active fever stage. The treatment employed was the use of potassium iodide internally, intralaryngeal applications of the faradaic current, and daily external applications of galvanism, placing a pole on either side of the larynx and making slow interruptions. At the end of eight days, the patient was able to speak aloud and in a few days more was discharged, her voice wholly restored.

In addition to myopathic paralysis of the laryngeal muscles, the cause may be a central lesion or a lesion in the course of the laryngeal nerves. Search should always be made for an enlarged lymphatic gland, especially along the path of the left recurrent laryngeal nerve, and for pleuritic effusion about the apex of the right lung, pressure from which in either case may destroy, in part or wholly, the function of either of the laryngeal nerves. So long as these nerves are subjected to pressure or when the lesion is a central one, you need not expect to cure the paralysis with electricity. This form of treatment, however, is still valuable, since it is the only means by which secondary muscular atrophy can be prevented, which, if it occurs, will render the paralysis permanent even though you may succeed after a time, through internal medication or by operative intervention, in removing the original cause.

Therapeutical Notes.

Carbon Bisulphide in Surgical and Pulmonary Tuberculosis.—According to the *Revista de medicina y cirugía prácticas* for November 28, 1901, at a recent meeting of the Paris Academy of Medicine, Dr. Delorme communicated the following results of Dr. Coromilas. In pulmonary tuberculosis, Dr. Coromilas injects into the trachea, by means of a special instrument that permits of respiration during the injection, a solution of carbon bisulphide. The instrument consists of a syringe of sufficiently large piston with a hollow rod, terminating in a cannula of two concentric tubes, the central one giving passage to the medicament while the external one permits the passage of air to and from the lung. The following are the formulæ used:

R Carbon bisulphide. 2 parts;
Venice turpentine. 1 part.

M.

One drop of this solution is added to a gramme of sterilized olive oil. Ten grammes of this liquid are injected, the injection being repeated every four days.

For localized tuberculosis, Dr. Coromilas replaces the turpentine by camphor, as follows:

R Carbon bisulphide. 100 grammes;
Camphor. 2 "

M.

This solution is to be mixed with from 20 to 25 parts of olive oil. A sufficient quantity is injected to fill the abscess cavity.

Dr. Coromilas also uses carbon bisulphide in enemata and in the form of syrup. The following is the formula for enemata:

R Carbon bisulphide. 1 gramme;
Terebinthinated olive oil. . . . 210 grammes.

M. Emulsify with the yolk of an egg.

The syrup, which is administered concurrently with tracheal or abscess injections, has the same composition as the injection fluid. The patients take, morning and evening every day, a tablespoonful.

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THE PREVENTION OF MOSQUITO-BORNE DISEASES.

A remarkably interesting little book by Major Ronald Ross¹ deals almost wholly, as its title indicates, with measures for materially reducing the numbers of mosquitoes, if not wholly eradicating them, in limited areas, especially in towns, which is about all, according to the author, that we can expect to accomplish in the way of stamping out malarial fever, yellow fever, filariasis, and elephantiasis by doing away with the insects that carry the germs of those diseases. The book is so free from unexplained technical expressions and written with such directness and vigor of style that it cannot fail to prove as instructive and profitable as it must be attractive to many persons who are not members of the medical profession.

Major Ross gives excellent reasons for preferring to enter upon a campaign against mosquitoes with funds raised by subscription, rather than devoting months or years of time to attempts to convince governmental officials of the need and feasibility of the undertaking, only to be told in the end that there are no funds available for the purpose. The officials, he says, will fall into line when some tangible results can be shown. To bring about such results, "the superintendent need not think that he must start with an army corps. Indeed, a brigade of one man besides the superintendent is a good working force to begin with, if the treasury is very low." One may judge from the following passages as to the energy with which Major Ross would have things pushed: "At this juncture modesty is a great fault.

The brigade, however small it may be, should be immediately set to work in the most obtrusive fashion." . . . "A public dinner and an after-dinner speech will work wonders. The superintendent is justified in stooping to any underhand tricks to obtain money." . . . "A conscience is not necessary for this work. As soon as he has enough money, the superintendent should demand more. He should no longer beg for it as he used to do, but insist upon it." . . . "Having abandoned all scruples, the superintendent must now openly avow piratical designs, especially upon government." It is certainly necessary at times to deal with the dear public in this arbitrary style if an enterprise is to be put through with any approach to promptness and thoroughness, and it is not to be wondered at that Major Ross urges such a course.

As we have said, the main purpose of the book is to give the reader the benefit of the author's experience in the work of getting rid of mosquitoes, which he justly regards as more to be depended upon as a prophylactic than any one of the four other measures that he considers, although he admits that each of them is more or less effective under certain conditions. They are as follows: Preventing mosquitoes from biting patients, preventing mosquitoes from biting the healthy, killing the parasitic organisms in patients (Koch's plan of cinchonizing all the inhabitants of malarious districts), and living at a distance (beyond the mosquito's flight) from people who are likely to have the disease. It is unnecessary to mention Major Ross's arguments to show the general inadequacy of these measures, for a little reflection will show that the suppression of mosquitoes is much more feasible than any of them.

THE MEDICAL SOCIETY OF THE PRESENT DAY.

Our Boston brethren are pondering the project of establishing an academy of medicine, and one of the gentlemen who have been prominently engaged in examining into the desirability and feasibility of the scheme, Dr. J. G. Mumford, has, incidentally to that inquiry, devoted evidently a good deal of thought to the lines on which existing medical societies are conducted at the present time. Dr. Mumford read a paper on the subject before the Warren Club in November, and the paper appears in the *Boston Medical and Surgical Journal* for February 6th. In some respects he takes what may be inter-

¹Mosquito Brigades, and How to Organize Them. By Ronald Ross, F. R. C. S., D. P. H., F. R. S., Walter Myers Lecturer in Tropical Medicine, Liverpool School of Tropical Medicine; Major, Indian Medical Service, retired. New York: Longmans, Green, & Co.; London: George Philip & Son, 1902, pp. x-100.

puted as a gloomy view of the present-day work of medical societies; at the same time, it must be admitted that he makes some deserved criticisms.

One of the most important of Dr. Mumford's animadversions, as it seems to us, is conveyed in the following words: "Whereas formerly papers and 'remarks' found little circulation beyond the immediate auditors, to-day they are all multitudinous, almost uncensored, *shoveled* into the press; and a devoted professional public is required to absorb the undigested mass." We are inclined to think that the proceedings of society meetings are too freely reported, and especially that in reports of discussions there is not enough condensation. Many speakers repeat themselves, say something quite different from what they mean to say, and inject a good deal of irrelevant or pointless matter into their remarks. Dr. Mumford himself divides debaters into these three varieties: "(1) The forceful, brief talker, the man who has something to say to the point and says it; (2) the complimenting, verbose man, who seizes the occasion to discourse at unconscionable length on various cases of his own; and (3), in a thinly attended, unresponsive meeting, the charitable man, who knows that nothing of importance remains to be said, but talks to save the day."

"How," he goes on to say, "shall we deal with these friends of ours? We have tried the naming of appointed speakers; that works fairly well. We have tried leaving the debate to chance; that frequently ends in chilling silence. We have tried publishing in advance synopses of the papers, but no method has been satisfactory always. We have tried setting a time limit on each speaker—often an excellent plan. Perhaps, after all, the secret lies with the presiding officer, who should have some knowledge of the subject and should call wisely on members from the floor." It is certainly a good plan for the presiding officer to endeavor to secure the presence of those members who are best qualified to discuss the subject of the paper, whether he calls upon them to speak on it or not. Above all, the man who speaks at all meetings and on every subject that comes up ought to be squelched, but we admit that it is not easy to do that.

The most serious evil complained of by Dr. Mumford, and one not very uncommonly encountered, is the uncensored paper coming from a man of comparatively unknown calibre—often not even a mem-

ber—for it is too frequently either a bid for practice in the shape of a record of alleged brilliant results of some method of treatment which is insufficiently described or else a veiled plea for the use of 'some particular producer's wares. Instances of both these varieties of worthless papers are of far too common occurrence, even in societies of very high standing.

THE REMEDY FOR OVERCROWDING OF THE PROFESSION.

The president of the American Medical Association, Dr. John A. Wyeth, lately received the following inquiry from a correspondent: "What, if anything, should or could be done to regulate the number of young men studying medicine?" The correspondent added that for nine years he had been a member of a State medical examining board, and had noted no material improvement in the educational qualifications of applicants, but a constant increase in their number.

In his reply Dr. Wyeth said: "In my opinion, there are too many medical colleges, and graduation in medicine is made too easy. Even after they have graduated, they should not be allowed to practise until they can pass a rigid practical as well as theoretical examination. For the general good, I would say that a man entering the profession of medicine as a student in college should have a very good classical education, for this implies a sufficiently thorough education in other departments of study. He should be vouched for as a man of refinement and honor. He should then study at least four years at a good school and at least one year in a post-graduate school or hospital. The final examination for practice should include bacteriology and the microscope and chemical analysis as applied to practical medicine."

As regards the results of mere teaching, we do not see that a very different or more satisfactory answer could have been given. If we were to attempt to add anything to it, we could only repeat what we have often said before, that the final examination should be so managed as to bring out the applicant's real mental capacity, his powers of observation, reasoning, and judgment, quite as much as his knack of memorizing; and that this feature of the State examination should be constantly held up to the view of the undergraduate, who should be ex-

amined at comparatively short intervals and set back in his course or dropped from the school altogether if he could not make a reasonably good showing. We do not want learned fools in the profession, and simply keeping out those whose memory is poor will not go far to raise the standard. We heartily approve of the practical examination suggested by Dr. Wyeth and of the post-graduation work that he would enforce. We believe that the evil of there being too many schools will cease to exist in the course of a few years, for the unsatisfactory schools cannot provide themselves with the resources required to enable them to turn out graduates capable of passing such examinations as the various States seem sure to insist upon—hence they can no longer obtain students.

PNEUMONIA AND EXPOSURE TO COLD.

It is years now since the medical profession gave up the idea that exposure to cold was capable *per se* of giving rise to pneumonia; we know that the disease is due to a specific micro-organism. But the notion that "this is good weather for pneumonia"—meaning cold weather—still holds almost unquestioned sway among the people. It is said that the President's son, who is now ill with pneumonia, has been in the habit of taking long walks in the country bare-headed, and that in this practice he has been joined by a number of his school-mates. To this exposure of the head to cold some newspaper writers have felt inclined to attribute the pneumonia. No argument is needed to upset this theory; we have only to point to the experience of the pupils of Christ's Hospital, in London, commonly known as the "Blue Coat School" on account of the garb worn by the boys. The small blue worsted cap which has always formed part of their uniform they seldom wear, having cast it aside soon after the founding of the school, in 1553. They are to be met with in all parts of London at any season of the year and in all sorts of weather, always bare-headed. This practice of theirs has been going on for more than three hundred years now, furnishing on a large scale experimental evidence against the notion that cold causes pneumonia, for the disease has been no more rife among them than among other school boys.

THE "BEERLESS" CANTEEN.

It seems that the "beerless" canteen—suggested by some of the teetotalers—has been tried in the army and found wanting. An officer of the army has written to the editor of the *Army and Navy Journal* a letter that appeared in that journal for

February 1st in which he states that in 1885 he established and took charge of such a canteen at Fort D. A. Russell. It proved a comfortable place for the men, but it did not decrease drunkenness among them to the extent hoped for. "When, however, permission was granted, some months later, to sell beer, there was an immediate improvement in conditions, and discipline was correspondingly benefited." In 1889 the same officer established a "beer" canteen at the recruiting depot on David's Island, and concerning its influence he says: "The immediate improvement in the condition of the men morally and physically was really marvellous. Drunkenness became exceedingly rare, and was confined to a few soldiers returning from a day's liberty on the mainland. Even the number of these men who always felt it incumbent upon themselves to indulge in a few glasses of whiskey while on pass decreased to a marked degree. The fact that they were able to drink a mild but satisfying beverage at home amid decent surroundings no doubt had a restraining effect. These improved conditions were remarked upon by everybody on the island, as well as by visitors from the mainland. What is more, *they lasted.*" The officer's name is Daingerfield Parker; his rank he does not state. His testimony, called forth by a chaplain's statement that the "beerless" canteen had never been tried in our army, seems to us of great value as an argument against the continued abolition of the canteen.

THE RICE MEMORIAL FUND.

We are glad to learn that measures are being taken to collect a fund for placing a simple slab or a memorial shaft over the place where there rest the remains of the late Dr. Charles Rice. The Committee on Revision of the *United States Pharmacopæia* is collecting a fund, and the *American Druggist* has opened a supplementary subscription list. It seems to us eminently fitting that medical men also should show their appreciation of Dr. Rice's great services, for they were of value, if only indirectly, to the advancement of medicine, and we know that this fact is widely realized.

JOURNAL CONSOLIDATION IN CLEVELAND.

As we announced last week, the *Cleveland Journal of Medicine* and the *Cleveland Medical Gazette* have been consolidated under the title of the *Cleveland Medical Journal*, with Dr. P. Maxwell Foshay as editor and Dr. Edward S. Lauder as associate editor. Both the original journals have deserved the respect and confidence of the profession, and we may be sure that the new one will have the strength that comes from union.

CHALODERMIA.

This term—apparently better formed than the French word *chalazodermie*, which has been applied to dermatolysis—is employed by L. von Kétly (*Archiv für Dermatologie und Syphilis*, lvi, 1; *Centralblatt für Chirurgie*, February 1st) to a peculiar change observed by him in the skin of certain parts of the body in which, instead of being simply excessively distensible or ductile, it hangs in loose, flabby folds. In a case observed by him, that of a woman thirty years old, it had begun at the age of eighteen without any discoverable cause. The parts of the skin affecting were those of the mammæ, the lower part of the trunk, the buttocks, and the thighs. On the last-named parts the skin appeared like a baggy pair of drawers.

PFEIFFER'S MICROCOCCUS CATARRHALIS.

This organism has recently been investigated anew by Ghon, H. Pfeiffer, and Sederl (*Zeitschrift für klinische Medizin*, xlv, 3, 4; *Berliner klinische Wochenschrift*, January 6th). They describe it as resembling the gonococcus, although larger, and as being a common saprophyte of the respiratory tract. By itself alone, it may cause bronchitis or lobular pneumonia. The affections caused by it have no characteristic features, and are often confounded with influenza, particularly as they are apt to come on with severe general symptoms. On the other hand, the *Micrococcus catarrhalis* is frequently associated with influenza bacilli and with pneumococci, but in cases of mixed infection, in the author's opinion, the *Micrococcus catarrhalis* plays the part of the primary excitant.

HORSE SERUM AS A PREVENTIVE OF INFECTION IN ABDOMINAL SECTION.

At a recent meeting of the Paris Society of Biology (*Gazette hebdomadaire de médecine et de chirurgie*, January 2d) M. Raymond Petit announced that he had been experimenting with the endoperitoneal use of the serum of the horse—normal serum, it is to be presumed—in abdominal operations, the serum having been raised to the temperature of 131° F. His inference was that it stimulated the phagocytes and thus tended to prevent infection, whether applied at the conclusion of an operation or previously injected into the peritonæum. We have frequently read, during the last twenty years or more, of injections into the cavity of the peritonæum, the so-called "intraperitoneal injections," but we have never met with a satisfactory description of the procedure. If we exclude ascites and a preliminary incision reaching to the peritonæum, how is one to know when the aperture of the needle is between the parietal and the visceral peritonæum?

News Items.

Society Meetings for the Coming Week:

MONDAY, February 17th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association, Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, February 18th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, February 19th.—Woman's Medical Association (New York Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, February 20th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 21st.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

SATURDAY, February 22d.—New York Medical and Surgical Society (private).

Dr. John Byrne, of Brooklyn, has retired, after fifty years of active practice, and will make a prolonged visit to Europe.

The Question of Priority between Dr. Shaffer and Dr. Hibbs.—Too late for publication in this issue, we have received Dr. Hibbs's reply to Dr. Shaffer. It will appear next week.

The Lunacy Bill Passed.—The Rogers bill abolishing the local boards of managers of the State hospitals for the insane and centralizing the power in the hands of the State Board of Lunacy has passed in the New York State Legislature.

Typhoid Fever in Philadelphia.—The daily newspapers of Philadelphia have devoted a good deal of space to the increase in the number of cases of typhoid fever in Philadelphia. The prevalence of the disease is attributed primarily to the recent floods which have contaminated the city water supply.

The Atlantic County (N. J.) Medical Society.—At a meeting of the Atlantic County (N. J.) Medical Society, held on February 5th, the following officers were elected: President, Dr. William Edgar Darnall; vice-president, Dr. Theodore Seuseman; secretary and treasurer, Dr. Edward Guion; reporter, Dr. C. B. Shimer.

Northwestern University Medical School.—Dr. John B. Deaver, of Philadelphia, addressed the Chicago Medical Society in the new amphitheatre of Mercy Hospital on Wednesday evening, February 12th, on the occasion of the opening of the new amphitheatre, which cost \$25,000 and was built in Mercy Hospital at the expense of the Northwestern University Medical School, Chicago Medical College, bringing into closer relations the affiliation between Mercy Hospital and the medical school.

Foreign Obituary Notes.—From the European journals we learn of the death of the following physicians during the past few weeks: Dr. Ed. Cramer, extraordinary professor of hygiene at Heidelberg; Dr. G. Garibaldi, professor of surgical anatomy and operative medicine in Genoa.

The City Hospital of Cincinnati Condemned.—An expert who was employed to inspect the City Hospital at Cincinnati, with a view to estimating the cost of repairs, has submitted a report utterly condemning the buildings as being unfit and recommending that they be torn down and new buildings erected at a cost of some \$350,000.

A Strange Petition.—According to the *Montpellier Médical* for January 12th, a petition has been addressed to the Chamber of Deputies of the Kingdom of Saxony asking if it is permissible for a physician who is treating one incurably diseased to poison him on his own specific request so as to end his sufferings. The committee on petitions has decided to take no notice of this petition.

The New York Academy of Medicine.—A stated meeting will be held in Hosack Hall Thursday evening, February 20th, at 8 o'clock. A paper will be presented on The Action Taken by the Health Department on Report of a Case of Small-pox, by Dr. Alonzo Blauvelt, and a paper will be presented by Dr. M. J. Rosenau, director of the Hygienic Laboratory, Marine-Hospital Service, the title of which is to be announced. A Comparison of Vaccine Points with Glycerinated Vaccine Virus will be discussed by Dr. F. S. Fielder, and Dr. J. H. Huddleston will present a paper on Tetanus and Vaccine Virus.

Banquet in Honor of Dr. Gregory.—The medical profession of St. Louis will give a testimonial banquet, under the auspices of the St. Louis Medical Society, to Dr. E. H. Gregory, who for fifty years has been an active teacher of medicine, probably longer than any other man living. The banquet will be held at the Planters' House early in April. A large number of guests will be invited, including all the ex-presidents of the American Medical Association out of compliment to Dr. Gregory, who was president of the association in 1887. A committee, composed of Dr. F. J. Lutz, Dr. N. B. Carson, Dr. J. P. Bryson, Dr. C. H. Hughes, Dr. W. B. Outten, and Dr. H. W. Loeb, has the matter in charge.

The Movement to Unite the Medical Profession of the State.—At the recent meeting of the Medical Society of the State of New York the retiring president, Dr. Henry L. Elsner, was made chairman of a committee of five to confer with a committee of equal number representing the New York State Medical Association for the purpose of formulating a plan by which the regular profession of the State of New York might be united. Dr. Elsner has selected as his associates on this committee Dr. Abraham Jacobi, of New York; Dr. Albert Vander Veer, of Albany; Dr. A. M. Phelps, of New York, and Dr. George Ryerson Fowler, of Brooklyn.

The Kings County (N. Y.) Medical Society, of Brooklyn, has elected the following officers: President, Dr. Henry A. Fairbairn; vice-president, Dr. Charles M. Cox; secretary, Dr. William S. Hubbard; associate secretary, Dr. W. C. Woolsey; treasurer, Dr. Onslow S. Gordon; associate treasurer, Dr. John R. Stievers; directing librarian, Dr. James Winfield; trustees, Dr. William Browning, the retiring president; Dr. David Myerle, Dr. Robert J. Morrison, Dr. Walter Wood, Dr. J. M. Van Cott, Dr. J. E. Sheppard.

Vaccination in New York.—A systematic effort to prevent the further spread of small-pox is being made by the health department of this city. There are now 155 vaccinators at work, and it is reported that about 10,000 persons are vaccinated daily. Besides, at the headquarters, at Fifty-fifth Street and Sixth Avenue, Manhattan, and the old quarters in Brooklyn, five additional places for public vaccination have been opened. These stations are located at 68 Elm Street, Manhattan; 1237 Franklin Avenue, Bronx; 38 Clinton Street, Brooklyn; corner of York Avenue and Richmond Terrace, New Brighton, Richmond, and 372 Fulton Street, Jamaica, Queens.

The Responsibility Fixed for the Tetanus Cases in St. Louis.—The board of health, which acted as a court of inquiry in investigating the cause of the deaths of thirteen children from tetanus after being inoculated with the city's antoxine for diphtheria, submitted a report recommending that Dr. Amand Ravold, city bacteriologist, and Henry Taylor, janitor at the city chemist's office, be removed from the city service. The board also recommended that the city discontinue the manufacture of diphtheria antitoxine. In accordance with the first recommendation of the board, Mayor Wells, whose name appears first among the signatures to the report, has dismissed Dr. Ravold and Henry Taylor. The board in its findings said that the poisonous character of the serum, which afterward caused the deaths of thirteen children from tetanus, was known to Dr. Ravold, but that he failed to have it destroyed.

The Municipal Hospital for Contagious Diseases in Philadelphia has been made the subject of an investigation by a committee of physicians employed by the Department of Public Safety. This committee, which is composed of Dr. John V. Shoemaker, Dr. James Tyson, Dr. H. A. Hare, Dr. Fred P. Henry, and Dr. J. M. Anders, submitted a report on February 7th, which reads as follows: "That the Municipal Hospital is equipped with all approved means of caring for small-pox, and we urge that persons suffering from this and other contagious diseases shall enter this institution for treatment. A corps of competent physicians, under direction of the physician-in-chief, gives careful attention to all cases sent to the institution. All the patients are well quarantined. No small-pox has spread from this hospital to its immediate vicinity, and patients are not allowed to leave until all possible danger of contagion has disappeared."

Half a Million for Small-pox.—The finance committee of the Philadelphia Common Council has recommended the appropriation of the sum of \$225,000, in addition to what has already been appropriated by the city, for the extermination of small-pox. In the course of a debate on the subject the chairman said that the city may have to pay out half a million dollars before the present epidemic is entirely suppressed.

The Mortality Statistics of Chicago for the week ended February 1, 1902, compared with the preceding week, and with the corresponding week of 1901, estimated population mid-year, 1902-1, 820,000, are as follows:

	Feb. 1, 1902.	Jan. 25, 1902.	Feb. 2, 1901.
Total Deaths—all causes.....	517	480	450
Death rate per annum, per 1,000...	14.80	13.73	13.35
By Sexes:			
Males	282	288	245
Females	235	192	205
By Ages:			
Under 1 year	100	88	98
Between 1 and 5 years.....	40	44	42
Over 60 years	103	95	103
Principal Causes of Death:			
Acute intestinal diseases.....	23	13	15
Apoplexy	13	21	8
Bright's disease	24	24	14
Bronchitis	23	30	36
Consumption	59	57	45
Cancer	29	13	16
Convulsions	15	16	11
Diphtheria	9	14	17
Heart disease	47	29	31
Nervous diseases	29	22	13
Pneumonia	88	71	84
Typhoid fever	4	5	5
Scarlet fever	16	12	2
Suicide	10	9	6
Violence (other than suicide). 16	21	18	
Influenza	3	6	18

Births reported: Males, 238; females, 231. Total, 469.

Dr. Osler's Views on the Municipal Care of Consumptives.—A joint meeting of the Maryland Public Health Association, the Medical and Chirurgical Faculty, and the Laennec Society of the Johns Hopkins Hospital was held in Baltimore on January 28th, for the study and discussion of tuberculosis, and a large number of prominent physicians was present. Dr. J. McPherson Scott presided and introduced the speakers.

Dr. William Osler, of the Laennec Society, said that in the past ten years the mayor and city council had been very inactive in the matter of public health, and had not provided any of the much-needed institutions. He further said that we were not doing one thing that a modern civilized community should do for consumptives. Plans were preferred some time ago by which two students were enabled to visit each consumptive patient who applied for treatment at the Johns Hopkins Hospital Dispensary, and what they found was a disgrace to a city of 500,000 inhabitants. Those people had not the slightest instruction as to the

proper way to care for themselves; there was no law compelling a report to the board of health of cases of consumption, so that the authorities could inspect those cases; there was no provision for proper disinfection of the house after a death from consumption, and if there were the health department hadn't the means to do it, and the conditions in this respect were indeed appalling. The speaker said that the remedy was very simple and easy; but it would not be obtained for years, because the people would not wake up. There should be notification of the health department and a careful inspection of cases. This could be done without the slightest hardship to any one—quietly, easily, and with no placarding or making of the patient a social outcast. Then there should be a civic sanatorium, near the city, for curable cases and a place for advanced cases that could not be taken care of at home and were a menace to the community.

The Loomis Laboratory.—After Colonel Oliver S. Payne several years ago gave Dr. Alfred L. Loomis a large sum for the founding and equipment of a laboratory, the "Loomis Laboratory" was incorporated, to which Dr. Loomis conveyed the property. The act of incorporation contained a provision that under certain circumstances the trustees of the institution had power to transfer the property to the New York University. The university recently brought an action to have a trust declared for its benefit in the real estate in this city, the legal title to which is in the Loomis Laboratory. It was insisted that the donor intended the gift to be for the exclusive benefit of the university, and that Dr. Loomis held the title upon a trust annexed to it; that the property should be transferred to a board of trustees to hold in trust for the use of the faculty and students of the university, and that the laboratory should be used to increase the teaching facilities of the medical department of the New York University. Colonel Payne, who was abroad at the date of the incorporation, when called as a witness on the trial of the action, testified that his purpose in giving the moneys was to build a laboratory for original research and elementary teachings in scientific medicine, and that this laboratory was to be entirely independent, and he intended "to endow it with sufficient funds to run it," and not a word was said about the laboratory being used in the interests or for the benefit of any other institution, and that he had never said to Dr. Loomis that it was intended for the New York University. A dismissal of the action has been unanimously affirmed by the Appellate Division of the Supreme Court, which held that the proof failed to establish the allegations of the complaint. Justice Patterson, who gives the opinion of the court, says in conclusion: "That the laboratory was for a time used in connection with the instruction given in the medical department of the New York University, with the consent of the trustees of the defendant, does not establish the trust, nor does the provision of the act incorporating the defendant, which authorizes the trustees in their discretion to convey to the plaintiff the property in fee establish that trust."

The American Congress of Tuberculosis will hold its third annual session on May 14th, 15th, and 16th at the Hotel Majestic, in this city. The officers of the association are; Honorary president, Dr. A. N. Bell, Brooklyn, N. Y.; president, Dr. Henry D. Holton, of Vermont, secretary State Board of Health, Brattleboro, Vt.; vice-presidents, Dr. Henry B. Baker, Lansing, Mich.; Dr. E. T. Barrick, Toronto, Ont.; Dr. William Bayard, St. John, N. B.; Dr. Ralcy Husted Bell, New York city; Dr. A. C. Bernays, St. Louis, Mo.; Dr. J. Mount Bleyer, New York city; Dr. George Brown, Atlanta, Ga.; Dr. W. L. Bullard, Columbus, Ga.; Dr. (Colonel) E. Chancellor, St. Louis, Mo.; Dr. C. K. Cole, Helena, Mont.; Dr. T. D. Crothers, Hartford, Conn.; Judge Abram H. Dailey, Brooklyn, N. Y.; Hon. Moritz Ellinger, New York city; Dr. Juan A. Fortich, Cartagena, Colombia, S. A.; Dr. R. F. Graham, Greely, Col.; A. P. Grinnell, Burlington, Vt.; Major A. Harvard, U. S. A., Havana, Cuba; Dr. Thomas Bassett Keyes, Chicago, Ill.; Dr. Luis H. Labayle, Leon, Nicaragua; Dr. E. P. Lachapelle, Montreal, Canada; Dr. Louis Leroy, Nashville, Tenn.; Dr. Edouard Liceaga, City of Mexico; Dr. Dwight S. Moore, Jamestown, S. Dak.; Dr. William H. Murray, Plainfield, N. J.; J. A. McNeven, of Idaho; Dr. A. E. Osborne, Glen Ellen, Cal.; Dr. John H. Pryor, Buffalo, N. Y.; Dr. J. C. Shrader, Iowa City, Ia.; Dr. J. H. Tyndale, Lincoln, Neb.; Dr. C. S. Ward, Warren, O.; Professor S. H. Weeks, Portland, Me.; Dr. Cressy L. Wilbur, Lansing, Mich.; Dr. U. O. B. Wingate, Milwaukee, Wis.; Dr. C. F. Ulrich, Wheeling, W. Va.; secretary and treasurer, Clark Bell, Esq., city of New York. The executive officers or executive committee were directed to name vice-presidents from each State, Territory, Province or country, at least three from each, and selected as far as practicable from both professions of law and medicine. More than seventy-five of these have been already selected, and when all are filled will be announced. The executive committee authorized and directed the selection of one or more honorary vice-president from each State, Province or country, and already a large number of these appointments have been made from the highest public officials in the American States, the Dominion of Canada and Central and South American countries, embracing the governors of American States and the Provinces of the Dominion of Canada, and others in high official positions in sympathy with its labors.

Compulsory Vaccination.—A bill requiring compulsory vaccination has been introduced in the Senate of the Legislature of the State of New York. It provides that every local board of health shall compel the vaccination of every public officer, policeman, fireman, school teachers, and all other municipal officials who come in contact with the public. No person is to be admitted to the National Guard without a certificate of vaccination obtained not more than five years before. A radical feature of the proposed law is that no person, firm or corporation employing more than ten persons shall employ any one who has not been vaccinated within five years.

The more important features of the measure are contained in the following sections:

"Section I. The board of public health of each city or town shall furnish the means of free vaccination or revaccination to all the inhabitants thereof.

"Sec. II. The board of health of each city or town shall require and enforce the vaccination and revaccination of all or any part of the inhabitants thereof whenever, in the opinion of said board of health, the public health and safety requires such action.

"Sec. III. Any person who shall resist or interfere with the board of health, or with any officer or duly authorized agent thereof, in the enforcement of Section II, or who shall refuse to submit to vaccination when required so to do, shall be deemed guilty of a misdemeanor, and, upon conviction, shall be subject to a fine of not less than fifty nor more than one hundred dollars, or to imprisonment for not less than ten or more than thirty days, or both. Such fine or imprisonment shall not stand in lieu of vaccination or quarantine.

"Sec. IV. It shall be the duty of the board of health of each city or town in which a case of small-pox occurs to cause the vaccination or revaccination of each inmate of the building wherein said disease shall be found, provided, however, that any person who has been exposed to the contagion and refused vaccination or revaccination, shall not forcibly be vaccinated, but in the discretion of the said board of health, he may be quarantined and guarded for the period of fourteen days after the removal, death, or recovery of the diseased person. Any person who shall resist or interfere with the operation or enforcement of the provisions of Section IV shall be deemed guilty of a misdemeanor, and upon conviction shall be subject to a fine of not less than fifty nor more than one hundred dollars, nor shall such fine stand in lieu of vaccination or quarantine.

"Sec. V. No teacher, principal, dean, or president of any school, seminary, college, or university shall admit any person as a pupil or student therein, except upon presentation of a registered physician's certificate that said applicant has been successfully vaccinated within five years, or that he has twice vaccinated said applicant without success and that there exists vaccinal insusceptibility, nor shall any unvaccinated teacher, principal, dean, or president be employed in any such school, seminary, college, or university. Any person violating any of the provisions of Section V shall be guilty of a misdemeanor and upon conviction, shall be subject to a fine of not less than fifty nor more than one hundred dollars.

"Sec. VI. Superintendents of almshouses, State reform schools, industrial schools, hospitals, and other places where the sick and poor are received, masters of houses of correction, jailors, keepers of prisons, and superintendents or officers of all other institutions, supported or aided by the State, shall cause all the inmates thereof to be vaccinated or revaccinated when, in the opinion of the local board of public health it demands it."

Other sections of the bill provides that no commanding officer of the National Guard or head of firm or partnership or head of police or fire department shall employ a person who has not been successfully vaccinated within a period of five years and the violation of the last three preceding provisions is made a misdemeanor punishable by a fine of not less than fifty or more than one hundred dollars.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 8, 1902:

DISEASES.	Week end'g Feb. 1		Week end'g Feb. 8	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	33	8	23	5
Scarlet fever.....	351	29	337	31
Cerebro-spinal meningitis.....	0	4	0	7
Measles.....	706	22	891	34
Diphtheria and croup.....	346	51	333	55
Small-pox.....	42	15	61	10
Tuberculosis.....	270	119	358	156

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending February 8, 1902:

CORDEIRO, F. J. B., Surgeon. Detached from the Pensacola Navy Yard and ordered to the *Constellation*.

EVANS, S. G., Passed Assistant Surgeon. Detached from duty at the Naval Hospital, Portsmouth, New Hampshire, and ordered to the Pensacola Navy Yard.

FURLONG, F. M., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Virginia, instead of to the *Topcka*, as previously ordered.

OMAN, C. M., Assistant Surgeon. Ordered to the Naval Hospital, New York, for duty.

SPRATLING, L. Q., Surgeon. Ordered to duty at the Naval Hospital, Portsmouth.

ULSH, W. H., Assistant Surgeon. Detached from the *Annapolis*, and ordered to the Naval Hospital, Mare Island, for treatment.

URIE, J. F., Surgeon. Detached from the marine recruiting rendezvous, Boston, and ordered to the Naval Dispensary, Washington.

WAGGENER, J. R., Medical Inspector. Detached from the *Constellation*, and ordered to duty at the marine recruiting rendezvous, Boston.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending February 8, 1902:

GLENNAN, JAMES D., Major and Surgeon, upon his arrival at San Francisco, will relieve ROBERT J. GIBSON, Major and Surgeon.

HICKS, GEORGE L., Contract Surgeon, will proceed to Fort Totten, N. Y., for duty.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon, will proceed to Fort Totten, N. Y., for duty.

METCALF, BENJAMIN H., Contract Surgeon, will report at Fort Banks, Massachusetts, for duty.

PERSONS, ELBERT E., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

RICH, EDWIN W., First Lieutenant and Assistant Surgeon, will proceed to Fort Slocum, N. Y., for duty with the detachment of three hundred recruits now under orders to proceed to San Francisco *en route* for the Philippines.

RICHARD, CHARLES, Major and Surgeon, is granted leave of absence for fifteen days, to take effect upon being relieved from duty at Fort Leavenworth, Kansas.

WALL, FRANCIS M., Contract Surgeon, will proceed from Fort Thomas to Columbus Barracks, Ohio, for duty with the detachment of recruits about to be placed *en route* for San Francisco.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 7, 1902.

Smallpox—United States.

California.....	Los Angeles.....	Jan. 18.....	5 cases.	
"	San Francisco.....	Jan. 19-20.....	14 cases.	
Illinois.....	Bellville.....	Jan. 25-Feb. 1.....	1 case.	
"	Chicago.....	Jan. 25-Feb. 1.....	5 cases.	
"	Danville.....	Jan. 25-Feb. 1.....	1 case.	
"	Galesburg.....	Jan. 25-Feb. 1.....	2 cases.	
Indiana.....	Crawfordsville.....	Jan. 18-Feb. 1.....	14 cases.	
Iowa.....	Clinton.....	Jan. 26-Feb. 2.....	6 cases.	
Kentucky.....	Covington.....	Jan. 26-Feb. 2.....	6 cases.	
Louisiana.....	New Orleans.....	Jan. 25-Feb. 1.....	4 cases.	1 death.
Massachusetts.....	Boston.....	Jan. 25-Feb. 1.....	47 cases.	12 deaths.
"	Brookline.....	Jan. 18-25.....	1 case.	
"	Cambridge.....	Jan. 25-Feb. 1.....	5 cases.	
"	Chicopee.....	Jan. 18-25.....	1 case.	
"	Malden.....	Jan. 25-Feb. 1.....	1 case.	
"	New Bedford.....	Jan. 25-Feb. 1.....	5 cases.	
"	Somerville.....	Jan. 25-Feb. 1.....	1 case.	
"	Waltham.....	Jan. 25-Feb. 1.....	1 case.	
"	Woburn.....	Jan. 25-Feb. 1.....		1 death.
Michigan.....	Ann Arbor.....	Jan. 11-18.....	1 case.	
"	Detroit.....	Jan. 25-Feb. 1.....	6 deaths.	
"	Ludington.....	Jan. 6-Feb. 2.....	1 case.	
Minnesota.....	Minneapolis.....	Jan. 18-25.....	23 cases.	
Montana.....	Butte.....	Jan. 12-26.....	9 cases.	
Nebraska.....	Omaha.....	Jan. 18-Feb. 1.....	51 cases.	
"	So. Omaha.....	Jan. 1-31.....	172 cases.	
New Jersey.....	Camden.....	Jan. 25-Feb. 1.....	7 cases.	
"	Jersey City.....	Jan. 25-Feb. 1.....	25 cases.	1 death.
"	Newark.....	Jan. 24-Feb. 2.....	40 cases.	3 deaths.
New York.....	Binghamton.....	Jan. 25-Feb. 1.....	3 cases.	
"	New York.....	Jan. 25-Feb. 1.....	42 cases.	15 deaths.
Ohio.....	Cincinnati.....	Jan. 1-31.....	16 cases.	1 death.
"	Cleveland.....	Jan. 25-Feb. 1.....	3 cases.	
"	Middletown.....	Jan. 25-Feb. 1.....	2 cases.	
"	Toledo.....	Jan. 25-Feb. 1.....	3 cases.	
Pennsylvania.....	Auburn.....	Nov. 11-Jan. 25.....	48 cases.	1 death.
"	McKeesport.....	Jan. 25-Feb. 1.....	1 case.	
"	Norristown.....	Jan. 25-Feb. 1.....	1 case.	
"	Philadelphia.....	Jan. 25-Feb. 1.....	73 cases.	13 deaths.
"	Pittsburgh.....	Jan. 25-Feb. 1.....	1 case.	
"	Williamsport.....	Jan. 25-Feb. 1.....	2 cases.	
Rhode Island.....	Providence.....	Jan. 25-Feb. 1.....		1 death.
So. Carolina.....	Charleston.....	Jan. 18-25.....	2 cases.	
"	Greenville.....	Jan. 18-25.....	1 case.	
So. Dakota.....	Sioux Falls.....	Jan. 24-Feb. 2.....	4 cases.	
Tennessee.....	Memphis.....	Jan. 25-Feb. 1.....	12 cases.	
Washington.....	Tacoma.....	Jan. 19-26.....	3 cases.	
Wisconsin.....	Green Bay.....	Jan. 24-Feb. 2.....	10 cases.	
"	Milwaukee.....	Jan. 25-Feb. 1.....	3 cases.	

Smallpox—Foreign.

Brazil.....	Para.....	Nov. 1-30.....	14 cases.	1 death.
"	"	Dec. 1-31.....	11 cases.	1 death.
Colombia.....	Cartagena.....	Jan. 13-19.....		2 deaths.
"	Panama.....	Jan. 20-27.....	25 cases.	
France.....	Paris.....	Jan. 11-18.....		7 deaths.
Gt. Britain.....	Bristol.....	Jan. 1-11.....	1 case.	1 death.
"	Liverpool.....	Jan. 11-18.....	3 cases.	
"	London.....	Jan. 11-18.....	877 cases.	60 deaths.
India.....	Bombay.....	Dec. 31-Jan. 1.....		1 death.
"	Karachi.....	Dec. 29-Jan. 1.....	8 cases.	2 deaths.
"	Madras.....	Dec. 1-2.....		3 deaths.
Italy.....	Naples.....	Jan. 11-18.....	15 cases.	3 deaths.
Russia.....	St. Petersburg.....	Jan. 4-11.....	5 cases.	1 death.
Uruguay.....	Montevideo.....	Nov. 8-Dec. 7.....	268 cases.	26 deaths.

Yellow Fever.

Brazil.....	Para.....	Oct. 1-Dec. 31.....		24 deaths.
Dutch Guiana.....	Paramaribo.....	Jan. 9.....	2 cases suspect.	
Mexico.....	Vera Cruz.....	Jan. 18-25.....	1 case.	

Cholera.

India.....	Bombay.....	Dec. 31-Jan. 7.....		1 death.
"	Calcutta.....	Dec. 28-Jan. 1.....		33 deaths.
"	Madras.....	Dec. 14-20.....		4 deaths.

Plague.

China.....	Hongkong.....	Dec. 14-21.....		1 death.
India.....	Bombay.....	Dec. 31-Jan. 7.....		13 deaths.
"	Calcutta.....	Dec. 28-Jan. 4.....		22 deaths.
"	Karachi.....	Dec. 29-Jan. 5.....	31 cases.	26 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ended February 6, 1902:

- BULLARD, J. T., Acting Assistant Surgeon. Granted leave of absence for twenty-five days from February 1st.
- CLARK, TALIAFERRO, Assistant Surgeon. Granted leave of absence on account of sickness for fourteen days from January 16th.
- GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for two days.
- KALLOCH, P. C., Surgeon. Granted leave of absence for fourteen days from February 5th.
- KINYOUN, J. J., Surgeon. Department approval of June 28, 1901, granting Surgeon KINYOUN leave of absence for four months, is amended so that said leave shall be for one month and twenty-one days.
- MAGUIRE, E. S., Hospital Steward. Granted leave of absence for thirty days from February 5th.
- THOMAS, A. R., Passed Assistant Surgeon. To proceed to London, England, for special temporary duty.

Births, Marriages, and Deaths.

Married.

FRASER—STARK.—In San Jose, California, on Wednesday, January 29th, Dr. W. W. Fraser and Miss Effie D. Stark.

KNIGHT—LAMBERT.—In Brooklyn, on Thursday, February 6th, Dr. Frank H. Knight and Miss Lizette S. Lambert.

Died.

BOOTHBY.—In Boston, on Saturday, February 8th, Dr. Alonzo Boothby.

BOYCE.—In St. Louis, on Sunday, February 2d, Dr. Thos. H. Boyce, of Oklahoma City, Oklahoma Territory, in the thirty-third year of his age.

HERR.—In Lancaster, Pennsylvania, on Saturday, February 8th, Dr. M. L. Herr, in the sixty-fourth year of his age.

MUNDÉ.—In New York, on Friday, February 7th, Dr. Paul F. Mundé, in the fifty-sixth year of his age.

PLYE.—In Jersey City, on Friday, February 7th, Dr. Edwin Wollaston Pyle, in the fifty-third year of his age.

TRAU.—In Philadelphia, on Friday, February 7th, Dr. Adam Trau, in the sixty-first year of his age.

WEIDMAN.—In Reading, Pennsylvania, on Saturday, February 8th, Dr. W. Murray Weidman, in the sixty-fifth year of his age.

Obituary.

PAUL FORTUNATUS MUNDE, M. D., LL. D.

Dr. Mundé was only in the fifty-sixth year of his age when he was stricken with a cardiac affection that proved fatal in the course of a few weeks; before this attack, there had been every reason to suppose that the years of usefulness still in store for him were numerous. Although born in Dresden, he was brought to this country when he was but three years old, and he grew up a typical American. He received his medical degree from the Harvard Medical School in 1866, having previously served as an acting medical cadet in the Federal army. After his graduation he went to Germany and became a volunteer medical officer in the Bavarian army. He then went to Würzburg and served in the maternity hospital. In the Franco-Prussian

war he was a battalion surgeon on the German side, and at the siege of Paris won distinction by his bravery in saving some wounded men from a field hospital that had been set on fire. At the close of the war he pursued his obstetrical and gynecological studies in Vienna, where he received the degree of master of obstetrics. He was a pupil of von Scanzoni's, and from that great teacher he profited not a little. He came to New York in 1873, and at once obtained an active practice in obstetrics and gynecology. He soon became the editor of the *American Journal of Obstetrics and Diseases of Women and Children*, a journal which he improved very materially.

Dr. Mundé was a member of many learned societies, and he taught gynecology in the Dartmouth Medical College and in the New York Polyclinic.



PAUL FORTUNATUS MUNDE, M. D., LL. D.

It was from Dartmouth that he received the degree of LL. D. He was the author of an excellent work on *Minor Surgical Gynecology*, and, in collaboration with Dr. T. Gaillard Thomas, he made a thorough revision of Dr. Thomas's treatise on *Diseases of Women*. He was the author of many valuable articles on obstetrical and gynecological subjects and a frequent speaker on such topics in society meetings. He was a clear and concise writer and talker and always conservative in his teaching.

Dr. Mundé was exceedingly liked and admired by his professional brethren, and not by them alone, but also by his patients and by others with whom he came in contact. His energetic and cheery personality will long be remembered in New York, and here, as elsewhere where he was known, his early demise is deplored.

Pith of Current Literature.

Philadelphia Medical Journal, February 8, 1902.

Regenticides Not Abnormal as a Class. A Protest against the Chimera of Degeneracy. By Dr. E. C. Spitzka.

Tumor of the Brain, Localized Clinically and by the Röntgen Rays. By Dr. Charles K. Mills.—From his experiments, the author concludes that fibrosarcomata, and probably other tumors, can be photographed in the living subject, and their location and extent shown. Other abnormalities and deficiencies in brain tissue itself can be photographed, which will probably be of value in the diagnosis of cysts, softening, and hæmorrhages. The shadows obtained in normal parts of the brains studied, indicate that great care is necessary in the interpretation of any shadow obtained in the living subject.

The Treatment of Paralytic Attacks. By Professor A. Pick.

A Case of Cerebral Bulbar Palsy, with a Study of the Localization of the Tongue and Lip Centres. By Dr. Charles L. Dana.

Myasthenia Gravis (Asthenic Bulbar Paralysis). By Dr. Wharton Sinkler.

Scleroderma and Sclerodactylia. By Dr. B. Sachs.—The author remarks on the peculiar expression of the face in several of the patients suffering from scleroderma. The "mask-like countenance" is impressive, but the author has been struck still more forcibly by the pinched and attenuated nose, the sunken-in cheeks, and the retraction of the upper lip in the more advanced stages of scleroderma.

Hypochondria. By Dr. F. X. Dercum.

Fibroma of the Upper Dorsal Region of the Spinal Cord. By Dr. M. Allen Starr.

The Surgery of the Spine. By Dr. Samuel Lloyd.

The Sensory Segmental Area of the Umbilicus as Determined by a Case of Fracture of the Tenth Cervical Vertebra, with Complete Compression of the Spinal Cord and without Kneejerks and Babinski Reflex. By Dr. William G. Spiller.

Remarks on the Treatment of Syphilis of the Nervous System. By Dr. Joseph Collins.

A Case of Cerebellar Tumor. By Dr. James Henry Lloyd and Dr. J. Perceval Gerson.

Boston Medical and Surgical Journal, February 6, 1902.

The Proposed Boston Academy of Medicine. By Dr. J. G. Mumford.

A Plea for the Municipal Control of Tuberculosis in Boston. By Dr. Agnes C. Vietor.—The author believes it to be an error of fact, as well as of judgment, to lay predominant emphasis on the contagiousness of tuberculosis. The fundamental factor in the existence and increase of tuberculosis is the health of the mass of the people, and the community which does not vigorously attack the removable causes that lower this mass health, passively

supports the manufacture and maintenance of the tubercle bacillus. A model sanatorium should be erected in each section of the city, as an example of the method of living which cures. To these sanatoria selected cases should be sent for short periods, to learn the lesson by actual experience; returning to their homes, they will themselves be teachers to ever new and widening groups. A distinctly charitable hospital is needed to care for the really destitute and desolate, and, if this charity is guarded against abuse, the hospital need not be a very large one.

Six Cases of Operation for Cleft Palate. By Dr. C. A. Porter.—The results in these six cases were very encouraging. The author points out, however, that the power of speaking properly, in spite of a good technical result after operation, is almost always in direct ratio to the time spent in instruction and the intelligent effort of the patient.

The Treatment of Congenital Cleft Palate by Mechanical Means. By Dr. George A. Raymond.

Rabies: Report of Cases. By Dr. Charles J. Patton.

American Medicine, February 8, 1902.

Nature of Typhoid Fever. By Dr. Eugene Wasdin.—The author believes it probable that the *Bacillus typhosus* bears a most important relation to purpura hæmorrhagica of febrile type. The author quotes extensively from the literature on the subject and concludes that the treatment of the disease, now limited to the effort to remove the toxic products by baths, etc., should be directed more energetically to the destruction, or the attenuation, of the germ in its primary colony. As to the hygiene of communities, the prevalence of dust cannot be avoided, save by oil sprinkling, but one thing can be avoided—the sprinkling of the streets with water known to be contaminated, a process calculated to increase danger from this disease. It would be better to filter the street-sprinkling supply and allow the drinking of hydrant water.

Tuberculosis of the Eye. By Dr. Allen T. Haight.—The author is satisfied, from his own observations and those of others, that seventy-five per cent. of all cases of tuberculosis of the eye are due to two primary causes, either to infection from other parts of the body, or to direct injury to the eye. In primary tuberculosis of the eye, early diagnosis and operation rob death of many of its victims.

Malarial Iritis: Report of a Case. By Dr. Sidney D. Jacobson.

Phlegmon and Fistula of the Lower Jaw, Consecutive to Eruption of the Wisdom Teeth. Fracture of the Bone or Fractures of the Teeth and Infection after Extraction. By Dr. Thomas H. Manley.—Perforative endosteitis of the lower jaw is an infective lesion usually consecutive to (a) caries of the crown, (b) incomplete extraction, or (c) the late eruption of the third molar. Surgical aid is resorted to rather as a means of removing the blemish than because of severe pain. Operative intervention embraces: (1) Complete extraction of diseased fangs; (2) dissection away of scar tissue; (3) the thorough curetting of the sinus, and the closing of the breach in the soft parts in such manner that little or no deformity will result after heal-

ing. Drainage must be entirely from the base of the alveolus into the mouth, hence the importance of frequent cleansing of the gums with antiseptic lotions until repair is complete.

Peripheral Anæsthesia Paralysis, with a Report of Three Cases. By Dr. A. H. Levings.—The author concludes that during operative procedure the arms should never be forcibly abducted or extended and maintained in those positions for any considerable length of time.

Black Vomit in Inflammation and Injury of the Peritonæum. By Dr. John H. Landis.—The author considers this to be the most ominous prognostic sign to be met with in this class of cases. The treatment should be prophylactic rather than curative. *Veratrum viride* is, perhaps, the best remedy for this purpose. Ten drops of Norwood's tincture of *veratrum viride* should be given every two to four hours, until perspiration and nausea occur with lowering of the pulse-rate. After that, four-drop doses every two to four hours.

The Aspect of Disease as Seen in Arctic Alaska. By Dr. Ernest W. Kelsey.

Medical Record, February 8, 1902.

The Diagnosis of Pericarditis. By Dr. Arthur R. Edwards.—The definitive diagnosis may depend on the physical findings. Precordial prominence may occur when the chest is plastic. The apex beat is somewhat lower when exudation depresses the diaphragm. The interspaces may bulge. According to Ewart, the upper edge of the first rib can be felt as far as its sternal attachment, being separated from the clavicle ("first rib sign"). The friction thrill is often felt. There are two complementary recesses in the pericardium where fluids may accumulate, the first over the basal vessels, whose apex is directed downward, the second in the fifth right intercostal space, the fluid exudate replacing the relative liver dullness. Auscultation reveals the chief and most reliable diagnostic sign, the pericardial friction due to attrition of the inflamed serous pericardial surfaces. This friction increases upward during exudation and downward during absorption. Pericarditis is almost invariably secondary, infective diseases of which rheumatism is foremost being most frequent. It may arise by contiguity from adjacent organs, pleurisy, pneumonia, aneurysm, etc. In cachexiæ, carcinoma, in from three to ten per cent. of nephritis, alcoholism, blood diseases, scurvy, etc., often as a terminal infection where it may be overlooked. The fluid is sero-fibrinous in rheumatism; ichorous in perforation from hollow viscera; hæmorrhagic in scurvy, carcinoma, tuberculosis, hæmorrhagic exanthemata, and alcoholism; purulent in sepsis, empyema, etc.; yet paracentesis is the only certain test, since exceptions are frequent. Tuberculous pericarditis can be diagnosed positively only by detection of tubercle bacilli in the aspirated exudate.

Dengue: A Study of Its Mode of Propagation and Pathology. By Dr. Harris Graham.—After a very careful study the author has found, in over one hundred cases, an amœboid form in certain of the red blood corpuscles, resembling in many ways the *Plasmodium malariae*, but having a much longer

cycle of formation. Its resemblance to the parasite of the Texas cattle fever, and its mode of propagation by the mosquito, are suggestive.

Treatment of Vessels from Yellow-fever Ports: A Reply to Dr. Reed and Dr. Carroll. By Dr. Edmond Souchon.—The author asserts that when the sanitary authorities of our sister republic, Mexico, and of the Central and South American States, destroy all possible causes of yellow fever, and disinfect thoroughly, before departure, all vessels going to ports liable to yellow fever, or going to Northern ports which may transmit it to Southern territory, we shall be safe in altering our quarantine regulations.

Nephrectomy: A Clinical Study of Four Cases. By Dr. Louis J. Ladinski.

Medical News, February 8, 1902.

The Surgical Treatment of Ascites Due to Cirrhosis of the Liver. By Dr. George Emerson Brewer.—The author reviews the statistics of sixty cases in which operative intervention was resorted to. At least six patients have been cured by the procedure and have remained well for two years or more. Six others have been relieved of the symptom and lived for from two to six months. Another patient suffering from hæmorrhages of the alimentary canal was promptly cured by the operation, and a number of others have been materially improved. Thirty-eight have recovered from the operation. The author suggests the Morrison operation at an earlier and more favorable stage of the disease.

On the Ætiology of Cirrhosis of the Liver. By Dr. James K. Crook.

On the Treatment of the Alcoholic Cirrheses of the Liver. By Dr. George M. Converse.—The author commends the milk diet. The quantity to be taken should be from three to four litres daily. The disgust often induced by the fermentation of some of the milk that remains in the mouth may be prevented by washing the mouth with Vichy after each one of the meals. This diet should be continued until the gastro-intestinal symptoms and the congestion of the liver have subsided. If ascites is due to the coexistence of perihepatitis and chronic peritonitis, complete rest, together with a milk diet and removal of the fluid, may do much for the patient.

On the Diagnosis of Cirrhosis of the Liver. By Dr. J. C. Wilson.—The author affirms that the term cirrhosis is an unfortunate one, in that it has been applied to conditions wholly unlike ætiologically, anatomically, and clinically, which have, however, in common, an overgrowth of the connective tissue of the liver. The term chronic interstitial hepatitis is to be preferred. The symptoms are ill-defined and the liver is often unchanged in size or contour. The clinical diagnosis in a large proportion of the cases is, therefore, impossible. In the presence of definite symptoms and of the signs of enlargement or diminution of the liver, the diagnosis is commonly a simple matter.

Cirrhosis of the Liver as Seen in Children. By Dr. W. C. Hollopeter.—Cirrhosis of the liver in infants and adolescents is not so infrequent as clinicians infer. It may be relegated to either the syphi-

litic or alcoholic types, with a very small percentage as sequelæ of the acute infectious diseases. As a rule, the premonitory symptoms are disguised by a long train of gastro-intestinal irritation that renders an early diagnosis uncertain.

Intestinal Obstruction Due to Gall-stones. By Dr. Lewis Stephen Pilcher.

Percussion of the Lower Border of the Liver. By Dr. Albert Abrams.

Tumors of the Liver. By Dr. Ryerson Fowler.

Journal of the American Medical Association,
February 8, 1902.

Autotoxæmia as a Factor in the Neuroses. By Dr. George F. Butler.—Diagnosis in conditions of self-intoxication is not so simple as it at first seems. Owing to the tendency of the neuroses with an underlying vasomotor factor to remit or assume temporary appearances of health, the distinction between the deep forms of self-intoxication and these neuroses becomes at times difficult. In an hereditarily defective or acquired neuropathic constitution, self-intoxication may cause marked and decided symptoms of less augury than when found in a healthy constitution. Self-intoxication occurring in puberty often temporarily imitates seemingly serious puberal neuroses and psychoses. The same is true of the climacteric end of the senile period. In all these cases the condition produced by self-intoxication has the clinical tinge of the period in which it appears. This is why treatment directed to a change of environment and the habits of the individual so often produces favorable effects on seeming senile and climacteric breakdown.

The Uses of Tuberculin. By Dr. Charles Denison.—The author disagrees with the statement of Petruchki that "Nothing will be gained by the search for new forms of tuberculin"; he asserts that there is more yet to be discovered in reference to tuberculosis than we now know.

The Importance of Heredity as a Cause of Insanity. By Dr. Arthur McGugan.

Incipient Amyotrophic Lateral Sclerosis, with Recovery. Brachial Neuritis, Angina Pectoris, and Epilepsy from Electrical Injury. Traumatic Neuritis and Persistent Brachial Neuralgia from Hypodermic Injection. By Dr. Leo M. Crafts.

Alexia from Cyst Caused by Bullet Wound; Operation; Death. By Dr. G. W. McCaskey.—This case is of interest because the occurrence of alexia as an isolated type of aphasia, and especially its occurrence as a type of traumatism, is comparatively rare. If the warning given by the presence of Hutchinson's pupil after the operation had been heeded, the patient would have had an excellent chance for recovery from the operation, with considerable symptomatic relief.

The Economic Limitations of the Visual Acuity in Various Trades and Professions. By Dr. H. V. Wuerdemann.—The author insists that the normal visual requirements of trades and professions should always be ascertained before examining applicants for admission, advancement, or retention in service. If we adhere to the highest scientific requirements in certain trades, many valuable

men would be prevented from work and both the workman and the business be injured thereby.

What Amount of Visual Defect should Disqualify in Railroad Service. By Dr. Frank Allport.—In this article the author incorporates in statistical form the answers to a letter of inquiry and a question blank sent by him to every railroad in the United States, Canada, and Mexico, operating over one hundred miles of road.

The Problem of Heredity. By Dr. James J. Kiernan.—The author asserts it to be obvious that the problem of heredity has been approached from the standpoint of preconceived notions, and that the forces underlying it have been estimated entirely from the standpoints of times when embryology and biology were unknown.

Note on Gauging Vesical Capacity. By Dr. G. Frank Lydston.—A small catheter and sterile water or normal salt solution is best for distending the bladder. A hypodermic injection of morphine, twenty or thirty minutes before gauging the bladder capacity, is very useful. Whenever the urine returns with some degree of force, but loses this force as the test proceeds, temporary distention atony has been produced and the test requires repetition.

Primary Sarcoma of the Œsophagus and Stomach. By Dr. William Travis Howard, Jr.

Lancet, February 1, 1902.

The Heart of the Child. By Dr. D. B. Lees.—The author first describes the proper method of examination of children's hearts, laying stress on the necessity for a kindly manner, gentle ways, and warm hands. Murmurs due to congenital malformation are very peculiar and very puzzling. Such murmurs are generally systolic in time, a presystolic or diastolic congenital murmur being very rare. The most frequent is a systolic murmur, often very loud, heard best at the junction of the fourth left costal cartilage with the sternum, due often to an incomplete cardiac septum. The next most common is a systolic murmur over the pulmonary artery, loudest over the second left cartilage, and indicating a congenital obstruction of the pulmonary artery. Congenital malformations of the heart mainly affect its right side, which is most active during intra-uterine life. The most important affection of the right heart, clinically, is secondary to acute or extensive chronic disease of the lungs or to disease of the left heart. Taking up next the left side of the heart, its normal limits are defined as follows: In healthy boys of from twelve to fourteen years of age, the left border of the cardiac dulness is found at about one finger-breadth interval to the nipple line. The heart is frequently affected in diphtheria, there being extensive fatty degeneration and destruction of the cardiac muscular fibres. If the dilatation amounts to two finger-breadths to the left of the nipple line, the danger of death is great. Influenza may also produce a rapid dilatation of the left ventricle which may be dangerous to life, but here the susceptibility of the child is less than that of the adult. The pneumococcic toxine appears to affect the left ventricle less than does that of in-

fluenza; any enlargement is usually due to dilatation of the right ventricle pushing the border of the heart further to the left. In tuberculosis and typhoid fever moderate enlargement of the left ventricle is not infrequent. In acute and subacute rheumatism an enlargement of the left ventricle with enfeeblement seems to be invariable. In children the cardiac manifestations of rheumatism often are far more pronounced than any other indications of the disease. Pericarditis may occur in a first attack, but is usually a later phenomenon. The author gives full adherence to the view of Poynton and Paine, that rheumatism is due to a diplococcal micro-organism. In chorea an enlargement of the left ventricle, with or without murmur, is present in the great majority of cases—an additional confirmation of the essentially rheumatic nature of chorea.

In the treatment of cardiac disease of rheumatic origin in children, the salicylates should always be given, and in sufficient dose. They are never depressing to the heart, and where there is a tendency to rheumatic relapse, they should be given in small doses over a long period of time. The best means of repressing cardiac inflammation are leeches and the ice bag. Digitalis is of little service in the treatment of rheumatic cardiac inflammation in the child; the hypodermic injection of strychnine is of far greater value. In diphtheria the author relies mainly on subcutaneous injections of atropine when danger threatens, and believes that this has saved many lives.

Notes Concerning a Native Remedy for Black-water Fever. By Dr. R. O'Sullivan-Beare, M. B.—As to the primary cause of black-water fever we are entirely in ignorance. The predisposing cause of the disease is undoubtedly that anæmic state of the system produced by repeated attacks of ordinary malaria, which is known as malarial cachexia. The author holds that black-water fever is not a complication of ordinary malaria, but an entirely distinct disease; it attacks persons exposed to its influence, whose powers of resistance have been weakened by chill, fatigue, faulty dietary, insolation, or possibly the abuse of quinine. Among officinal preparations, there appear to be none upon which, employed either singly or in combination, any reliance can be placed for the treatment of black-water fever. The exhibition of quinine aggravates the symptoms and is distinctly harmful. There is only one legitimate rôle for quinine in black-water fever—namely, that of a prophylactic against ordinary malaria. Some years ago the author heard of a native remedy for the disease in question. It consists of a decoction made from the roots of a *cassia* which grows in equatorial East Africa. The author reports five cases of black-water fever in which the use of this native remedy brought about speedy recovery. He administered it in the form of a fluid extract, which corresponded almost exactly to the decoction used by the natives. The patients improved at once, the temperature falling to normal within twenty-four hours, and the urine becoming abundant and clear. E. M. Holmes, F. L. S., states that this particular species of *cassia* is closely re-

lated to *Cassia abbreviata*, but as it differs in essential characters he has named it *Cassia Beareana*.

On the Ultra-violet Light from a Rapid Oscillation High-tension Arc for the Treatment of Skin Diseases. By Dr. H. Walsham.

Two Cases of Uterine Cancer Successfully Treated with Cancroin. By A. Adamkiewicz.

The Trial, Execution, Necropsy, and Mental Status of Leon F. Czolgosz, Alias Fred Nieman, the Assassin of President McKinley. By Dr. C. F. MacDonald. With a Report of the Post-mortem Examination. By E. A. Spitzka.

The After-histories of One Hundred Cases of Supra-vaginal Hysterectomy for Fibroids. By Dr. G. C. Thomas.—The author has followed up the cases of one hundred women, upon whom the operation of supra-vaginal hysterectomy for fibroids had been performed during the past five years. His most prominent conclusions are as follows: From the standpoint of the patients, the operation is a most satisfactory one, and their capacity for work is greatly increased. The statistics clearly demonstrate that one ovary should be retained, but that the importance of this diminishes in proportion as the age of the patient approaches more closely to the climacteric period. The operation *per se* causes no tendency to insanity, but a certain number of patients complain of a diminution in their powers of memory. The pain and discharge resulting from the operation are very slight; the functions of the bowel and bladder are not usually interfered with, and the sexual sensations are not generally influenced by the operation.

A Case of Recurrent Sarcoma with Apparently Spontaneous Cure and Gradual Shrinking of the Tumor. By A. L. Watson, M. B.

British Medical Journal, January 25, 1902.

A Visit to some American Hospitals. By Dr. G. B. Ferguson.

The Operative Treatment of Lymphangeiectasis of Filarial Origin. By Dr. J. Maitland.—The chief objections that have been raised against operations for the removal of lymphatic varices and lymphadenocèles of filarial origin are three in number: 1. That such operations are unscientific in principle, as only a portion of the varix is removed and the obstruction to the circulation of the lymph still persists. 2. That the operation is frequently followed by lymphorrhagia, or a lymphatic fistula forms and can never be closed. 3. That such operations are very liable to result in septic infection or erysipelas.

The author reports three cases of operation for filarial lymphangeiectasis (removal of lymphatic glands and varices), in which the distressing symptoms of the disease were completely relieved. The object of these operations is, not to restore the circulation of lymph, but to relieve the patient, and this result is achieved in a number of cases; so that no theoretical objections, as (1), should carry any weight. As regards objections (2) and (3), the author has never seen a fistula, an attack of ery-

sipelas or septic infection, or a death follow the operation. And his experience has been large.

Observations on Human Filariasis in Trinidad, W. I. By G. A. Vincent, M. B.—Of 500 patients under treatment at the Colonial Hospital, Port of Spain, 25 (5 per cent.) were found to be infected with filaria, and 33 (6.6 per cent.) had elephantoid disease. Of the 25 cases of filariasis, 3 (12 per cent.) had well-marked elephantiasis.

Experiments showed that the metamorphosis of filaria in mosquitoes in Trinidad coincided in the main with that observed in other tropical countries. The species of mosquito employed were *Culex fatigans*, *Culex tainatus*, and *Anopheles albimanus*.

The only safeguard against filarial infection is to be found in the habitual use of mosquito-nets. If a malarial subject is a source of danger to those around him, a filariated individual is doubly so, for in his case the carriers of infection are drawn from the ranks of a very common species of infection—*i. e.*, *culex*.

On the Causal Relationship between "Ground-itch," or "Pani-ghao," and the Presence of the Larvæ of the Ankylostoma Duodenale in the Soil. By C. A. Bentley, M. B.—Ground-itch is an affection of the skin, confined entirely to the lower extremities, and probably always associated with the presence of the larvæ of the ankylostoma duodenale in the affected areas; endemic in Assam and the West Indies, and possibly in other parts of the tropics; characterized by its periodical epidemic appearance in the infected areas coincident with the onset of the rainy season; with typical lesion consisting in a primary erythema, followed by a vesicular eruption which frequently becomes pustular, and in severe cases may result in obstinate ulceration, or even in gangrene. All observations point to the earth as being the infecting medium, and faecal contamination of the soil as being the most active agency in the propagation of the disease. The first symptom is an intense itching and burning at the spot where afterward the eruption appears. In the papular and early vesicular stage of the disease, the application of a strong solution of salicylic acid in collodion or in methylated spirit will cause the eruption to dry up. If, however, pus has formed, the only treatment of any service is the opening up and disinfection of the pustules with pure carbolic acid, and the after-treatment of the sore as an ordinary ulcer. The adoption of a proper conservancy system would probably entirely prevent the occurrence of the disease. The wearing of shoes is known to be an almost certain preventive of the disease.

Malarial Fever in St. Lucia, W. I. By St. G. Gray, M. B., and G. C. Low, M. B.—The very large majority of the cases of malarial fever in St. Lucia are of the malignant type, the æstivo-autumnal fever of the Italians. Many of the cases showed large numbers of parasites in the peripheral blood, while others had very few. The usual type of the fever was quotidian, and the non-pigmented and the pigmented quotidian parasites were both found. Crescents were not rare, but quartan fever was met with only twice. Of 1,065 cases, 2 proved fatal, both patients being moribund when first seen. No cases of hyperpyrexia were observed. In many cases intestinal parasites were also present, the resulting anæmia being very great.

Leprosy and Congenital Symmetrical Keratoderma. By G. Pernet, M. R. C. S.—The author calls attention to the fact that the well-known case of leprosy mentioned by Gilbert White in his Natural History of Selborne was not leprosy at all, but an instance of symmetrical congenital thickening of the palms and soles, known variously as tylosis, keratoma, or keratoderma. Leprosy of the soles and palms is rare, and, involving the latter areas alone, unheard of.

Blackwater Fever. By R. V. Moffat, M. B.—The author negatives Koch's theory that the hæmoglobinuria which at times complicates malaria is generally, if not always, due to the action of quinine on corpuscles damaged by malaria. He has seen several instances of hæmoglobinuria in individuals who had taken no quinine for months, and believes that such hæmoglobinuria is usually due to exposure or chill. Quinine should be given steadily through such attacks, as it is the only efficacious remedy. It cures thousands of cases of malaria for every case of hæmoglobinuria it may produce. Koch's theory has done incalculable harm in South Africa; the laity have become frightened and are inclined to use quinine too sparingly.

Notes on Filaria Demarquaii. By G. C. Low, M. B.—The embryos of *Filaria Demarquaii* are very small, but they may be detected in the peripheral blood by day as well as night. Their movements are at first exceedingly active. They measure, on an average, 0.205 to 0.208 millimetres long by 0.005 millimetres broad. The presence of the parental and embryonic forms seems to give rise to no pathological effects or clinical symptoms, the diagnosis being made only by examination of the blood. The habitat of the parent is the loose connective tissue of the peritonæum. The intermediate host (mosquito) of this parasite has not yet been determined. Experiments with the commoner mosquitoes have proved negative.

The Suctorial Bulb in "Culex." By G. T. Collingwood.—In this article is given a short description of the œsophageal, or suctorial, bulb and the apparently loose connection of its tubular part with the basal end of the epipharynx, or suctorial tube, in the head of the female *culex*.

Notes on Lightning-stroke in South Africa. By J. G. Berne, R. A. M. C.

Inoculation in the Incubation Stage of Plague. By A. M. Corthorn, M. B.—The author reports five cases of inoculation in the incubation stage of plague, in which there was only one death—a recovery-rate of eighty per cent. All the patients lived in highly infected centres, and developed active symptoms of the disease within forty-eight hours.

Centralblatt für innere Medicin, January 4, 1902.

Staining Urinary Sediment with Alizarin Sulpho-acids.—Dr. R. Knapp says that, using the sulpho-acid salts of phthallic acid, he has obtained exquisite pictures of the mucosa of the bladder in normal urine, but that in diseased kidneys or pelvic renal disease, the mucosa did not stain at all, or at best, in a cloudy, stringy manner. Granular casts appear yellow, hyaline casts with a faint violet color. Among the leucocytes,

the protoplasm is stained lightly, the nuclei somewhat darker. In pyelitic abscesses, the leucocytes stain yellow and are imbedded in a stainless or lightly yellow stained mucus.

Berliner klinische Wochenschrift, December 30, 1901.

Origin and Prevention of Oxalic Sediment in the Urine.—Professor G. Klemperer suggests a diet which excludes milk, eggs, tea, cocoa, and most vegetables, and embraces meat, fats, bread, flour foods, rice and leguminous vegetables, apples and pears. These contain considerable calcium and magnesium with a minimum of oxalic acid.

Active Movements of Leucocytes. By Dr. Alfred Wolff.

New Method of Treating Genuine Epilepsy. By Dr. M. Lion.

Treatment of Swollen Nasal Alæ in Vasomotor Rhinitis. By Dr. W. Lublinski.

Riforma medica, October 21, 22, and 23, 1901.

A Contribution to the Study of Talma's Operation. By Dr. Davide Tedeschi.—It is found that in rabbits the collateral blood currents are better developed when the omental graft is implanted between the muscles and the skin of the abdominal wall than when it is implanted between the peritonæum and the muscles. Even after the operation has been performed in dogs, ascites may develop on tying the portal vein, but this ascites disappears after two months. In man, with good technics, the intervention may be reduced to an operation classed as not grave. As to the indications for the operation of establishing a communication between the omental veins and those of the anterior abdominal wall to relieve the portal circulation of undue pressure, they have not yet been positively determined, and will not be until the data concerning the success of the operation are more complete. An index of operability should be established for the liver, just as one exists for the kidney in the urine, in the examination of the blood for hæmoglobin, etc. The communication between the vessels which was intended by Talma to take place in the omental graft does take place promptly, and in man begins within five days of the operation, as appears from the author's researches.

November 7, 9, and 12, 1901.

Intestinal Obstruction Due to Carcinoma of the Colon. By Dr. Guido Turazza.

On the Pathogenesis of Acute Delirium. By Dr. A. Pieri.—Before the publication of the work of Briand and others, acute delirium was regarded as an independent morbid entity. Briand, in 1881, was the first to point out that this condition might be of infectious origin. Since then various bacteria have been found in the blood of patients with acute delirium, but a number of cases have also been published in which no micro-organisms were found on examination of the blood. The author reports a case in which the result of the bacteriological examination was negative, and in which the autopsy revealed the presence of a slight leptomeningitis. In commenting upon the diagnosis of these cases,

the author says that the term acute delirium is frequently applied to cases of acute febrile diseases in which delirium is a prominent symptom. Acute delirium is a separate disease, with a still obscure pathogenesis, and with not always characteristic pathological evidences on autopsy. The gradually increasing restlessness, the profound loss of consciousness, the hallucinations of fear, the facies pathetica, the rather elevated temperature, the rapidly appearing bedsores, the short final coma, are all symptoms which characterize the clinical picture of acute delirium. Acute mania, on the other hand, does not give rise to an elevation of the temperature, does not present the facies pathetica, and does not cause rapid wasting of the body, as does acute delirium.

November 13 and 14, 1901.

Paralyses in the Course of Pertussis. By Dr. R. Simonini.—The author reports two cases of paralysis occurring in patients suffering from pertussis. In the first case there was a complete left spasmodic hemiplegia and an incomplete inferior facial paralysis. The onset was sudden, without any disturbances of consciousness, and without any pain in the muscles affected, or along the nerves on pressure. The reaction of degeneration was not present, and the reflexes were undisturbed, but there was a slight atrophy. The author concludes that in this case there was a lesion of the internal capsule, as such a lesion explains all the symptoms. In the second there was the symptom-complex of a bulbar paralysis, and the autopsy showed that this diagnosis had been correct. The first patient was a boy, aged five years and eight months, and the second patient a girl, aged six years and five months.

November 15, 1901.

The Curative Action of Streptococcus Erysipelatous in Ozæna. By Dr. G. Montoro de Francesco.—The researches of Loewenberg have shown ozæna to be an infectious local disease caused by the presence of a specific microbe, the micrococcus of Loewenberg. In order to produce its effect, this coccus must find a favorable soil in the shape of an already altered Schneiderian membrane. Such preparatory lesions may be simple coryza, acute or chronic, and are due to the presence of a variety of bacteria that are found on the pituitary membrane and may live in symbiosis or alone for a long time, until a cold, etc., disturbs the equilibrium between the bacteria and the mucosa, thus rendering the former pathogenic. Ozæna is developed by the advent of Loewenberg's coccus, upon a soil of rhinitis or coryza, in a patient predisposed by debility. The coccus of Loewenberg produces lesions in the mucosa of the nose, which eventually cause the atrophy of the glands of the structure affected. All antiseptic and other local remedies are of no avail in such cases, except the streptococcus erysipielatis, which evokes an inflammation (inflammatory leucocytosis) in the membrane of Schneider, and by means of the soluble products of its metabolism furnishes the tissues with a resisting power against the coccus of Loewenberg. The author, in support of the above statements, relates a case of ozæna in which erysipelas developed accidentally, and in which the ozæna vanished after the disappearance of the erysipielatous inflammation

that affected the face and nose. Three years have since elapsed without recurrence of the ozæna. In a second case, in another family, where erysipelas had been present, all efforts at combating the ozæna were of no avail, and the author had fully determined to inoculate the patient with erysipelas, if necessary, when he found that the infection had accidentally taken place, and that erysipelas of the face had developed. After eight days, during which local applications of mild antiseptic solutions were made, the erysipelas disappeared, and with it the ozæna.

November 16, 18, 19, 20, and 22, 1901.

On a Cerebellar Syndrome with Anarthria Due to Acute Malaria. By Dr. Sergio Pansini.—As the result of a study of four cases, which he reports, the author adds a new type to the neuropathies of malaria. In these cases there is a complete syndrome of cerebellar disease, including atonia, asthenia, ataxia, disturbances of walking and on standing. The symptoms in these instances did not depend upon any other causes, such as alcoholism, syphilis, hereditary, etc., but exclusively on malaria. Properly speaking, this syndrome is in direct relation to pernicious malaria, and is a twin of the coma of pernicious fever. It is exclusively of cerebellar origin because the symptoms are purely those of insufficiency, without those of irritation and compensation which often accompany cerebellar lesions. There are no phenomena indicating a lesion of the medulla, the pons, the brain, or the peripheral nervous system. The accompanying dysarthria (difficulty in articulation), is of cerebellar origin. The onset is sudden and the tendency is toward prompt resolution, except the dysarthria, which persists longer than the other symptoms.

November 22 and 23, 1901.

The Radical Treatment of Ischuria, Due to Prostatic Hypertrophy, by Means of Rectal Cauterization of the Prostate. By Dr. Angelo Negretto.—The author devised this method of treating hypertrophied prostates in 1895, and has since then tried it in a number of cases. The present article contains the results obtained in his last series of ten cases. He prepares the patient for operation by the administration of a purgative and a mixture of bismuth and opium. An hour before the operation he administers several enemata of glycerin. General anæsthesia is then administered, the patient is placed in the position used in perineal cystotomy, with elevated pelvis, and the rectum is stretched with a Weiss's speculum and the upper part of the rectum is packed with gauze so as to protect the operative field. The special point for the Paquelin cautery, which the author has specially devised, and which is provided with a scale enabling the operator to control the amount of tissue destroyed, is now introduced until it reaches the middle of the rectal surface of the prostate. The extent and depth of the cauterization depend upon the size of the gland. The operation lasts, on the average, two minutes, and ten or twelve days later, the catheter is withdrawn permanently and the patient urinates spontaneously. In nearly every case the method described has effected a speedy and complete cure of the hypertrophy and of the urinary obstruction, according to the author. Only in one case was there

no improvement, that of a man with an enormous prostate and severe vesical complications. The method outlined is directed especially against the congestive element of prostatic hypertrophy, and is useful particularly in those cases where this element plays a great rôle. It has the advantage of not interfering with the generative functions.

November 25, 1901.

A New Method of Fixation for Movable Kidney. By Dr. Niccola Giannetasia.—Convinced of the inadequacy of the methods of renal fixation now in use, the author has devised a new operation which he has tested on the cadaver and on dogs. The results of these experiments he will report later, when he has had the opportunity of comparing them with those obtained by other methods. The author's operation consists of three steps: (1) The isolation of the kidney and the formation of a rectangular flap from its capsule. (2) The passage of this flap through a *boutonnière* formed in the quadratus lumborum muscle, in such a way as to separate a fascicle at the margin of this muscle, which is shut off between the flap and the denuded portion of renal tissue. (3) The fixation by means of sutures of the three margins of the flap to the adherent edges of the capsule which has remained in place. Simon's lumbar incision having been made, the external portion of the quadratus lumborum muscle is carefully isolated, the anterior leaf of the transversalis is incised, the kidney drawn into the wound, the adipose capsule removed, and a flap of fibrous capsule, rectangular in shape, including the middle third of the convex border, is traced. A small bundle of muscular fibres is now separated from the external border of the quadratus, leaving it attached above and below to the rest of the muscle. The flap is now drawn into this button-hole by means of forceps until the bundle of muscle-fibres reaches the base of the flap. The latter is now sutured into place with a few catgut sutures, and the wound is closed in the usual way.

Roussky Archiv Patologiyi, Klinicheskoy Meditsiny y Bakteriologiyi, October 31, 1901 (New Style, November 12, 1901).

A Contribution to the Study of Gaseous Exchange in Cancer Patients. By Dr. N. Swenson.—The irrepressible disintegration of proteid bodies in the organism of patients with cancer, which is apparently due to a toxic substance, has led the author to investigate the gaseous metabolism in such patients, with a view of determining whether this excessive decomposition involves also the non-nitrogenous substances. For this purpose he analyzed the gaseous exchange by means of a Zuntz-Geppert apparatus, and in addition made an analysis of the nitrogenous metabolism and the food taken in during the seven days of observation in the case of a patient with cancer of the œsophagus.

He found that the sum of the oxidizing processes (the development of carbonic acid and the consumption of oxygen) in this patient exceeded the physiological limits. The acceleration in the general nutritive exchange cannot be attributed, however, to the increased decomposition of proteids alone. Cancerous patients probably decom-

pose more non-nitrogenous substances (fat) than a healthy man under the same conditions of life.

On Agglutination as a Means of Diagnosis in Glanders. By Dr. N. Pokchichevski.—In obscure cases of glanders it is important to recognize the invasion of the body by the disease as early as possible. In addition to the well-known reaction with mallein, the agglutination-test, according to Widal's method has been tried in the diagnosis of glanders. The author examined the blood of sixteen healthy horses and eight horses attacked with glanders, with a view of determining their agglutinating powers. He found that the serum of healthy horses did not give the agglutinating reaction when the broth culture of the bacillus was diluted 1:300, but that horses affected with glanders gave a distinct agglutination in the extreme dilution of 1:1000. In a dilution of 1:500 the clumping was macroscopic. The preparatory injection of mallein into horses with glanders gave an increased capacity for agglutination to the animal's blood, because the blood, being taken at higher temperature, gave a microscopic agglutination distinctly in a dilution of 1:2000.

The Influence of Tincture of Opium upon Immunity. By Dr. Oppel.—In 1894, Cantacuzene, as the result of experiments, concluded that opium destroyed the immunity of guinea-pigs in cases where the cholera bacillus was introduced into the intestine, subcutaneously, or into the peritonæum. Grigoryevsky later confirmed this view as regards the *Bacillus pyocyaneus*. The author found that the injection of cultures of the typhoid bacillus into guinea-pigs produced strongly marked leucocytosis and phagocytosis, with a diminishing number of bacteria in the exudates, within the first six hours. In animals that had received at the time of injecting the typhoid culture, a dose of tincture of opium proportional to their weight (from 1:200 to 1:2000) the addition of new leucocytes was inhibited. The larger the dose, the slower the access of new white blood cells. Animals that had been previously artificially rendered immune from typhoid fever showed a much more marked leucocytosis after the injection of the culture into the peritoneal cavity. Doses of tincture of opium in the ratio of 1:200 to 1:2000 of body-weight, therefore, certainly depress the resistance of the body to infection, but doses smaller than these, such as 1:3000, do not have this effect. The cause of this lowered immunity is therefore the inhibition of leucocytosis and phagocytosis. The author does not make any practical conclusions concerning the use of opium in infectious conditions in man, but calls attention to the phenomena observed, adding that they may give food for thought on the part of clinicians.

The Formation of Uric Acid in the Liver of Birds. By Dr. S. Salaskin and Mme. E. Kowalewsky.—The paper will be printed in German in the *Zeitschrift für physiologische Chemie*. As a result of a series of researches into the mode of formation of uric acid in the liver of birds, the authors conclude that the liver is the seat of the manufacture of uric acid. The liver is the seat of

the synthesis of uric acid, and the materials which enter into the combination are not only ammonium lactate and the ammonium salts of organic acids, but various complex organic compounds, such as arginin. The authors do not doubt that, as Minkowsky and Lang have shown, amido-acids may be converted by the liver into uric acid. They announce that further researches into the chemistry of uric-acid formation will be forthcoming in the future.

A Note on the Clinical Methods of Determining the Blood-pressure. By Dr. A. Jaroltzy.—The apparatus for measuring the blood-pressure which is at present in general use, namely, those of v. Basch, Riva-Rocci, and Gaertner, give not the absolute, but only the relative blood-pressure, and only show the maximum value of the blood-pressure. The variations in blood-pressure occurring in one patient cannot therefore be compared with those occurring in another. Mosso's apparatus, constructed according to the principles laid down by Marey, is not in general use because it is too complicated for employment in the clinic. In 1897 Hill and Barnard (*British Medical Journal*, October, 1897) described their sphygmometer, which consists of a leather bracelet within which a rubber cushion is attached. This cushion is connected with a pneumatic machine and a metallic manometer. According to the author, this apparatus is the best for use at the bedside, as its manipulation is simple and its figures are constant.

Vratch, December 29, 1901 (*New Style*, January 11, 1902).

On the Question of Accidental Wounds of the Large Veins. By Dr. B. K. Finkelstein.—The author speaks of wounds of the large veins which occur accidentally or as a result of attempts at suicide, and not in the course of operations. As a rule, the artery which accompanies the vein is also injured, but he does not consider such cases. The rarity of accidental wounds of the large veins, in the author's sense of the term, is shown by the fact that at the Obouchoff Hospital, where an enormous number of accident cases is received, only seven cases of this kind have been recorded for the last ten years. A study of these cases, and of the instances of traumatism to the large veins recorded in recent literature, leads the author to conclude that: (1) There is no vein in the human body, perhaps with the exception of the inferior and superior venæ cavæ at their entrance into the right auricle, which may not be ligated in case of necessity, when it is impossible to suture the wound in the vein. (2) In all wounds of veins, the lumen of the vessel should be preserved if possible, in spite of the fact that a circular ligature is not often followed by serious complications. (3) The chief danger of accidental wounds of the veins is the primary or secondary hæmorrhage. The entrance of air does not play an important rôle. (4) The veins most frequently wounded accidentally are the internal iliacs, if situated superficially, and the femoral veins. Then follow the subclavian and the axillary veins. Cases of wounds in other veins are rare.

Letters to the Editor.

A RECONSIDERATION OF THE VACCINAL TETANUS QUESTION.

101 CONVENT AVENUE, NEW YORK, February 3, 1902.

To the Editor of the *New York Medical Journal*:

SIR: Recently I have made an extended tour of the antitoxine plants and vaccine farms in Philadelphia, Marietta, Detroit, Albany, Boston, and vicinity, with the result that my views, as expressed in my address before the Society of Medical Jurisprudence, at the Academy of Medicine, have undergone a change. After a thorough inspection and searching investigation of *all* the plants and manufacture, I am forced to the conviction that, *without exception*, Mulford, of Philadelphia, Dr. Alexander, of Marietta, Pa., Parke, Davis & Co. and Sterne, of Detroit, the State stables at Albany, and the Massachusetts farms and stables are as near completely aseptic and antiseptic as science can go and art devise.

I do *not* believe now that tetanus ever was induced by any vaccine. Please to put me on record as to that statement and oblige

W. R. INGE DALTON, M. D.

REMOVING THE DUTY ON EGGS FOR INOPERABLE CANCER OF THE MAMMA.

NEW YORK, January 30, 1902.

To the Editor of the *New York Medical Journal*:

SIR: Once and a while a little divertisement is beneficial, especially for us serious men of science. The *ἐλληνοφανής* word makers, although unintentionally, supply us with a rich source of amusement—and thus we are benefited by them.

To-day I received the programme of a meeting of a medical society of which I have the honor to be a member. One of the numbers on this programme is: Cases of Oophorectomy for Inoperable Carcinoma of the Mamma.

I am sure the distinguished colleague who is to read this paper does not mean to say that the duty on eggs is to be removed on account of inoperable cancer of the mamma, but such is really the meaning of the title as it stands. He had no doubt the best intention to avoid the hybrid term ovariectomy, and produced instead a genuine all-Greek word, but he only demonstrated the danger of the attempt to coin new formations in Greek as long as one is not familiar enough with this language. The word he should have chosen was of course oothectomy (*ὠοθηκτομία*).

A. ROSE, M. D.

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Æschylus on the Origin of Medicine.—In the *Prometheus Bound*, vv. 484-391, Æschylus makes Prometheus say:

But thou shalt wonder more when thou dost hear
The rest, what arts, what measures I contrived.
And greatest this, that if a man fell sick
Nothing availed him aught, no thing to eat
No unguent and no draught; but, lacking drugs,
He pined away, till I to man revealed
The skilled compounding of mild remedies
Whereby diseases may be warded off.

K. W. M.

Book Notices.

Memoirs and Letters of Sir James Paget. Edited by STEPHEN PAGET, One of his Sons. With Portraits and Illustrations. London and New York: Longmans, Green, & Company, 1901. Pp. 438.

As to the statesman there is no more useful study than that of history, so to the man engaged in any given professional pursuit, there is none more helpful and elucidating than good biographies of those who have attained to great preeminence and leadership. From an attentive study of the lives of such men may be learned what difficulties are to be overcome and how to overcome them, what mistakes have to be avoided, what are the best principles to govern one's actions, and the true value of traditional methods and of the beliefs on which they are founded.

The life of Sir James Paget, as presented to us in the volume under consideration, is singularly rich in such lessons. It tells us in his own simple and unaffected manner the story of a career of great difficulties, overcome by dogged persistence directed aright by a sound judgment sustained by an indomitable courage, and ending at length in the best of all kinds of success—a moderate fortune coupled with well-deserved honors, social, professional, scientific, and popular.

The work consists of two parts. The first is an autobiographical memoir written between 1880 and 1885. This consists of seven chapters, of which the first six cover the years between his birth, in 1814, and the year 1851, before October of which year he himself says that he "could hardly be considered as in practice." The seventh chapter deals but lightly with the thirty-four years following. Each of these chapters is supplemented by a running commentary by his son, the editor, so skilfully and tactfully accomplished that the typographical arrangement alone indicates the entrance of another personality into the narrative. The second part is by the editor, and deals more fully with the later career of Sir James; it is accomplished with the same admirable tact that distinguishes the commentary on the first part.

The first chapter deals with Paget's family and his boyhood. Already during his school days the reverses began in his father's previously prosperous position which were to handicap young Paget in entering the profession, in making firm his foothold on the bottom of the ladder, and later when established but still struggling, to keep him continually in a state of financial depression. His father was a wealthy brewer, merchant, and ship-owner, of the prosperous seaport of Yarmouth, his mother a woman in whom all the noblest traits of wife and mother were signally conspicuous. His school education, begun at a small school in the town, "was not of a very high order, neither was it accurate or profound or of a kind likely to encourage deeper study. . . . It would have served quite well enough for making fit for any of the public schools," but unfortunately his father's reverses at that time rendered this educational promotion, which had been the lot of his elder brothers, out of the question for him. At the end of his school career, he desired to enter the navy, being attracted thereto by

the social distinction which he saw accorded to the officers. Fortunately this plan fell through at the eleventh hour, and he adds that he cannot imagine a happier escape, for he could not think of a calling for which he would have been more utterly unfit.

He was then apprenticed to Mr. Charles Costerton, "an active, energetic, and well-educated practitioner" in Yarmouth, in 1830, for five years, on payment of a premium of 100 guineas; but at the end of four years and a half he was to be permitted to go to London, to St. Bartholomew's Hospital. Of the now defunct system of medical apprenticeship, he says: "I cannot doubt that the period thus spent was too long. The first year of it might have been more usefully spent in some good school, the last in a London hospital; but the advantages of an apprenticeship were, or at least might be, far greater than is now commonly supposed. Many things of great utility in after-life could be thoroughly learned; things of which the ignorance is now a frequent hindrance to success; such as dispensing and a practical knowledge of medicines and the modes of making them; account keeping; the business-like habits needed for practice; care and neatness and cleanliness in all minor surgery. Besides, in most cases, as in my own, the elements of anatomy could be slowly learned; there was time for reading and for natural history or any branch of science by which the habit of observing might be gained; and there was ample opportunity for observation in practice, without being confused in a crowd of cases in which it is, for a student, equally difficult either to study the whole or to make a good choice."

Then follows an interesting picture of the life of an apprentice in those days, and the author adds: "I cannot be too grateful for the opportunities which mine gave me for botany and for some portions of zoology." This devotion to science served him in stead in many ways. It led to the publication, toward the close of his apprenticeship, of the *Natural History of Great Yarmouth*, in conjunction with his brother Charles, and to the acquaintance with eminent men of science; and of the knowledge acquired, he says that, while none had in his after-life any measure of what is called practical utility, "the knowledge was useless; the discipline of acquiring it was beyond all price."

Among other valuable pursuits of his apprentice days, he taught himself, under considerable difficulties, to read French, and also cultivated his talent for drawing. Facsimiles of some of his sketches, showing a decidedly useful proficiency appear in the book. Of the power to draw he says that its immediate utility was too little, its indirect utility too great, to be told. It increased his power of observation, strengthened his memory, and facilitated his power of description in the lecture-room. The period of apprenticeship was followed by two years of hospital pupilage at St. Bartholomew's.

His hospital career marked him for distinction from the first, and he was popular, not only with his teachers, but with his fellow students.

He became a member of the College of Surgeons in 1836, at the age of twenty-two. Owing partly to the system of "hospital apprentices," whereby these students who were the apprentices of the surgeons to the hospital, had, besides other privileges, almost a monopoly of the resident appointments, and partly

to the heavy fees entailed, Paget never filled the posts of dresser and house surgeon, now so universal among those who look for success in the practice of surgery. He spent three months in Paris, however, after receiving his diploma, and saw and heard Roux, Lisfranc, Cloquet, Velpeau, Magendie, Andral, Broussais, Louis, Chomel, and others; but he adds: "Unless it were in some fresh stir and enterprise and thinking on contrasts, I do not know that any great good was gained in Paris. But I got, at least, a much wider range of thinking and more interest in the different modes of study."

The history of Paget's career thereafter is one of splendid determination. His father's gradually failing resources, and the need of helping to support him; his own straitened circumstances; the disappointments during the waiting-time, hanging on to the hospital in the hope of the staff appointment, so absolutely essential in London to consulting practice; and the final "stooping to conquer" by acceptance of the minor post of the curatorship of the pathological museum even without the coveted though nominal title of an assistant demonstratorship—all are the indications of that devotion to a professional ideal which signalized him as an exemplar to the end. He then became successively demonstrator of morbid anatomy, demonstrator of anatomy, lecturer on physiology, warden of the Residential College for Students, and finally, in 1847, assistant surgeon to St. Bartholomew's Hospital and professor of anatomy and surgery at the Royal College of Surgeons, during all which time he had supported himself and incidentally helped in relieving the necessities of his family, by the meagre pay for his appointments, together with such sums as he could obtain by writing for the *Medical Gazette*, the *Penny Cyclopædia*, the *Biographical Dictionary*, and later Sir John Forbes's *British and Foreign Medico-chirurgical Review*; for of practice, as yet, he had really none.

The value of seemingly useless work is well illustrated in the following passage. Speaking of the seven years, 1837-1843, during which he was curator of the museum, and "the work of the place was hard and some of it rather menial," the author says: "Such things would not be worth telling unless for the chance that some one may read of them who may think it hopeless or unwise to begin a professional life in an occupation such as this, or may think that from 9 to 4 is enough for a fair day's work. Probably I would not have taken the place but for the need of money. I had at first £100 a year for it; but, after the first year, only £40 (I forget the reason for the reduction). If I could easily have chosen my course, my choice would probably have led me along some way less useful than my necessities did; for, with all its defects and all the occasional utter weariness of the occupation, the curatorship led straight to better things. It made me a thorough student of changes from disease; thus it led to the demonstratorship of morbid anatomy, my first office in the school. It made me familiar with all the common clerical work of the entering of students, and the like; and so it made me fitter to be warden of the Hospital-College, with the general charge of the school affairs. It gave me the reason and the means for writing a new edition of the *Catalogue of*

the *College of Surgeons' Museum*, which led to the college professorship, which led to more than I can tell of."

The services rendered by Paget to scientific pathology are too well known to need recounting, and are attested even in our medical onomatology, *e. g.*, Paget's disease of the nipple, Paget's recurrent fibroid, Paget's abscess, etc.; but it may not be so well known that on the unimpeachable testimony of that distinguished physiologist, Sir Michael Foster, "Paget's influence had in those days a large share in promoting the advance of physiological science." Of the preparation of the *Pathological Catalogue of the College of Surgeons' Museum*, begun in 1842, he says: "It required a method of writing which is excellent for education in accuracy—an education terribly neglected. I described every specimen as I saw it standing or lying before me; nothing was to be told but what could be then and there seen; nothing that could be only imagined or remembered; there was to be mere translation from eyes to hand. And I venture to say that in tasks of scientific description no other method than this, where it is possible, should be trusted."

From 1851 onward, the subject is taken up by his son, and consists of narrative interspersed with many interesting letters. They deal with Sir James Paget in the rise and at the zenith of his career, and gently picture the glowing sunset of his declining life.

The perusal of this most fascinating work has led us to turn again for comparison to another of like purport, associating itself with this both by its similarities and its contrasts, *viz.*, *Recollections of Past Life*, by Sir Henry Holland, Bart., M. D. Sir James Paget, after a hard fight, became a baronet, and sergeant surgeon to Her Majesty the Queen; Sir Henry Holland, having graduated at the University of Edinburgh in 1811, was travelling already in 1814 in medical attendance on the Princess of Wales, and from that time on his career was a succession of travels at leisure or in professional attendance, high official appointments, and subsequently a baronetcy and the rank of physician in ordinary to the Queen. Paget had an excellent father, whose losses rendered difficult the prosecution of his career, the need of aiding whom kept him in constant straits for money during his early life. Sir Henry Holland, on the other hand, says: "The liberality of an excellent father and my early professional success saved me, even from the beginning, from those pecuniary anxieties of early life which so often for a time painfully fret the minds even of those who eventually reach professional fame and fortune." Both were saved at the last moment from an unfitting career; Paget, as we have seen, from the navy, and Holland from a commercial life in Liverpool. Of classical studies, Paget says (p. 12): "I never could acquire anything fairly to be called classical knowledge; I could translate enough for the commonplace understanding of a Latin or Greek book, but never could acquire any classic taste or enjoy the influence of any ancient writer." And, again, his son tells us (p. 264) that he did not believe that reading for a pass in classics, at Cambridge or Oxford, helped men either in the study or in the practice of medicine." Holland, on the other hand, at the time of writing his

memoirs, when over eighty years of age, says: "My classical education, in the common use of the phrase, was a very imperfect one. . . . But it imbued me with sufficient love of the great writers of Greece and Rome to carry me forward into the private study of them; and this study, ripened by time and my travels in classical lands, has become a source of ever-increasing enjoyment. . . . Many, perhaps all, who have held fast to these studies must have noticed in themselves this result of increasing pleasure in their pursuit. But no long gap must be allowed, or the faculty of enjoyment is lost, and rarely regained. It is an old but true remark, that the greatest works, whether of art or literature, do not at once disclose their full perfection to the eye or understanding. They are mines of discovery, the richer the deeper they are worked." Both Paget and Holland made themselves familiar with several modern tongues. The memoirs of both are rich in a galaxy of names illustrious in science, art, medicine, literature, and other fields, names of those with whom the writers were in frequent and friendly intercourse, and many of these names occur in both, for the lifetimes of the two overlap for several years; though Holland's memoirs appeared thirty years ago.

But there is this essential difference. Holland's memoirs are delightful reading to the refined and scholarly man, for his leisure hours; they represent the intellectual luxury of life, the life of cultured leisure; they may interest us, if we are in a mood to be interested, they may arouse our envy or evoke our admiration. But the memoirs of Sir James Paget are the memoirs of flesh and blood like unto ourselves, of one who had a hard fight to fight, and fought it and won, and who now shows us, dazzled by the brilliance of his later years, the bitter struggles through which he passed from darkness unto light. For the first seven years after taking his diploma, Paget's largest income from practice was £23.13, and for sixteen years, it never exceeded £100; while he tells us that if he had died before he was forty-seven, he should have left his wife and children in extreme poverty, and even if he had died or become unfit for hard work before he was sixty, his children would have been very poor. But from 1851 on, his practice grew until it reached £10,000 per annum. He then ceased to operate, and it fell to £7,000, and from that time on slowly decreased.

The typographical character of the work is of such a kind as to make its reading a pleasant occupation, and it is embellished by several excellent portraits. In conclusion, it may be said that Mr. Stephen Paget, in editing the work, has not only performed a filial duty in a spirit of affectionate loyalty and reverent regard, but, by the excellence of his method and his tact and self-subordination, has so done his work that, no matter from what point of view the book is approached it presents an altogether beautiful vista in the landscape of life.

BOOKS, ETC., RECEIVED.

On Disorders of Assimilation, Digestion, etc. By Sir Lauder Brunton, M. D., D. Sc., LL.D. (Edin. and Aberd.). F. R. S., F. R. C. P., Foreign Honorary Member of the American Academy of Arts and Sciences, etc. London and New York: The Macmillan Company, 1902. Pp. 884. (Price, \$4.)

Hygiene for Students. By Edward J. Willoughby, M. D. Lond., etc. London and New York: The Macmillan Company, 1901. Pp. xx-563. (Price, \$1.25.)

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Post-graduate Medical School, Chicago. Volume III. The Eye, Ear, Nose, and Throat. December, 1901. Chicago: The Year Book Publishers. Pp. 5 to 346. (Price, \$1.50.)

Anatomy and Physiology of the Eye. With Hints for the Preservation of the Eyesight. By J. Frederick Herbert, M. D. Second Edition. Philadelphia, 1902. Pp. 68.

Reports of the Society for the Study of Disease in Children. Volume I. Session of 1900-1901. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xxxvii-238.

Leçons sur les maladies du système nerveux (année 1897-1898). Par F. Raymond, Professeur de clinique des maladies nerveuses à la Faculté de Médecine de Paris, etc. Recueillies et publiées par le Dr. E. Ricklin. Quatrième série. Avec 59 figures dans le texte et 2 planches en couleurs hors texte. Pp. 606. Cinquième série. Avec 77 figures dans le texte et 5 planches en couleurs hors texte. Paris: Octave Doin, 1901.

Infiammazione e Tumori nei seni sfenoidali. Pel Dott. Secreti Enrico. Con 17 figure nel testo. Pp. 9 to 107. Roma, 1902.

Report of the Commissioner of Education for the Year 1899-1900. Volume II.

Transactions of the American Ophthalmological Society. Thirty-seventh Annual Meeting, held in New London, Connecticut, 1901.

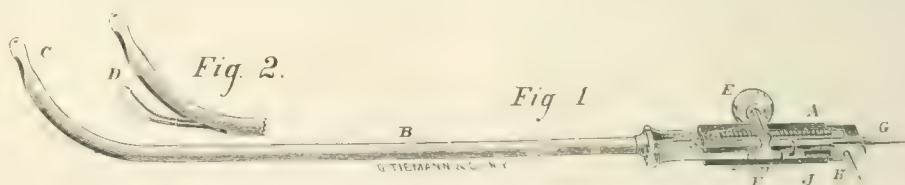
New Inventions.

INCISOR FOR HYPERTROPHY OF THE PROSTATE: A MODIFICATION OF BOTTINI-FREUDENBERG'S INSTRUMENT.

By ROBERT NEWMAN, M. D.,

NEW YORK.

Recent further improvements in this instrument constitute my reason for bringing it before the notice of the medical profession. The incisor has been manufactured by Tiemann & Co., New York.



The reason for the modification has been stated by the author in former papers.

Fig. 1 shows the instrument in perspective, with platinum burner shown in dotted lines, slightly exposed.

Fig. 2 is the end of the instrument, with the platinum knife fully exposed.

Description of the Instrument.—It consists of a hollow metal shaft, *B*, terminating in Thompson's curve with tunneled end, *C*. The platinum knife, *D*, is propelled backward and forward by means of a rack and pinion, *E*. Two insulated copper wires pass through the shaft and carry the electric current to the platinum burner. The conducting cords of

the battery, or Edison's street current, are adjusted to the instrument at staples *G* and *H*. The current may instantly be thrown on or off by means of the switch, *F*. A scale and indicator, *J*, shows at a glance the extent to which the knife is exposed.

Freudenberg's improvements on the original Bottini are very good, and were needed on this improved instrument. The writer has made the following modifications, as shown in the cut:

(1) The omission of the water cooler in order to make the mechanism of the instrument simpler. The water cooler is an impediment, takes up space, and needs for its proper management a special assistant. As the burner is smaller than in the original instrument, it does not need so much heat, which can be controlled more easily. It has been questioned whether it is better to dilate the bladder with water or air. Either method has its own advantages and objections, but it is better to do away with the heat than to injure the bladder; this is accomplished by (2) the two conducting rods conveying the heat, each attached to one end of the burner, and each running separately and being insulated. This arrangement will heat the burner immediately and prevent the heating of any other part of the instrument. The shaft remains cool. (3) The end of the instrument is conical and of a smaller size, in order to pass any obstruction and enter the bladder more easily. Thereby this operation can be performed in cases in which the larger sized portion of the instrument could not be introduced. (4) A tunnel is introduced at the conical end for a filiform guide, over which the instrument passes, to be used at the option of the operator. (5) The burner of platino-iridium is thinner and stationary, and thereby cannot get out of shape and place, and, moreover, the greater heat is avoided. (6) The protector of the burner, when moved, acts at the same time as a meter; the operator thereby knowing the exact place of the burner. This burner or knife can cut to any depth that the operator may desire, and, by rotation, can cut in different directions. (7) The price of the instrument is about one half of that of the Bottini-Freudenberg pattern.

One particular object in the construction of the instrument was to reduce the ampère needed to

heat the burner and thereby to make the water cooler superfluous. The last test in the laboratory demonstrated that from 20 to 21 ampères were sufficient, while Freudenberg himself stated in a recent publication that he needed 45 to 52 ampères for an operation.

The aim of the manufacturer is to reduce still more the necessary ampère.

The Bottini operation is not under discussion here, and the only question is, Which is the best instrument, if an operator has decided to follow the Bottini method?

148 WEST SEVENTY-THIRD STREET.

WALLACE'S MODIFICATION OF THE ALLIS INHALER.

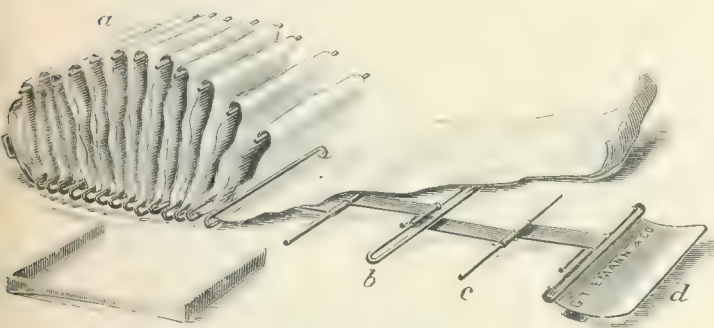
By HENRY WALLACE, M. D.,

BROOKLYN, N. Y.

ASSISTANT SURGEON TO ST. JOHN'S HOSPITAL, ADJUNCT LARYNGOLOGIST, ETC., POLHEMUS CLINIC.

This piece of apparatus is simply an old standby in a new form, a modification of the original Allis's inhaler.

Recognizing the fact that a very great objection to this instrument lies in the length of time necessary to fill it, the designer of the modified instrument offers it to such members of the medical profession as find in the Allis an otherwise most satisfactory form of ether inhaler.



The present modification will be found a great time saver, requiring but a few minutes to empty and refill.

Briefly, it consists of a folding frame of metal which is filled with the bandage while in the extended position and is then closed and held quite firmly in shape by a brace.

As in the original, a strip of adhesive plaster applied to the leading end of the bandage will facilitate its passage through the links. Tiemann & Co. have carried out very successfully the designer's ideas and have furnished the excellent cut of the instrument here presented.

Miscellany.

The Sanitary Duty of Common Carriers.—Dr. Frank W. Wright (*Yale Medical Journal*, January), in an admirable article on the Hygiene of Tuberculosis, says:

Those corporations acting as common carriers have not in the past given sufficient attention to the sanitary arrangements of their vehicles. Until very recently street railway companies made no attempt toward having their cars kept cleanly. These were usually filthy and disgusting. Since boards of health in most cities have passed and enforced ordinances forbidding spitting in the cars and have required the managements to display signs to this effect, there has been a marked improvement in their condition.

Steam railroads, especially those leading to health resorts, should give more attention to the sanitary condition of their cars. Sleeping cars are so constructed and used that there is a greater possibility

of danger from tuberculous persons than in the ordinary coaches. All cars should have as little plush upholstery and hangings of cloth as possible, leather from a sanitary point of view being preferable. Sleeping cars must of necessity have in their construction some material that is liable to hold the germs of disease, but much of the fine upholstery could be done away with, without lessening the comfort of the passengers. The seats and backs of all cars should be made so that they can be readily removed. Cars should have better ventilation, without draughts and so arranged as to prevent the ingress of smoke and dust. They should be evenly heated and there should be as few places as possible that are likely to catch and hold dust. All cars should be supplied with cuspidors containing a disinfecting solution.

At the end of each run every car, especially the sleeping cars, should be disinfected, have the seats and backs, bedding, hangings and carpets removed and dusted by the air blasts, and the interior of the cars thoroughly cleansed. When the cars start upon their journey they should be clean and free from dust; the bedding well aired and the linen freshly laundered. The blankets used in the berths should be white, that the passengers may judge of their cleanliness.

Practically the same rules apply to steamboats as to railroad cars.

The enforcement of sanitary regulations and the work of disinfecting and cleaning should not be left to laborers and scrub women, but should be under the direct supervision of an intelligent person, skilled in the use of disinfectants and having a knowledge of sanitary science. The writer believes that every corporation of common carriers should have a well-organized sanitary department, under the charge of a person educated in modern sanitary requirements as regards disinfecting, cleaning, lighting, heating, and ventilation. He is aware that some corporations are seriously considering these questions and making some attempt to improve the existing conditions.

Military versus Professional Titles for Military Medical Officers.—This perennial discussion has again reached flowering point, and blooms again in the *Army and Navy Journal*. In the issue of that periodical for January 18th is a letter from Major and Surgeon John Stewart Kulp, from which we abstract the following pertinent remarks:

"That there is no higher profession than that of the healer of the sick we are agreed upon, but there is no higher title than that of gentleman, and when we address an officer of the lowest grade of the pay department as captain we do not necessarily forget his higher title of Mr. Unfortunately in our country the title of doctor is borne, not only by graduates in medicine and surgery, but as legally by dentists, veterinarians, preachers, and by the graduates of some schools of science and pharmacy. In addition it is attached to Christian Scientists, osteopaths, eclectics, faith curists, root doctors, as well as to the magnetic healer and the good ship's cook. Then it is also bought and sold. Some of us, however, are doctors of laws and of philosophy, as well as of medicine, and others of the corps have foreign diplo-

mas where the title stands for scholarship and ability.

"The use of the military title is now universal in the English medical service, to which 'An Old Subscriber' alludes, and this is also true of the sanitary service of the French army. Ours is the largest of the staff corps, both in officers and men, and is the only one which is always under fire. Some have perhaps won some right to their military title under the compliments of the enemy, some have faced contagion and death as a matter of routine duty, and some are at isolated posts where when injured or ill they must care for themselves, for as General Chaffee says, 'The true soldier not only takes the risks of battle, but all other risks growing out of any and all incidents of war.' (*Army and Navy Journal*, xxxix, p. 459.) Our wars have always shown the difference between the medical officer and the doctor in uniform, and we sometimes forget that the medical officer's duty is no more the treatment of the sick than the care of the well.

"Some of us think that because we are military men doing purely military duty, it is better that the different grades which we have reached by service and real examinations be recognized by our superiors and subordinates, and that it is unwise for the contract surgeon and the officer of thirty years' service to bear the same title. Those of us who are proud to be known as 'The Better Class of Medical Officers' believe that had our corps had rank, and proper appreciation of rank, sixty years ago it might have prevented the awful result of the disregard of Satterlee's recommendations during the Mexican war from being forgotten during that with Spain. And yet we are far from a desire to control anything outside of our own department, nor do we wish to abridge the prerogatives of the line, but rather to strengthen in every legitimate way the power of the hand that strikes for all of us. The successful employer of men in civil life does not interfere with the policeman's right to command, and recognizes its necessity.

"There is no higher character than that of the scholarly, conscientious, and skilful practitioner of medicine in the army or elsewhere. Every one of us can call affectionately to mind personalities whose power over disease made them seem almost divine, and the light of the Great Master shines most clearly where he healed the sick. These men are as truly the giants of the corps as are such administrators as we have just lost, they will never lose their value, and they stand far above the everyday work of the strenuous military man. Perhaps some of the rest of us are 'military mad,' and our ideas of progress in the line of soldierly efficiency are wrong, but, on the other hand, the duties of our corps are so multifarious that there is room for all, and if some of us prefer the military title, some the professional one, or even some that of Mr., it is a matter of less importance than is the quality of the work we try to do, and the manner in which we do it."

Ancient Hindu Medical Science.—Arthur A. Macdonnell, Ph. D., in *A History of Sanskrit Literature* (New York, 1901, Appletons) says: "The question as to whether Indian Medical Science in its earlier period was affected by that of the Greeks cannot yet be answered with certainty, the two sys-

tems not having hitherto been compared with sufficient care. Recently, however, some close parallels have been discovered between the works of Hippocrates and Charaka (according to a Chinese authority, the official physician of King Kanishka), which render Greek influence before the beginning of our era likely.

On the other hand, the effect of Hindu medical science upon the Arabs after about 700 A. D. was considerable, for the Khalifs of Bagdad caused several books on the subject to be translated. The works of Charaka and Sushruta (probably not later than the fourth century A. D.) were rendered into Arabic at the close of the eighth century, and are quoted as authorities by the celebrated Arabic physician Al-Razi, who died in 932 A. D. Arabic medicine in its turn became the chief authority, down to the seventeenth century, of European physicians. By the latter Indian medical authors must have been thought highly of, for Charaka is repeatedly mentioned in the Latin translations of the Arab writers Avicenna (Ibn Sina), Rhazes (Al-Razi), and Serapion (Ibn Sarafyun). In modern days European surgery has borrowed the operation of rhinoplasty, or the formation of artificial noses, from India, where Englishmen became acquainted with the art in the last century."

Fibroids Complicating Pregnancy and Labor.

—Alban Doran (*Transactions of the Obstetrical Society of London*, June and July, 1901) sums up as follows the conclusions drawn by him in a paper on this subject: 1. In the great majority of instances in which fibromyomata of the uterus and pregnancy coexist, the course of the pregnancy and of the subsequent labor is not seriously influenced by the tumor; but in a small proportion of cases the patient's life and the life of the child are seriously endangered. 2. When pregnancy is found to be complicated by fibroid tumor it is best to allow the pregnancy to go to term, so long as the mother's health is not seriously endangered. 3. If at the onset of labor, or shortly before, it seems certain that the tumor will cause obstruction to the birth of the child, Cæsarean section, followed by hysterectomy, should be performed. 4. In cases in which the health of the mother makes it necessary to interfere in the earlier months, abdominal section should be performed and an attempt made to enucleate the tumor. 5. If under these circumstances myomectomy is found to be too dangerous, hysterectomy should be performed.

Herodotus on Leprosy among the Persians.—

Herodotus, in his *History*, i, 138, says: "But whoever of the [Persian] citizens has the scaly or the white leprosy does not come to the city, or hold communication with other Persians; for they say that he suffers these things from having sinned in some manner against the sun; and every foreigner who is stricken with these complaints the multitude expel from the country." [*λέπρα* (in Ionic, *λέπρη*) really an adjective used as a substantive; *νόσος λέπρη*, the scaly disease. In the same way *νόσος λεύκη* the white disease. Hippocrates speaks of *λειχηνες καὶ λεύκαι*.]

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WHOLE No. 1212.

Original Communications.

A CRITICAL REVIEW OF SOME OF THE RECENT LITERATURE OF TUBERCULOSIS.

By JONATHAN WRIGHT, M. D.,

BROOKLYN, N. Y.

Nothing can be more evident in medical literature than that the tuberculosis question is assuming new aspects. There is every indication of a return to some of the ideas which existed in medicine before the announcement of the discovery of the tubercle bacillus. This is not only plain in clinical medicine, where an indication of the drift of opinion may be seen in the Address on the Personal Factor in Tuberculosis, by Sir Dyce Duckworth,¹ but in numerous papers direct from the hotbed of laboratory research in Germany.

It may be well to digress for a moment from the subject of the published views of others to point out what I conceive to be the standpoint from which the intelligent practitioner of medicine views the question, and incidentally to give expression to my own bias, for no intelligent criticism can be advanced which does not include a clear indication of the writer's views.

From the tone of many of the very numerous discussions which have been reported in the last ten or fifteen years, it would appear that many of the participants labor under the impression that the infectious theory of phthisis began with Koch, or at least with the experiments of Villemain. As a matter of fact, the Grand Duke of Tuscany, in 1754, issued an edict of sanitary police relative to infection from phthisical patients. So also did Ferdinand IV of Naples, who died in 1825, in consequence of a publication by many Neapolitan physicians, among whom were Cotugno and Cirillo. Similar steps were also taken by the republics of Lucca and of Venice, and by the Councils of Health of Rome, Bologna, and Pesaro.² And yet, for some reason, so completely did even the idea of the infectivity of phthisis sink into oblivion, that when it reappeared, as has so often happened in the history of medicine, it was accepted as an innovation. With the dis-

covery of the Koch bacillus it not only became the dominant idea, but so influenced the minds of medical men, that it was the potent factor in the birth of the present bacterial conception of nearly all diseases. With the advent of this tangible factor in the ætiology of tuberculosis came the natural hope, ripening into the belief, that it would be practicable to banish tuberculosis from the world by destroying the tubercle bacilli, or by learning to avoid them.

There is no more doubt that anatomical tubercle is usually produced in the animal body by a bacillus than there is that germination requires the heat and light of the sun; but the sun is not all that germination requires, and Koch's bacillus is not the only thing necessary to the development of tuberculosis. There is not the slightest doubt that we can start fatal tuberculous disease in the guinea-pig with heavy enough doses of the bacillus. Probably the same may be said of man, however resistant, but that has not yet been proved. It is quite another thing to declare that the chief factor in the ætiology of tuberculosis, the disease we see in our patients, is the tubercle bacillus. In the first instance, the laboratory man asserts what he knows and can prove. In the latter, he asserts that of which he knows little, and which he cannot prove. Clinically, we know on as good evidence as that on which the law of gravitation is based, that some men are immune to some doses of the tubercle bacillus, during some period of time. We certainly know also that the size of the dose, as it is taken into the human organism, in the ordinary life of the individual overlaps the index of individual resistance of a large enough proportion of the human race to infect over one half, and kill over one seventh, of it. All this I believe is, in spite of active opposition in certain laboratory circles, accepted as a fact by the vast majority of the rational practitioners of medicine, who come into daily contact with the activities of disease and whose personal experience is not based solely on the observations of the pathological results of disease. If this is true of the conception of the ætiology of tuberculous disease by the practitioner of medicine, there is good reason for the reluctance, exhibited in many quarters, to accept as well grounded the regulations which many boards of health are seeking to introduce. This was attempted in a drastic way at first, but perceiving that neither the public nor the profession would tolerate the enforcement of laws which, to be effectual,

¹*Lancet*, November 9, 1901.

²Ferreri and Rosati: *Archivio Italiano di Otologia*, Vol. x, fasc. 2, p. 178.

would render the life of the consumptive unbearable, they are seeking to approach their ideal gradually. So far as my own convictions are concerned, I do not believe it is in the range of possibilities to produce any material effects on the mortality of phthisis by isolation or by any other hygienic precaution it is possible for State medicine to enforce. I hasten to say, of course, I do not desire it to be understood that I deny the possibility of so surrounding one human individual with sterilized air and food that the bacillus may be excluded from the tissues of that particular individual. Of such a thing I can conceive, but the individual would soon perish under such a regimen. Neither do I think it possible to materially diminish the risk of effective contacts by susceptible individuals. In the long run, even if we did succeed in lowering the average number of bacilli with which mankind comes in contact, evolutionary laws would surely allow of the survival of more susceptible individuals, thus lowering the average index of immunity in the race. While, therefore, any regulation which does not materially interfere with the personal liberty of the patient is to be cheerfully accepted, I do not believe the present state of our knowledge warrants us in enforcing rules requiring the isolation or serious discomfort and annoyance of the phthisical patient. I regard the strengthening of the individual index of resistance as of much greater importance and much more easy of attainment. That means better lodging for the poor, shorter hours of work, more breathing spaces in our great aggregations of population, the prohibition of child labor, in short the thousand and one things that modern democracy is doing in our age. These means, I think, will cause, and I believe these are the means which have caused, the drop in the death rate from phthisis, which began more than fifty years ago. They will do more for the prevention of tuberculosis than the slaughtering of herds of cattle and the ruthless isolation of the consumptive, however desirable the rational execution of the latter may be.

Of course the ideal of which we all dream, and after which many have striven, is an effective anti-toxine, or a destroyer of the bacillus in the tissues. However promising this may have once appeared, recent experience, if it has not deprived us of hope, has at least largely destroyed our illusions.

In the foregoing remarks I have outlined, so far as I am able to appreciate them, the convictions which I believe are entertained by the majority of practising physicians in regard to the present state of our knowledge of tuberculosis. It remains to draw attention to observations and researches which tend to confirm these views at which clinical medicine has arrived in spite of misleading experimental evidence and unsupported theories advanced as

facts, with which for the last two decades it has been all but overwhelmed. As always in the history of medicine, from Paracelsus to Koch, it has been in Germany that the conception of the exclusive bacterial ætiology of disease has been carried to its point of greatest absurdity. Of late years, however, the number of eminent teachers who have begun to emphasize the importance of other factors has been rapidly increasing. Certainly not the most abandoned English or American heretic could put the other side of the question more strongly than does Professor Grawitz, in speaking of tuberculosis:³ ". . . The influence of the individual tendency is in this so striking, that in the face of such cases, I do not understand how any one can cling to the hope of gradually banishing tuberculosis from the world by the extirpation of the tubercle bacilli; that is a dream, which, after a thousand years of hygienic precautions, will have no realization, if the predisposing causes do not cease."

Certainly such refreshing zephyrs, starting in a pathological laboratory in the land of Koch and Cornet, are grateful to those of us who for years have had to face the hot siroccos which those in this country, deriving their inspiration from the Rhineland, have emitted, when we have found bacterial ætiology an unsatisfactory explanation. I can well remember the time, only a few years back, when such cavilling was greeted by young men just back from Germany with a deprecating shoulder shrug, or at best with a benign, expansive, charitable smile, and silence.

Coming down to the specific lesions, Grawitz advances another heresy, or rather a corollary of the chief proposition, which perhaps has not received the attention it deserves from the clinical side. He declares that the presence of a tuberculous ulcer in the mucosa of the intestines, is by no means an evidence that the bacillus has entered the system through the intestinal tract. Especially unproved is it when foci of tuberculosis exist elsewhere. It is even not entirely satisfactory evidence of this, when the intestinal lesion exists alone. With the apparent necessity of admitting the fallibility of the evidence, often advanced, of the development of tubercle at the supposed point of entrance of the bacillus, there is abundant room for the assumption which Grawitz insists upon, and which I have often urged in discussing tuberculosis of the air tracts, that not only is there such a thing as individual predisposition to tuberculosis, but also separate indices of immunity or predisposition for the different organs and tissues of the body. This is a phenomenon familiar enough to clinical medicine, but I think that its significance has been very much overlooked

³*Deutsche medicinische Wochenschrift*, No. 41, 1901.

both by clinicians and pathologists. It seems to me that our attention must be more fully turned in that direction, before we can hope for the next great step in advance toward a more complete knowledge of the ætiology of the diseases we now group under the classification of their accompanying micro-organisms.

Evidence of the shifting in the conceptions of the real ætiology of tuberculosis, in quarters from which extremists have derived many of their arguments, has perhaps been brought into stronger relief by recent revelations as to the relationship of human tubercle to that of the lower animals, and as to the apparent non-identity of the accompanying bacilli. While the credit for priority in the announcement of the non-identity of bovine and human tuberculosis belongs elsewhere, and was made many years ago by Virchow from histological evidence presented by the tubercles, anything in the way of a pronouncement concerning bacterial disease coming from Robert Koch is received, as it should be, even though not original with him, with marks of the liveliest interest, and elicits everywhere evidences of earnest consideration.

For some time it has been generally admitted that the tuberculosis of fowls is unrelated, in its ætiology, to consumption in the human race. Koch's positive assertion that the bacillus derived from tuberculous disease in man will not produce the lesion in cattle, was well grounded in the experiments he detailed, and has received thus far considerable confirmation. With this, clinical medicine has little to do, but the parallel statement which he ventured upon, frankly admitting that it is as yet devoid of experimental proof, has many clinical facts to strengthen it. The coincidence of human tuberculosis with exposure to bovine tuberculosis has not in any way been established, except in so few cases that they have no value as an argument for the identity of the two processes. For twenty years we have been acquainted with the bacillus, and surely with all the medical world eagerly seeking clinical support for a favorite and well accepted belief, such coincidence by this time should have been demonstrated. As intimated in the remarks of Grawitz, from which I have just quoted, and as we have been aware for a number of years, primary tuberculosis of the alimentary canal is very rare. We might believe that this also would support the assumption of Koch, for it might be assumed that more lesions would be observed at the point of entrance of the bacilli in milk and meat than elsewhere; but this would be leaving out of account the fact that primary tuberculosis of the upper air passages, on which bacilli in the air current and in the food must lodge, is still more rare. Koch himself leans to the belief, which he everywhere asserts in

support of Cornet, that bacilli pass into the lung with the air current. This is certainly not so. They must lodge higher up.

Koch also left a large void in his argument, since filled by others, by his neglect in tracing the different degrees of susceptibility or immunity of other animals to the human and the bovine bacillus respectively. The question of the transmission of human tuberculosis to cattle we may expect to be quickly and easily solved. If it is solved in the negative it will in itself throw a large element of negation in the question of the inoculability of man with cattle bacilli. This, for obvious reasons, will not be so satisfactorily or so quickly answered, although that too will not be long left in doubt. Almost contemporaneous with Koch's paper was that of Ravenel,⁴ of Philadelphia. He published elaborate experimental observations, by which he asserts that he has, at least tentatively, established the conclusion that the bovine bacillus is more virulent in its morbid action on various animals, than is the human tubercle bacillus, but he accepts other evidence and adds some clinical evidence of his own that the bovine tubercle bacillus is also pathogenic to man. His results have also failed to support entirely those reported by Koch as conclusively proving the non-susceptibility of cattle to the human tubercle bacillus; for, while he was unable to infect calves by feeding them on the tubercle bacilli of man, he produced lesions by intraperitoneal injections, but, as I understand his statements, there is some doubt on that point, as bacilli cultivated from these lesions failed to infect calves again. Another question directly bearing on these problems is yet to be settled. The variation in the virulence of the respective bacilli and the conditions on which this depends have not been sufficiently elucidated. The past and more recent work of Ferdinand Hueppe bears on this point. He subjects Koch's statements, with a good deal of show of personal resentment, to a sharp criticism.⁵ He says that after the population of the world had been thrown into spasms of fear by the assertion that the tubercle bacillus, with deadly power, was lurking in every corner to smite down the unfortunate being in whose organism it could find entrance, mankind was again by a volteface of Koch's calmed by the assurance that human tuberculosis was not cattle tuberculosis, and in all probability man was not infected by the tuberculous milk and meat of the bovine race. He asserts that again Koch has committed the glaring error of which he was formerly guilty in reasoning from the possibility of infecting an animal organism by the injection of enormous amounts of bacilli, to the conclusion that this is, in fact, the way in which men contract

⁴*Lancet*, August 10-17, 1901.

⁵*Berliner klinische Wochenschrift*, Nos. 24-26, August, 1901.

tuberculosis. One does not readily see the force of this criticism, since the fallacy of reasoning from positive results in this manner does not apply with equal force to the same reasoning from negative results. More valid would be the criticism that Koch left out of account the fact of individual and temporary immunity or susceptibility, apart from racial characteristics.

Hueppe thus advances another criticism of Koch based on his new announcement: "And now Koch credits us with a willingness to sacrifice our intelligence and demands that we believe that tubercle bacilli, closely related by culture and hardly to be differentiated, the bacilli of cattle and the bacilli of man, must be held as *toto cælo* distinct, because in his animal experiments they do not mutually infect."

Not only had Virchow many years ago noted the differences in human tuberculosis and the cattle "perlsucht," but Hueppe and others had noted a morphological difference in the two micro-organisms. Thus Hueppe charges Koch with disingenuousness, not only toward American investigators, but toward his own countrymen, for he draws attention to the fact that it had previously been announced in America that cattle bacilli would not infect man. This, so far as scientific endeavor is concerned, is a matter of subsidiary interest which may be neglected here.

The virulence of tubercle bacilli, even when grown in the bodies of the same race of animals, is known to vary in intensity. Much more do they vary in virulence when transferred from one species of animals to another. This we know is only a common rule in bacteriology, applicable to many varieties of pathogenic germs. Perhaps the *Streptococcus pyogenes seu erysipelatos* may be cited as the most familiar example. Scarcely less well known are the vagaries of the diphtheria bacillus. It seems remarkable that hygienists can at present entertain any further hope of exterminating the fugacious and widely diffused tubercle bacillus, which, according to Hueppe, is the same which in a modified form infests many animals, when they seldom even venture to raise the question of the possibility of freeing man, in ordinary walks of life, from the presence of the streptococcus and the Klebs-Löffler bacillus, far less widely diffused and far less difficult of detection and identification. Hueppe has asserted, and he seizes upon the present occasion to reiterate his belief, that "the tubercle bacillus is a parasitic growth-form of a pleomorphic germ."

Hueppe admits the important factor of predisposition in its full force, but he does not regard it as at all proved that the human tubercle bacillus is not infectious to every kind of cattle. He denies absolutely the validity of the assumption that the cattle bacillus will not infect man, believing that this, as a

matter of fact, does take place through the food supply in milk and meat.

Testimony supporting the claims of Koch as to the harmlessness to cattle of the human tuberculous virus, has already been advanced by Baumgarten,⁶ but the most interesting part of his communication supports the other proposition of Koch. About twenty years ago a colleague, since dead, had made attempts to treat inoperable cases of sarcoma and carcinoma with injections of the tubercle bacillus. As the tuberculous disease in man was then thought to be the same as in cattle, bacilli from cattle were used, human bacilli not being at hand. Six cases thus treated were not the better or the worse for it. These results were supposed to prove Rokitsanski's contention that tubercle and cancer were antagonistic in the human body. As the latter theory has long since been exploded, these experiments may now be advanced in support of direct evidence of Koch's assertion, which he himself was not in a position to prove. The pleomorphic idea, or the idea of the non-identity of tubercle bacilli has suggested to B. Fraenkel the possibility that something of this kind may, in an ætiological way, be at the base of the differences in the clinical manifestations of lupus and tuberculosis of the mucous membranes.⁷

On other occasions I have devoted considerable attention to the question of so-called latent tuberculosis of the tonsils. Having tried to show the uncertainties which attend the microscopical diagnosis of this condition, there remains a further remark of criticism to add. The investigations of Rabinowitsch, Petri, E. Fraenkel, and Moeller⁸ have shown the morphological resemblance to tubercle bacilli in the reaction to the acid stains of various other bacilli, called by some of the authors the timothy or the manure bacillus, from the environments in which they have been noted. They have not only pointed out this coincidence in their appearance and reaction to stains, but they have also stated that these bacilli are to be found in non-tuberculous conditions of the lungs, pharynx, and tonsils. It is therefore apparent that, hereafter, not only the diagnosis of latent tuberculous disease of the tonsils, but also that of the lungs, cannot be implicitly accepted when it rests chiefly on the demonstration of acid resisting bacilli in the tissues and the sputum. It is said by Moeller that the differentiation of these various forms of acid resistant bacilli may be made by culture methods, the tubercle bacillus being of very slow growth and requiring the high temperature of the thermostat, differing in this way from the others. It is hardly necessary to point out, either to the clinician or the bacteriologist, the practical difficulties in

⁶Berliner klinische Wochenschrift, No. 35, 1901.

⁷Berliner klinische Wochenschrift, September 23, 1901.

⁸Lancet, July 27, 1901; also Centralblatt für Bakteriologie Bd. xxx, October 23, 1901, No. 14.

using this method in clinical diagnosis. As for the animal tests, Koch's recent declarations and the present aspect of that side of the question involve that resource in a cloud of uncertainties, and there must be a rapid revision of deductions springing from it.

Just where these investigations and their sequelæ are going to land us it is impossible to say. At present there is no room for dogmatic assertions; we are more or less at sea, and it remains to be seen what port we shall make, with the shifting winds which are shaking our sails.

GENERAL ANÆSTHESIA AND ITS ADMINISTRATION IN THROAT SURGERY.

By M. L. MADURO, M. D.,

NEW YORK.

The operation of short duration, and particularly such work as the laryngologist is called upon to do, requires anæsthesia that is graded to such a nicety that, after the face-piece has been removed, the surgeon can complete his work without being hampered by the readministration of the anæsthetic. It further requires that the minimum amount of anæsthetic be given to secure complete relaxation. Great stress should be placed on the word minimum as indicating the smallest amount of after-effects to be experienced by the patient. What is the anæsthetic of selection in these cases, and how is the administration accomplished? Without doubt nitrous oxide and ether is the safest and best we yet have, and, barring special contraindications, should be the one selected by the throat surgeon. Experience has taught me that there are various ways of administering nitrous oxide as a preliminary to ether, but in throat cases, where we are usually sure to encounter obstruction to proper breathing in the form of enlarged tonsils or adenoid vegetations, adherence to a certain method has given me very satisfactory results. The conclusions formed from such observations are:

1. It should be carefully ascertained that the valves of the gas apparatus fit accurately, thereby establishing the certainty of a rapid exit of atmospheric air from the lungs.

2. A certain amount of re-breathing of nitrous oxide should be allowed at the end of its inhalation, in order that a longer gas, and a shorter ether anæsthesia can be obtained.

3. The transition to ether should be accompanied by a rather free amount of admixture of air through the various inlets in the apparatus without removing its face-piece.

4. Lastly, the head of the patient should be well drawn back, and forward pressure made on the jaws,

at the time of the transition to ether, so that the air-way may be increased to its utmost.

In explanation: 1. The air-valves, having rubber in their composition, are very prone to deterioration by reason of the moisture deposited on them during to and fro breathing. Thus they assume a fixity that determines absolute failure on attempting narcosis with gas. Herein lies the need of proper inspection and self-testing before making use of the apparatus, and of noting the clicking response of the valves to forcible breathing. One must not be led astray by such an experiment on the patient, as the change incident to breathing nitrous oxide after air through normal valves, is apt to disturb the respirations to such an extent that the looked-for clicking sound will not be heard. In attending to this detail, it is worthy of mention that perfect administration in all cases of gas and ether depends on a close fitting face piece. This must be adjusted closely and gently, not forgetting to advise the patient of its absolute necessity; for, not infrequently, the omission of this simple explanation will cause the patient to hold the breath and pretend to be breathing, when in fact he is not doing so. Such an occurrence reflects on the administrator and has the worst effect on the patient.

2. To and fro breathing for the short space of two or three breaths at the end of gas inhalation is useful, more especially in throat cases, as it does not asphyxiate so deeply and gives the patient a more prolonged and safer narcosis. Thus the transition will be calmer and surer when ether is turned on.

3. That a free admixture of air should be allowed with the ether is certain, for two reasons: (a) Because vascular turgesence is directly proportionate to the deprivation of oxygen and will thereby interfere with free respiration. Coupled with obstruction in diseased states of the throat, this fact should be given due appreciation, and ought to be readily apparent. (b) Because vascular turgesence naturally means freer hæmorrhage during operation. This latter fact has been amply proved by Emil Mayer after a careful weighing of the blood lost during a series of throat operations of short duration.

Many objections have been justly made to the practice of to and fro breathing from a hygienic point of view; but there is no reason, in my mind, why ordinary rules of cleanliness cannot pertain to the care of the rubber bags before and after each operation.

4. It is obvious that, in obstructive conditions of the throat from morbid growths, the air-way is increased by drawing the head backwards and pulling the jaw forwards. Hare and Martin have justifiably contended that this action raises the epiglottis. Forewarned is forearmed, therefore, such practice of performing manual traction should be made a rout-

ine measure in order to preclude the possibilities of accidents. It is specially useful during the transition period to ether, when the masseteric spasm takes place, compelling mouth-breathing to cease. Counteract the spasm by traction and the admixture of air, and experience the satisfaction of seeing the patient pass gently into a deeper ether narcosis.

The actual time necessary for all the preceding details to take place and until the patient is ready for operation, averages five minutes. Now is the time for the administration to cease, and for the surgeon to begin and finish the short operation. This method is especially applicable to the extraction of adenoids and enlarged tonsils. A comparative review of the use of other anæsthetics in these special cases should be dealt with here. Chloroform, looked at from all points of view, should be given a very limited field. Its tendency to cause laryngeal closure in conditions of obstructed breathing through disease must be given some thought. Then, the danger of pushing it is assured. The respiratory movements in chloroform, at the best of times and under other and more adaptable cases, are not so deep, so quick, or so noticeable, as those of gas and ether. In the longer operations that the throat specialist is sometimes called upon to do, the use of chloroform after ether is very often indicated, as the attendant secretion of mucus is very much less, and one need not remove the face-piece during the operation. But we are concerned here with the short operation. Regarding the mixtures of chloroform and their use in these cases, I have personally no complaint to make, except that they contain chloroform and are, therefore, more dangerous, and, on general principles, are not to be given the preference.

In a series of throat cases where the Schleich No. I was used, almost three years ago, nothing but the most favorable results were reported, and my experiences were uniform in that they were all attended with a sleep of short duration where the face-piece was only applied once, the minimum amount used being two drachms, the recovery rapid (two to four minutes) and the after-effects very little and sometimes *nil*. Its use has since been discarded owing to the general objection to mixtures.

Ethyl chloride acts disadvantageously in these cases, in so far that one can not obtain complete relaxation.

Ethyl bromide is too evanescent and far from safe.

The object of this paper is simply to relate a practical lesson taught me by careful observation in a number of narcoses in a selected type of cases. If it has aroused sufficient interest for the reader to reflect and compare his own experiences on a subject of such wide importance, it will have fulfilled its purpose.

TWENTY-THREE CONSECUTIVE CASES OF APPENDICITIS TREATED BY OPERATION, WITH RECOVERY.

By WILLIAM C. WOOD, M. D.,

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This series of cases covers all my appendicular operations from January 15, 1901, to November 23, 1901. They were not selected, for I operated in every case I saw, except on one patient, who was sent to her home, in Michigan, with orders to report immediately to her family physician.

This article is written, not with a desire to brag, for I know that it is more often the condition of the patient than the skill or experience of the operator that determines the result.

It is written to emphasize the fact that the surgical treatment of appendicitis is the *safe* treatment, and that the physician who still clings to the idea of there being a medical treatment of this disease, is needlessly and uselessly risking valued lives of persons who have put their trust in him.

For, while the medical man can, and often does at the last moment, shirk his responsibility and throw his burden on the surgeon, who as often accepts the load and carries it safely through, yet a proper recognition of the nature of the disease

DR. WOOD'S TABLE OF TWENTY-THREE CONSECUTIVE CASES OF OPERATION IN APPENDICITIS WITH RECOVERY.

Case No.	Sex.	Age, under 16.	Age, over 16.	Recurrent Appendicitis.	Time of Operation.	Symptoms.	Gangrene of Appendix.	Abscess.	Inflamed Appendix.	Removed.	Not removed.	Wound closed.	Wound Drained.
1	M	..	1	..	20 hours	Mild	..	..	1	1	..	1	..
2	F	..	1	..	7 days	Severe	..	..	1	1	..	1	..
3	F	..	1	1	10 hours	Severe	..	..	1	1	..	1	..
4	F	..	..	..	3 days	Mild	..	1	..	..	1	..	1
5	M	1	..	..	18 hours	Severe	..	..	1	1	..	1	..
6	M	..	1	1	2 weeks	Severe	..	1	..	..	1	..	1
7	M	..	1	..	18 hours	Severe	..	1	..	..	1	..	1
8	F	..	1	..	3 days	Severe	..	..	1	1	..	1	..
9	M	..	1	1	3 days	Severe	..	..	1	1	..	1	..
10	M	..	1	1	3 days	Severe	1	..	..	1	..	1	..
11	M	..	1	..	1 week	Mild	1	..	..	..	..	..	1
12	F	..	1	..	24 hours	Severe	..	..	1	1	..	1	..
13	F	1	..	..	3 weeks	Severe	..	1	..	..	..	..	1
14	F	1	..	..	14 hours	Severe	..	1	..	1	..	..	1
15	M	..	1	..	48 hours	Severe	..	..	1	1	..	..	1
16	F	1	..	..	4 days	Severe	..	1	..	1	..	..	1
17	M	..	1	1	24 hours	Severe	1	..	..	1	..	..	1
18	M	..	1	1	Interval	Mild	..	..	1	1	..	1	..
19	M	1	..	..	1 week	Mild	..	1	..	..	1	..	1
20	M	..	1	1	8 hours	Severe	..	1	..	..	1	..	1
*21	F	..	1	..	4 days	Severe	..	..	1	1	..	1	..
22	M	..	1	..	3 days	Mild	1	..	..	1	..	..	1
23	F	..	1	..	4 weeks	Severe	..	1	..	..	1	..	1
23	5	18	7	..	..	..	4	9	10	17	6	9	14

* Patient 5 months pregnant, miscarried on the second day after operation, was jaundiced and delirious, and vomited excessively until the sixth day.

and a proper division of responsibility would result in an early consultation, and the final say as to delay would rest with the operator.

In some communities the laity have caught on, and by their acceptance of the idea that appendicitis is essentially a surgical disease, have made

it easy and popular for the medical man to seek surgical aid. In such a community I have the good fortune to be located, and the good sense of our general practitioners, together with first-class hospital facilities, has enabled me to present this series of twenty-three consecutive patients operated on for appendicitis without a death.

Of these cases, it is true that two or three patients might have recovered from that attack without operation; the opposite is positively true of others, and there were cases in which one or more recurrences had already taken place.

From the table published herewith, we may draw the following conclusions:

As they all recovered, the results obtained could not be surpassed by medical treatment.

Under any but surgical treatment in the four gangrenous cases death must have ensued.

The recurrent cases were in themselves a confession of medical failure, and several of the primary ones were only given to the surgeon because of the failure of medicines to cure.

A medical friend, on seeing an enormous abscess of the appendix evacuated, expressed himself as converted; and, later, when he saw a gangrenous appendix removed from a patient whose temperature was 99° F. and pulse 72, said: "I have become a howling crank on the subject; no patient of mine who has pain, tenderness, and rigidity over McBurney's point shall escape an operation with my consent or advice."

Nor need the lack of hospital facilities be urged against operative procedure. Four of my operations were done in private houses under the most unfavorable circumstances—one by the light of a lantern held by my driver.

The accompanying table shows how little, either duration of attack, or severity of symptoms, can tell us as to the actual condition of the patient. Thus, in Case 14, at the end of fourteen hours from the beginning of the attack, an operation was performed, a pelvis full of pus evacuated, and a perforated appendix removed; while in Case 11, the patient had been sick for a week with scarcely a rise of pulse and temperature, there was no pain, and the only serious symptom was an excessive tenderness on pressure over the region of the appendix, which, on operation, was found to be absolutely rotten, and had to be removed piecemeal.

If my argument and the table appended serve to induce even one more of the profession to see to it that his patient takes no harm from delay, my work will be well repaid and I am sure some lives will be saved.

ON THE IDENTIFICATION OF THE CARDIAC NEUROSES, WITH SPECIAL REMARKS ON THE NOMENCLATURE.*

By JAMES K. CROOK, M. D.,

NEW YORK.

The researches of physiology have taught us much regarding the mechanism of the heart and its adjuncts in the circulation of the blood. We have thus learned the seat of the automatic and rhythmic action of the cardiac muscle and are able to descry the part played by the nervous system in controlling the force, frequency, and rhythm of the heart's pulsations, and the tonicity or laxity of the arterial walls. But this knowledge has not so far greatly aided us in a definite appreciation of the pathogenesis of the various disordered states which we designate the cardiac neuroses, nor has it to any appreciable extent quickened our perception as to a proper interpretation of the clinical manifestations of these disturbances. The physiological relations existing between the vagus and sympathetic supplying cords, on the one hand, and the cardiac ganglia and musculature on the other, have not been sufficiently defined to enable us to agree upon any fixed or definite anatomical, pathological, or even clinical basis in our attempts to explain the cardiac neuroses. We have thus at least a partial justification for the unsatisfactory state of the contemporaneous literature of this subject.

Nomenclature of the Cardiac Neuroses.—Until a very recent period the term palpitation was made to cover practically all of the nervous disturbances of the heart. With increased experience and additions to our clinical knowledge this restrictive appellation no longer serves its former purpose. It would appear, indeed, that we are in danger of going too far in the opposite direction. During the last decade or two there has developed an embarrassing tendency to multiply terms in labelling the functional derangements of the heart. Furthermore, no two writers appear to agree exactly in classifying these disorders. It thus transpires that the nomenclature of the subject is at the present time most bewildering to the seeker after information. As above premised, our physiological knowledge does not yet afford us a solid ground work upon which to erect a permanent clinical classification. Again, some of the conditions which we find it convenient to describe under distinctive titles so shade into each other that it is difficult to describe where one begins or another ends. For example, the condition described as palpitation may present at times the symptoms of the irritable heart or of arrhythmia, while in tachycardia the features of palpitation, or

*Read before the Medical Society of the State of New York, October 16, 1901.

even of pseudo-angina, may obtrude themselves. Some of the terms employed do not constitute true symptom groups; they are mere symptoms themselves and not distinct diseases. It has seemed to the writer, however, that all we know at the present time concerning the clinical and pathological features of the cardiac neuroses may be properly set forth under the following heads: (1) Palpitation; (2) tachycardia; (3) bradycardia; (4) the dyspeptic heart; (5) neurasthenia cordis; (6) the irritable heart; (7) arrhythmia, including tremor cordis and delirium cordis; (8) the heart in Graves's disease; (9) angina pectoris, including pseudo-angina. A careful study of all the available facts connected with these different disturbances, coupled with the writer's own clinical observations, leads him to the belief that the following-named may be regarded as distinct diseased conditions, viz., palpitation, tachycardia, neurasthenia cordis, arrhythmia, and angina pectoris. The remaining terms do not express morbid entities, but rather symptoms or sets of symptoms which are found in other diseased states.

Palpitation.—According to Balfour, all who suffer or think they suffer from disease of the heart are prone to palpitation. Under Laennec's definition, any person whose heart's action obtruded itself upon the consciousness might be said to be a victim of this disorder. In accordance with recent onomatology, however, the name is used to cover a much more limited class of cases. One by one symptoms formerly referred to as falling under this term have been relegated to other forms of disturbance until, at the present time, palpitation has become quite unfashionable. The writer believes, however, that the name may still be employed to cover a substantial and distinct disorder. It is frequently a symptom or concomitant of other more striking disturbances or diseases, but in numerous instances it constitutes the sole, or, at any rate, the most important, clinical factor. More or less palpitation, indeed, falls within the experience of probably every living human being of adult life. What are the marks of simple nervous palpitation and how may it be identified? Let us take an illustrative case. A young lady calls at the office with the information that something is wrong with her heart. She states that it appears to throb or jump disagreeably and at times feels as though it would stand still. A deep respiration may cause a shooting or darting pain to penetrate the region of the apex. Beyond this she has nothing to complain of. Her appetite is good and all of her functions appear to be properly performed. Possibly it will be learned on inquiry that she drinks two or three cups of rather strong tea daily. If the patient is a lad, possibly he has learned to smoke cigarettes. We can usually

learn the cause of the cardiac aberration, but this does not supply us with a name for it. The heart is carefully examined and found to be quite normal. There is neither intermittent nor other form of irregularity, although the rate may be somewhat quickened. Such a case is one of simple cardiac palpitation, properly so called. Even though there be slight signs of flatulent dyspepsia or a mild grade of anæmia, the cardiac symptom being most prominent and the only one complained of, we are still warranted in labelling the case one of palpitation.

Tachycardia. — Etymologically (*ταχίς* — quick, *καρδία* — heart), this word means a quick heart, but the name does not afford altogether an accurate conception of the disease. Tachycardia is characterized by an increased frequency of the cardiac pulsations, but not every person with a quick heart can be classed as a victim of the diseased condition which we now recognize under this appellation. Many persons have normally a heart's action of 100 or more, but these cases do not meet the requirements of tachycardia proper. Nor does the rapidly acting heart of emotional disturbance or that associated with tuberculosis, fevers, organic heart disease, or Graves's disease. Although the term has been greatly abused, tachycardia embraces a fairly constant symptom group and, as such, is entitled to be regarded as a separate morbid entity. Like palpitation, however, it may occur as a complication or as a symptom of other conditions more serious or more pronounced. Many theories have been offered in explanation of this strange affection, but none of them are fully satisfactory. In the present state of our knowledge we can do little more than guess whether the immediate causes lie in the augmentators of the heart, the vagus, the intracardiac nerve ganglia, or the muscular structure, or whether it is of centric origin. Possibly it is due at times to some eccentric irritation, such as a diseased ovary, a floating kidney, or a neuritis of distant cords. It seems rational to attribute the trouble in most cases to overstimulation of the accelerators or to paralysis of the inhibitory nerves; probably in extreme cases both factors are operative. Whatever the underlying cause may be, the result is a serious unhinging of the cardiac mechanism, producing an essential neurosis. How may it be identified? In essential paroxysmal tachycardia the attacks may occur in a person who otherwise enjoys a fair degree of health. It is apt to be ushered in about as follows: A peculiar sensation of lassitude or restlessness steals over the patient; slight vertigo occurs; the extremities become cold or numb, and a shivery feeling creeps up and down the spine. The face may become ashen or mottled. A sensation of oppression or tightness, but not of palpitation, is felt about the heart. This may occasionally amount

to actual pain. An examination of the heart will now show a pulse rate of 120, 140, or 160. Sometimes it is so frequent as to be counted only by the use of the sphygmograph. Dr. Bristowe met with a case in which the pulsations were 308 per minute. The use of the stethoscope shows no murmur or other evidence of organic disease of the heart. The pulsations have a tick-tack sound, and not all of them are propagated as far as the wrist. In most cases the urine is scanty, but nervous polyuria may exist. The attacks usually last for a few moments only, although cases of prolongation for several hours, or even several days, have been seen. The attack generally ends suddenly with a few parting twinges of pain and twitching. The presence of these features thus outlined, in whole or in part, will usually suffice to satisfy the observant practitioner as to the nature of the case with which he is dealing. It should be further remembered that the disease occurs with about equal frequency in the two sexes, but that very few cases are met with prior to the twentieth year of age.

Bradycardia (from *βραδύς*, slow, and *καρδία*, heart), otherwise known as *aræocardia*, *oligocardia*, *pulsus rarus*, *pulsus tardus*, etc. In *bradycardia* the cardiac pulsations fall far below the normal standard in frequency; pulse-rates of 50, 40, 30, and even 20, have been observed. This condition cannot, in our present state of knowledge, be identified as a distinct affection. The name connotes nothing and signifies nothing more than a phenomenon common to many definite groups. There is not, as in *tachycardia*, a particular symptom group of which a slowly acting heart is itself the centre. Cases of what was supposed to be essential paroxysmal *bradycardia* have been reported, but further observations have shown that the slow heart in these instances was always secondary. A description of the condition, therefore, can consist only in detailing the various disorders or diseases of which it is one of the clinical features. We may, if we choose, denominate any case of slow heart one of *bradycardia*, but the designation is superfine and superfluous.

The Dyspeptic Heart.—Is there a symptom group, referable to the heart as its centre, occurring with sufficient frequency or uniformity to warrant the addition of this term to our nomenclature as a separate and distinct affection? After much careful thought and observation the writer is led to answer this question in the negative. Aberrations of the digestive functions lead to all kinds of disturbances of the heart's action, whether they take the form of palpitation or of *tachycardia*, of *neurasthenia cordis*, or of *pseudo-angina*. These neurotic manifestations due to indigestion present nothing peculiar or distinctive, however, but are quite simi-

lar to those resulting from other causes, plus the presence of features referable to the stomach or intestines. We may speak of a *dyspeptic heart* as a symptom, but there is no such disease as the *dyspeptic heart*.

Neurasthenia Cordis.—This condition is very similar in some of its manifestations to the irritable heart of some authors. It is practically identical with the not infrequent class of cases somewhat loosely referred to as the "weak heart." The condition denotes aberration or insufficiency of the heart, the result of defects of innervation. It is clearly a neurosis and in our present state of knowledge excludes all organic disease. The marks of identification are as follows: The patients are usually of the neuropathic type, probably the result of defective endowment, hereditary or otherwise. It is brought on by long-continued depressing emotions, frequent excitement, long marches, overstudy, failure in business, onanism, sexual excess, or coitus reservatus, and follows convalescence from prostrating diseases, especially the essential fevers. Being to some extent an occupation neurosis, it is more frequent in males than in females. Clinically the cardiac features predominate, although general nervous manifestations are usually prominent. The patient is fretful, irritable, and fidgety. He is easily startled on sudden excitement, and is apt to be more or less hypochondriacal. The cardiac attack usually begins with a feeling of discomfort or uneasiness about the heart. There is some quickening of the apex beat, and more or less irregularity or intermittence is observed. The first cardiac sound is short and lacking in volume; the second sound is not accentuated. The patient is apt to show vasomotor disturbances in the shape of pigment changes of color in the face and sudden coldness followed by burning heat of the hands and feet. The sleep is restless and the patient is apt to awake with a sudden jump of the heart. After the stage of irritability the patient falls into a state of depression marked by defective nutrition. The patient's long-continued general *neurasthenic* state, coupled with the cardiac symptoms and with the absence of any evidences of organic trouble, Addison's disease, carcinoma, or tuberculosis, renders the existence of *neurasthenia cordis* altogether positive, or at least strongly inferential.

The Irritable Heart.—Under this name a form of cardiac neurosis is described in various ways by different writers. The term was originally used by Da Costa in describing a peculiar cardiac excitability which he found to exist among soldiers in the field. In the form of the trouble described by Allbutt, which tallies closely with the affection as it has come under the writer's observation, the patient complains that he is never free from a tired feeling

about the heart. Sometimes a sharp pain is felt; the organ is liable to throb and jump and is never entirely outside of the consciousness. Even when the patient is lying quietly in bed it makes itself a nuisance, banging away when the sufferer should be asleep, while exercise or exertion brings on a violent beating. This trouble frequently remains among college men as a memento of the wear and tear, the indiscretions, and untamed passions of youth. Spasmodic bouts of study, overdoses of alcohol and tobacco, late suppers, overwork in the gymnasium, and other incidents of an irrational and irregular life in a nervous and dyspeptic young person go to form the groundwork of the irritable heart. A physical examination may show a slight degree of hypertrophy, but dilatation is most frequently present. The peripheral arteries are lax, the pulse is dicrotic, and the slackness is in marked contrast with the excitable state of the heart itself. The rhythm of the cardiac contractions is often a little uneven, and the second sound at the apex too loud. The action of the heart may seem labored and heavy under the palpating band. The irritable heart is described by some writers under the head of palpitation, arrhythmia, or neurasthenia.

Arrhythmia (a priv., and *ῥυθμός*, rhythm), known also as the *pulsus inæqualis*, or *pulsus irregularis*, is a disturbance of the rhythmic contractions or regularity of the heart. The cardiac pulsations may be normally intermittent or irregular in some persons, and slight deviations of this kind are not incompatible with the complete and proper performance of the cardiac function. It is not uncommon to notice a certain disturbance of the rhythm in childhood, especially during sleep, which disappears after the child awakes and runs about. This has no pathological significance, but the irregularities which are increased by exercise or excitement, especially if accompanied by pain or palpitation, are always a sign of gravity. The condition of arrhythmia at times complicates all the other cardiac neuroses, as well as organic diseases, but it is frequently present without other symptoms or signs, and constitutes the sole evidence of cardiac trouble. It is, of course, an objective phenomenon and can be recognized only by actual observation of the heart's action as well as of the pulse.

Tremor Cordis.—This is not a morbid entity, but it is a symptom sometimes met with in neurotic persons, especially those who suffer from indigestion. It is a peculiar form of irregularity which seizes the sufferer without a moment's warning. The symptom is exceedingly alarming to the sufferer, but is devoid of danger. It may be recognized by the following features: "Like a bolt from the blue, and with as little warning, a quiet, steady heart is suddenly seized with a rapid fluttering, and the ordi-

nary full pulse of health suddenly drops to a mere tremulous thread" (Balfour). The attacks may vary in duration from the space of three or four to a series of short, rapid, incomplete systoles, extending over several seconds. On laying the hand over the heart a delicate tremulous sensation is felt, and the radial pulse is scarcely perceptible. The paroxysm ends suddenly with an unusually forcible beat. It is seldom attended by faintness or vertigo.

Delirium cordis denotes an extreme degree of irregularity, accompanied by intermittence and a rolling or staggering sensation conveyed to the palpating hand. It is usually classified as a neurosis, although, as it seems to the writer, improperly so, as true examples of the condition are found only in cases of dilatation and occasionally in mitral stenosis. It is at once recognized by its prominent characteristics. Auscultation shows the heart to be irregular; even in its irregularity there is no "method in its madness." It will intermit, beat slowly for one or two or half a dozen beats, then pulsate so rapidly as to be uncountable for a few moments; but this rotation is not maintained. Counted for a full minute, we may find the rate 110, the next minute 170, the third 130, and the fourth so rapid, intermittent, and irregular as to be indeterminable. The average number of pulsations is always far above normal if counted at the apex; whereas, at the wrist, perhaps not more than half the beats can be appreciated.

The Heart in Graves's Disease.—Graves's, or Basedow's, disease, more recently known as the thyreoid cachexia, is classified by many authors as a cardiac neurosis. This, it seems to the writer, is not fully warranted. The clinical triad which constitutes the basis of a typical case of this affection is as follows: First, a rapidly acting heart; secondly, enlargement and undue prominence of the thyreoid gland; thirdly, protuberance of the eyeballs. Not all of these manifestations are invariably present, the bulging eyes and hypertrophied thyreoid, one or both together, being most frequently absent. The rapid heart is the most constant symptom, but the writer has seen more than one case presenting all the other usual signs and symptoms of Graves's disease, with a heart's action but little, or not at all, accelerated. But, in a well-marked case, the action of the heart is very rapid, amounting to 120 or more pulsations per minute. This is often attended by a violent throbbing which extends even to the smaller arteries. The sounds of the heart are also greatly augmented in volume, being audible in some instances at a distance of several inches from the chest. This peculiar action of the heart differs from simple palpitation by its continuity, and by the fact that the throbbing embraces the small arteries as well as the heart and great vessels. By these

features, supplemented as a rule by the general symptoms of anæmia, Graves's disease is usually easy of recognition.

Angina Pectoris.—This name (*angere*, to bind, to strangle) was introduced by Heberden in 1768. The affection has also been known as stenocardia, sternalgia, and breast-pang. There are two varieties, the true, or angina pectoris proper, and false, or pseudo-angina. True angina is always attended by structural changes, and is no more a neurosis than is atheroma or endocarditis. It is usually treated in the books as a neurosis, however, and this is at least partially justified by the fact that the most formidable and striking evidence of the trouble undoubtedly has its origin in some of the nerve structures communicating with, or located within, the heart. Many authorities have regarded it as a neuralgia. Pseudo-angina is not attended by organic change and is indisputably a neurosis. The features of false angina are not usually so severe as those of angina vera, but it is not always possible to separate the two. A fatal issue has undoubtedly resulted from pseudo-angina pectoris in some instances.

Symptoms and Diagnosis.—The structural changes which constitute the basis of true angina pectoris do not occur in early life; thus, the affection seldom makes its appearance before the fortieth year of age. It is much more frequently encountered in males than in females. The initial paroxysm may set in suddenly and without previous warning, although the marks of arteriosclerosis and general failure of health and strength may have shown themselves for some years. Cardiac palpitation and arrhythmia are usually experienced beforehand. Probably no condition in the entire range of our knowledge entails more dreadful agony than that of a typical attack of true angina pectoris. The seizure may appear when the patient is sitting quietly or resting in bed, but is most likely to come on during some exertion, such as going up stairs, climbing a hill, "breasting the wind," or straining at stool, or while he is laboring under some form of excitement. The paroxysm is of overwhelming suddenness and of unspeakable intensity. The pain begins in the præcordial region, usually about the mid-sternum, and radiates, as a rule, upward into the left shoulder and down the left arm as far as the fingers' ends. Sometimes it is propagated in the direction of the right shoulder or possibly downward toward the hip or lumbar region. The nervous system is acutely alert. One of the most characteristic features is the sense of imminent death. The patient feels as though the heart were being tightly squeezed in the grasp of a gigantic hand. The features are haggard and the face is

blanched, the forehead is bedewed with a cold sweat. In many cases, a sense of coldness, numbness, deadness, creeping, or other vasomotor disturbance is felt. Occasionally the pain may not be so acute, but takes the form of a dull ache (*angina sine dolore*) and is overshadowed by the intense anxiety. The respiration, as a rule, is in nowise affected, but may be hurried and superficial. The patient is well able to take a deep breath, but is afraid to attempt it. He usually prefers to keep perfectly quiet in a sitting or upright posture for fear of increasing the severity of the paroxysm. A physical examination may or may not show the signs of organic heart disease; the most frequent lesion is aortic stenosis. During the attack the heart's action may be increased or diminished in frequency. In one of the writer's patients it sank as low as 40 per minute. The blood pressure is always raised in the beginning of an attack, as shown by the tenseness and incompressibility of the arteries. The seizures may last from a few moments to an hour or more, probably five or ten minutes being about the average duration. After the attack, which may cease as suddenly as it set in, the patient feels weak and exhausted for a short time. A sensation of formication or numbness may be experienced, and there may be a considerable belching of gas and voiding of large quantities of urine.

The recognition of true angina should not be difficult. No other condition presents the same complex of symptoms—sudden irradiating pain, squeezing, tightening, constriction, overwhelming fear of immediate death, etc. From pseudo-angina it is distinguished by its occurrence almost invariably in males past the meridian of life and by its greater severity. Huchard's aphorisms, while not infallible, are important: (1) Every angina produced by effort is a true angina. (2) Every angina which occurs spontaneously without effort is a false angina. (3) But an angina occurring at night, though independent of effort, is a true angina. The absence of all signs or symptoms of organic disease of the heart creates a presumption in favor of pseudo-angina.

783 MADISON AVENUE.

The Treatment of Pruritus Consequent on the Menopause.—*Nouveaux remèdes*, cited by the *Revue médicale* for January 8th, attributes the following to "W. Shoemaker":

R Zinc oxide. 4½ grains;
Quinine. 37½ "
Extract of aloes. 15 "
Licorice. q. s. to make 20 pills.

M.

One pill to be taken three times daily. At the same time the pruriginous parts are to be bathed in a weak carbolized lotion containing a little menthol.

PRACTICAL PHARMACY FOR THE PHYSICIAN.*

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Gentlemen: Having been invited to read a short paper before this association by one of your members, who, out of a sincere regard for your comfort placed special emphasis on "short," I have chosen for a subject one that I hope may interest a few of you gentlemen, though I have to admit my inability to do half justice to it in the allotted time.

By way of explanation I wish to state that in discussing Practical Pharmacy for the Physician I shall confine myself to a few points which, in looking back over my career at the prescription counter, seem of interest to the physician. During an experience of ten years as a pharmacist, nearly four of which were spent in a government hospital where I came in contact with physicians of different ages from all sections of our country, I have often noted that the older physicians displayed a far better knowledge of pharmacy in prescription writing than did the younger ones. Fifty years ago, before American pharmacy had attained its present high order of efficiency, and when it was necessary for the physician to dispense as well as prepare most of his medicine, I have been informed that a course in pharmacy was included in the curricula of all our medical colleges.

To-day there are comparatively few that give an obligatory course in this important branch of medicine, the reason for this being the increase in number and efficiency of colleges of pharmacy and the maintenance of rigid State pharmacy laws.

While it would not be feasible for medical schools to give a course in practical pharmacy as elaborate as that given in colleges of pharmacy, it seems to me that the young graduates should be taught at least the minor manipulations in the art of compounding, that they may be familiar with any drug or combination of drugs they might prescribe.

As a result of the failure of our medical schools to teach students the branch referred to, many of our young doctors are entirely dependent on the pharmacist to avoid many incompatibilities, errors, etc. While the pharmacist is invariably true to the trust, we should be prepared to know whether or not such is the case, when it is possible to do so from a careful inspection of the medicines we have ordered when we next visit our patient.

Though it has been my experience that physicians make more mistakes in writing prescriptions than

the pharmacists do in compounding them, the profound interest which we should have in our patients' welfare should prompt us to surround them with every safeguard possible that may be conducive to their comfort and rapid restoration to health.

The physician often ties the hands of the compounder, so to speak, in the attempt to accomplish too many things in one prescription without regarding the individual properties of the drugs entering into its composition. As an instance of this the following may be cited, which I have often encountered:

R Quinin. sulph. gr. xx;
Acid. sulph. dil. q. s.;
Ext. glycyrrhiz. fl. ad. $\bar{3}$ i.

M. et sig.: $\bar{3}$; t.i.d.

Here the physician intends to bring the quinine in solution that the rapidity of its absorption may be increased, by addition of the acid, using the licorice to mask its bitter taste.

The sweet principle of licorice exists in the root in combination with ammonia—ammonium glycyrrhizate. Glycyrrhizin itself is insipid. When an acid is added to extract of glycyrrhiza, the active principle is thrown out of solution. Acid should not be employed where licorice is used to mask the bitter taste of quinine. The quinine should be diffused through the mixture, and the mixture dispensed with a shake label.

The acid precipitates the sweet principle of the licorice (glycyrrhizin) and the mixture is infinitely more bitter than if no liquorice or acid had been used, for the solubility of a salt can not be increased without increasing its taste.

A knowledge of pharmacy is useful to the physician in aiding him in the administration of nauseous and irritant drugs, and while the enterprising manufacturing pharmacists supply many useful vehicles for this purpose, a proper knowledge of the U. S. P. drugs intended for this use will obviate the necessity for their employment, and the doctor who dispenses his own medicine can save himself much expense by familiarizing himself with the properties and manner of combining the drugs referred to.

For instance, we all know that chloral possesses an exceedingly nauseous taste and irritant properties, and in cases where we have a trouble accompanied by an inflamed stomach—as in acute alcoholism (and when it is not feasible to give per rectum)—it is necessary to give this drug in some vehicle that will in a measure overcome its objectionable properties.

I have found syrup. acaciæ, U. S. P., $\bar{3}$ iv, and tinct. cardamom. comp. \mathfrak{M} x to each scruple of the drug much better adapted than the aromatic elixir and other hydro-alcoholic preparations usually employed. And, in that it is our aim to maintain the

*Read before the Seaboard Medical Association at its sixth annual meeting, held at Norfolk, Va., December 19, 1901.

integrity of the stomach if possible, that nourishing food may be taken and retained as early as possible in such cases, we should exercise great care in avoiding its further irritation.

In the administration of oil of turpentine in the form of emulsion, especially when given in typhoid cases, physicians frequently make the mistake of using too much acacia in forming the emulsion, and the resulting thick liquid adheres to the patient's mouth and is not easily washed away with a swallow of water. This, of course, may be obviated by diluting each dose of the thick preparation with sufficient water, but the bulk of the dose is increased, and it is much better to use the proper quantity of the emulsifying agent and secure a thin liquid of small volume and one easily swallowed and washed away.

For the benefit of those who prepare their own drugs, I will mention the best method of preparing such an emulsion: Place the finely powdered acacia in a perfectly dry bottle in the proportion of 20 grains to the ounce of oil, add the entire quantity of oil, shake vigorously, and then add 4 drachms of water and again shake well until globules of oil cease to be visible on the sides of the bottle. Add gradually, and in divided portions, the remaining water, shaking after each addition. This is a good method of preparing emulsions of volatile oils, though yolk of egg is preferred by some. The town doctor often wisely leaves the quantity of acacia to be used with the compounder.

A knowledge of pharmacy on the part of the physician serves no greater purpose than the avoidance of chemical and pharmaceutical incompatibility. I shall not attempt to discuss the subject to a degree commensurate with its importance, for obvious reasons, but shall ask your attention to a few features with which experience brought me in contact.

I realize that it is almost impossible for the physician to avoid minor incompatibilities, and it is those decompositions in which the aim of the physician is frustrated, to which I refer.

Chemical incompatibility may be known in three ways: (1) By precipitation or the formation of an insoluble compound; (2) by the evolution of gases, and (3), by changes in color. There are two available fluids often used to retard the above changes—namely, glycerin and syrup. When one of these is used it should be added to the suspected ingredients before adding the other, and when neither is present, a good general rule is: Dilute the reacting ingredients to their full extent before mixing and mix cold.

Precipitation forms by far the largest class of incompatibilities, and takes place according to the well-known rule. Here I wish to remind you that insoluble salts are never inert, though they act more

slowly upon the system than the soluble salts. For instance, we know that the white of an egg is an antidote for corrosive sublimate poisoning, the albuminate of mercury being formed. But if this insoluble albuminate is allowed to remain in the stomach the poisonous action will continue, though, of course, more slowly. Therefore in cases of poisoning by metallic salts an antidote is followed by an emetic or the use of the stomach tube.

The following may be used to illustrate instances of chemical incompatibility:

R Argenti nitrat. gr. vi;
Ext. opii. gr. viii;
Ext. gentian. q. s.

M. Make into twelve pills.

This is a favorite remedy in certain conditions, and while the rule is to avoid mixing oxidizing agents with organic substances, clinical experience teaches us that it is useful. However, regard for the compounder should prevent us from the attempt to combine creosote with such a combination, as an explosion would result. Pills of silver nitrate have been known to explode when massed with extract of gentian, owing to the reduction of the nitrate to the state of oxide and the rapidity with which the oxide thus formed parts with its oxygen. If, however, the silver nitrate is first massed with a mixture of talcum and resin ointment, or with a mixture of kaolin and petroleum, it is protected from decomposition in presence of organic substances, and the extract of opium and extract of gentian may then be safely incorporated.

In some cases poisonous compounds are formed as the result of chemical incompatibility, as when hydrocyanic acid and calomel are mixed, the mercuric salt being formed. I have known symptoms of corrosive sublimate poisoning to follow the administration of a sedative cough mixture containing hydrocyanic acid soon after calomel had been given.

Pharmaceutical incompatibilities are chiefly cases of insolubility and can be remedied in most cases by changes in the solvent or by some protective or suspending agent. We cannot always secure solution, on account of some therapeutic objection to the necessary solvent, but we should always aim at obtaining homogeneous mixtures, upon which we can depend to yield an even dose of the constituents. The variety of such incompatibilities is so large, I will only state the four general methods of remedying them:

(1) By order of mixing; (2) by changes in the bulk of the mixtures, whereby the alcoholic or solution strength is kept within certain limits; (3) by alterations in the solvents used; (4) by emulsifying or suspending the troublesome drug with gum or syrup.

During my experience as a pharmacist the following incompatibilities were among the most frequent encountered: Potassium iodide with infusion of alkaloidal drugs, resulting in precipitation of alkaloid as hydro-iodides; alkali acetates with quinine sulphate, resulting in insoluble quinine acetate.¹ The apparent incompatibility between solutions of potassium iodide and infusions or other preparations of alkaloidal drugs can usually be obviated by the introduction of a small amount of alcohol, 15 to 40 per cent. being sufficient; pepsin with alkalies (and alcoholic liquids), resulting in precipitation of pepsin; spt. æther. nit. with infus. uvæ ursi (infusion of bearberry), resulting in an explosive mixture; alkaloids with alkali bromides, iodides, and carbonates, resulting in precipitation of alkaloids. These can usually be obviated by addition of alcohol. Acid syrups with carbonates, resulting in the evolution of CO₂ and salts of acid; resinous liquids with aqueous preparations, resulting in precipitation of resinous principles.

While the pharmacist is required by ethics to protect the physician at all hazards, when it becomes necessary to see him before compounding a prescription, some are unethical enough to say: "Take this back to the doctor and tell him he has made a mistake"; therefore we cannot be too careful in writing our prescriptions if we are to escape unpleasant positions. We should be familiar with the properties of every drug we use, whether it be a U. S. P. or A. B. & Co.'s product, that we may detect substitution and mistakes. Regarding the former, I know from experience that it is not infrequent with disreputable druggists in one of our large cities not far away. I remember distinctly that two of them were in the habit of using acetanilide when a different coal-tar product was specified, and of making a compound acetanilide powder which they substituted for a well-known *quack product*. In this connection, gentlemen, let me say that the "substituting druggist" bears the same relation to pharmacy that the "criminal abortionist" bears to medicine. The fact that substitution exists is another reason why we should be able to recognize the drugs we use.

The following incident occurred in Baltimore eight or nine years ago: A young physician hurriedly entered a drug store and asserted that he had asked for sulphuric ether, when (as was subsequently proved) he had called for sulphuric acid, which the drug clerk had given him, properly labelled. The doctor had poured the heavy liquid in the inhaler and placed it over the face of a child two years of age to produce anæsthesia, and, notwith-

standing the fact that he sent a lovely floral design at the funeral, which was held two days later, he figured as the defendant in a suit for malpractice. He was found guilty and convicted—the judge deciding that he did not exhibit the required "usual medical skill" in that he failed to recognize the great difference between the physical properties of the drugs in question. I admit that this is an extreme case of carelessness, and I mention it, not as a warning, but to emphasize the importance of knowing the properties of the agents we handle.

In conclusion, the following question presents itself: How are we as practitioners to acquire a practical knowledge of pharmacy if we have not been instructed in this important branch in the school from which we graduated? This can only be answered in a general way, and to those who write prescriptions I would suggest

1. Study the properties of drugs and preparations used whenever an opportunity occurs.
2. Carefully inspect every prescription written when filled by a competent pharmacist.
3. Study the subject of incompatibility.

And to those who dispense their own drugs:

1. Study the subjects of extemporaneous pharmacy and incompatibility in any text-book on pharmacy.
2. Note the appearance, odor, etc., of all drugs and preparations handled, and avoid the indiscriminate mixing of drugs without regard for their properties.
3. Be careful, accurate, and neat in every manipulation.

THE "POULTICE METHOD" OF HEALING CUTANEOUS AND SUBCUTANEOUS ABSCESS CAVITIES.

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In the April, 1900, issue of the *Atlanta Journal-Record of Medicine* I published two cases illustrating the method of treatment to be described. My discovery of the value of the poultice treatment was the result of a patient's positive refusal to have a freshly opened axillary abscess packed with gauze, as had been done for her in abscesses of the other axilla the previous winter.

The method is simply to apply over the opening of the abscess a poultice of flax-seed meal, made with three-per-cent. carbolic, instead of plain water. A thin cloth or gauze layer can be put next to the opening. The three per cent. of carbolic acid really becomes about one per cent. in the mixture and is hence very weakly germicidal. Absolutely nothing

¹There is double decomposition here. It is true that quinine acetate is first formed, but this is quickly hydrolized and the precipitate formed is really quinine hydrate.

is put in the abscess cavity, it simply being emptied of pus by pressure—through a small opening—if not already open. The poultices are changed as often as cleanliness or their getting dry requires.

The wet poultice affords constant drainage and absorbs the discharge. The moisture in the poultice and the constant flow of discharge prevent premature union of the mouth of the cavity. There is no painful packing in of gauze strips and retardation of healing by the presence of the foreign substance—gauze. There is no reinfection in dressing and there is a saving of from 75 to 80 per cent. in time of healing. When incision is necessary it may be small, instead of "free" and long. The pressure of the poultice aids in the coaptation of the walls, and the rapid removal of discharge clears the way for natural reparative processes. The successful use of rubber adhesive plaster on some occasions shows the effect of simple warmth and moisture in facilitating healing from the bottom.

A brief record of a few cases will demonstrate the superiority of this method over that usually adopted. Cases I and II were reported in a previous article.

CASE I.—Young lady. Abscess from follicular infection in the right axilla. About one ounce of pus discharged after incision. The carbolyzed poultice was applied directly over the incision and frequently changed. The cavity was healed to the skin level in three days. In a previous similar condition of the left axilla the gauze packing was properly used, but produced much pain, and healing required eleven or twelve days, though the confluent abscesses were not over one fourth the size of the last.

CASE II.—Young man. Neglected boil on the back of the neck. Complete suppuration; half-a-walnut sized cavity. Poultices. After two days nothing left but a slightly gaping skin wound.

The skin heals rapidly in these cases after the cavity is filled up.

CASE III.—Old lady. Small pinhead-sized pustule upper edge of right ear. Acid nitrate of mercury was applied. Three days later a crust was removed, exposing a small cavity full of pus. The floor of the cavity was almost on the cartilage. For over four weeks this minute lesion persisted in healing at the top first, in spite of enlargement by incision of the skin opening, the application of fuming nitric acid to the edges, the leaying a little blood in, packing with 1-to-1,000 bichloride gauze, the use of boric-acid ointment, and even collodion put in and on. After using every imaginable procedure to force the lesion to fill from the bottom and the skin edges to heal last, instead of first, the edges were slit, for about the fourth time, a little boric ointment put in and plain rubber adhesive plaster applied. Two days later the lesion had healed properly.

Here was a little lesion which resisted ordinary treatment for about one month, becoming but little smaller, and healing permanently with the plaster substitute for a poultice in two days.

CASE IV.—Young man. A number of simple and compound furuncular lesions, some already discharging. As the treatment of unopen lesions does not conform to the title of this paper, I only go into the management of the cavities after discharge began. The use of the carbolyzed poultices was begun on a quarter-dollar-sized cavity on the back of the neck, on the 16th of the month. On the 17th a compound lesion over the right jaw angle emptied through five small openings and the poultices were begun. On the 19th, three of the five openings had healed from the bottom and only the two remaining openings were visible. On the 20th the nuchal and remaining jaw openings were filled to the level and only needed a little epidermis.

Two openings in a lesion behind the angle of the right jaw were united by incision on the 19th; pus and slough removed. Poultices. Later a "pocket" in this lesion had to be opened and complete healing required nine days from the beginning of treatment, the longest time noted under this plan. The other lesions required from two to four days, even where the cavities held from one to four drachms of pus. The poultices could only be used at night in this case, being replaced in the day by twenty-per-cent. salicylic—or plain—adhesive plaster. This patient had a number of smaller lesions which responded to treatment in the same satisfactory way.

CASE V.—Physician. Fresh furuncle on the nucha. "Core" forcibly removed. Carbolic poultices at night, twenty-per-cent. salicylic plaster in day. Infective material remaining, prolonged the healing somewhat, but the filling up was comparatively rapid, much more so than that following any other method. In fact the healing was too rapid, as evidenced by slight recurrence, in a week or two, of necrosis and suppuration in the granulation tissue.

CASE VI.—Dentist. Shaves the face. A minute follicular pustule in the right submaxillary region had infected an underlying lymphatic gland, forming a red and exceedingly sensitive walnut-sized swelling. As soon as slight softening was felt, a one-eighth-inch puncture was made and pus and seropus were pressed out from the depth of nearly an inch. Salicylic plaster was used by day and the poultice at night. The patient left the city about the third day, there being very little discharge then. Upon his return a few days later he stated that the cavity had disappeared in two days. Examination showed no swelling, no scar, and the absence of a few hairs. Slight redness marked the site of the trouble.

CASE VII.—Young man. Abscess over the left facial artery, its centre lying over the border of the jaw, the result of disease of the root of a tooth. Duration two weeks. Entire swelling one inch and a half by two inches. A one-third-inch incision was made and nearly an ounce of creamy pus discharged. Carbolyzed poultices day and night. Some difficulty in keeping the lips of the incision open owing to rapid drying of the poultices. Still a small quantity of discharge three days later and exuberant granulations abundant, even projecting into the lips of the cut. Carbolic acid, ninety-five per cent., was applied to the visible granulations. Six days after incision only a little serosanguineous fluid could be expressed, and the poultices were dis-

continued. Patient was dismissed on the eighth day with instructions to have the offending tooth treated.

The foregoing cases are sufficient to demonstrate the utility of this method of treatment.

Once opened and emptied, bubo cavities should be amenable to this treatment, and should yield as rapidly, in proportion to the nature of the infection, as other kinds of abscess cavities.

As shown by reference to the use of rubber adhesive plaster, it is the poultice principle that is insisted upon and not necessarily the poultice itself. Whatever procedure meets the indications is available. Drainage, painlessness, pressure to some extent, and, essentially, prevention of premature union of the mouth of the cavity, are the objects sought.

64 MARIETTA STREET.

THE MANAGEMENT OF THE TENDENCY OF THE UPPER FRAGMENT TO TILT FORWARD IN FRACTURES OF THE UPPER THIRD OF THE FEMUR.

By RUSSELL A. HIBBS, M. D.,

NEW YORK.

A REPLY TO THE QUESTION OF PRIORITY RAISED BY DR.

N. M. SHAFFER.

In the *New York Medical Journal* of February 8th there appears an article from Dr. N. M. Shaffer raising the question of priority in the matter of a method of management of the tendency of the upper fragment to tilt forward in fractures of the upper third of the femur described by me in an essay appearing in the same journal for February 1st.

In Dr. Shaffer's statement of what I say, the emphasis is placed upon traction, as may be seen by the following quotation from his remarks: "Briefly, Dr. Hibbs advises, first, extension, or traction; second, coaptation splints; and, third, placing the limb in a flexed position."

The following is a direct quotation from my essay (after saying that it cannot be prevented): "Therefore the only way to correct the displacement caused by the tilting forward of the upper fragment and secure coaptation of the fractured ends of the bone in a straight line is by placing the lower fragment in the line indicated by the position of the upper fragment, that is, by placing the limb in a flexed position; and, as the upper fragment is usually displaced outward also to some extent, the limb should be slightly abducted. By this means the tilting forward of the upper fragment ceases to be a displacement in its relation to the lower, and thus the *first condition* necessary to securing union in good position is attained.

"The *second condition* necessary to securing union in such position is that of immobilization, and this is accomplished by two means, first, extension, or traction, and, second, coaptation splints."

As may be seen from the foregoing, the emphasis is laid upon placing the limb in a flexed position as the prime necessity of obviating the tendency of the upper fragment to tilt forward, and no degree of success in meeting the second condition, namely, immobilization, can obviate that tendency and secure coaptation of the fractured ends of the bone in a straight line.

In so far as may be determined from his record, in raising the question of priority as between himself and myself, and in attempting to establish it for himself, he has unconsciously established it for me. Not, of course, in originating principles of treatment or in devising original means of applying those principles, for both in their origin date back beyond the year 1871, but in their combination to meet a specific mechanical indication.

In attempting to prove his claim to priority, Dr. Shaffer quotes from two articles of his, one appearing in the *Annals of Anatomy and Surgery* for December, 1883, and the other in the *New York Medical Journal* for October 23, 1897; and among the cases there reported there is but one in which the principle involved is precisely similar to that which is involved in the class of cases which is the subject of my essay, and that is the second case referred to in his quotation from the *Annals of Anatomy and Surgery*, namely, an ununited fracture at the junction of the upper and middle third of the thigh, of four months' standing. There does not appear in the report of this case any record of his having appreciated the chief difficulty in its treatment, namely, the tendency of the upper fragment to tilt forward, or that any means were used to meet that difficulty. And therefore no degree of immobilization, however attained, could have secured coaptation of the fractured ends of the bone in a straight line.

Dr. Shaffer's failure in this, the only case of fracture at the upper third of the thigh which he is on record as having treated (the only one pertinent to this discussion) to utilize a successful method of managing the tendency of the upper fragment to tilt forward, disproves his claim to priority over me in the method that was described in my essay upon this subject.

The Toledo Medical Association.—At the annual election of officers of the Toledo Medical Association the following were elected: President, Dr. John North; vice-president, Dr. A. F. McVety; recording secretary, Dr. Charles P. Wagar; corresponding secretary, Dr. A. C. Schnetzler, and treasurer, Dr. F. E. Klauser.

CRETINISM.

By WALTER SANDS MILLS, M. D.,

NEW YORK.

The origin of the word cretinism is lost in obscurity. It is the name applied to the set of symptoms produced by congenital absence or loss of function of the thyroid gland. When this occurs early in life there is arrested development of both body and mind. If loss of function occurs later in life there is an infiltration of the connective tissue, first noticeable about the face and upper part of the body, and gradual impairment of the mental faculties.

In certain parts of Europe cretinism is endemic and a large proportion of the inhabitants are affected. The cretins from these districts have been known and described by writers for hundreds of years.

In 1875, Sir William Gull described a "cretinoid state" in adults. In 1879, Ord, who has made a study of this condition, named it myxœdema. In 1892, Kocher described the "cachexia strumipriva," a cretinoid condition developed after removal of the thyroid gland.

Sporadic cretinism, sometimes called congenital myxœdema, or the myxœdema of childhood, has only recently come to be recognized. Until the work of Gull and Ord and Kocher became known, sporadic cretinism was classed as idiocy. In all cases of the various forms of cretinism that have been examined since Kocher's report there has been found either absence or degeneration of thyroid tissue.

Barker, of Johns Hopkins Hospital, examined a case for Osler (see supplementary volume to *Keating's Diseases of Children*). He found a marked increase in the connective tissue separating the lobules of the thyroid gland. The microscope showed the acini to be separated one from another. Some were solid, some seemed to be replaced by cysts. The lumina of the acini varied in size; the epithelia were unrecognizable.

Osler states that goitre is present in sixty per cent. of the cases of endemic cretinism. In sixty cases of sporadic cretinism collected by him goitre was present in only seven per cent. In a case of mine now under treatment the thyroid gland appears to be absent. When goitre is present the swelling is evidently in the connective tissue and at the expense of the glandular substance.

In cretinism developing before puberty there is an arrest of development, physical and mental. The arrest may range all the way from slight stuntedness and puerile mentality to complete stoppage of growth and idiocy. The arrest may take place at any age and the victim remain at a standstill.

In myxœdema—adult cretinism—the connective tissue becomes infiltrated; the face and upper part of the body become gross and heavy looking; the hands become large and clumsy; there is gradual impairment of the mental faculties. The patient thinks more and more slowly.

Murray, in the Johnstonian lectures before the Royal College of Physicians, in 1900 (*Lancet*), gives the symptoms developed in the monkey after complete extirpation of the thyroid gland. After an average of five days, nervous symptoms appeared. There was first a fine regular tremor, then progressive muscular atrophy. There was loss of curiosity and interest in surrounding objects and great irritability of temper. There was loss of activity and of muscular power; contractions followed, due to clonic spasms of the flexor muscles. The gait became stiff and unsteady, with a tendency to falling backward. True epilepsy appeared. The temperature was at first increased, and later became subnormal. In two or three weeks myxœdema became distinct, most so in the face. The skin became dry and rough. The red corpuscles diminished in number, the white corpuscles increased.

The cause of loss of function of the thyroid is unknown. The mother of my patient is extremely nervous. Girls are afflicted in the proportion of two to one.

In sporadic cretinism, the only kind to be found in the United States, the child is usually normal until two years of age or over. Then the head continues to enlarge while the rest of the body retains its infantile shape. The belly becomes protuberant; the normal spinal curves are exaggerated; the legs are bowed and thick; the head hangs down; the mouth is open; the lips and tongue are thick, the latter protruding, and the saliva runs away. The skin is dry and harsh; the hair coarse and usually brittle and scant; the teeth are bad. The patient is very sensitive to cold. The face is expressionless, stupid, and the child does not learn to walk or talk, or may be able to walk only a little and to use a few words.

As a rule, diagnosis is easy. Other forms of lack of mental development do not exhibit the physical characteristics of cretinism. Rickets may simulate the physical symptoms, but the child is, as a rule, bright mentally. Myxœdema—cretinism of the adult—can only be mistaken for Bright's disease. Here the urine will differentiate.

The prognosis of sporadic cretinism is as yet an unknown quantity. Since the introduction of the thyroid treatment in 1892, by Murray, cases have been greatly benefited. The improvement in many has been marvelous. Before that time it was rare for a cretin to live more than thirty years. The thyroid treatment is as yet too new to say whether

it can be carried on and life prolonged indefinitely or not.

Since Murray introduced the use of the thyroid gland in the treatment of cretinism a mass of clinical evidence has been accumulated as to its value. A cretin is no longer a hopeless imbecile, a burden to relatives, but may become a more or less useful member of society. It seems to make little difference in what form the thyroid is used. So long as it is kept up, improvement continues. A whole or a portion of a gland has been transplanted with benefit. When this becomes absorbed the operation has to be repeated. Liquid preparations have been used and have been given by mouth. The desiccated gland has been administered by the mouth. Finally, Baumann (Ziegler) has isolated thyroiodinine, or Thyroiodin, from the thyroid gland, and this has been administered with good results. Iodine is a well-known remedy for goitre, and Baumann's active principle contains this drug.

Murray usually begins his treatment with from five to ten minims of liquor thyroidei; others prefer dry preparations. The treatment appears to be more successful in young than in old patients. The physical improvement is greater than the mental in older subjects.

In beginning any form of thyroid treatment the patient is best kept in bed for a while. The treatment is contraindicated in irritable or weak heart. If there is marked increase in the pulse rate, or rapid loss of weight, reduce the dose. If diarrhoea supervenes, stop the remedy. In cases where the thyroid treatment does well, an occasional intermission of a week or two seems to be of benefit. The average dose to begin on is five grains once a day. When this is well tolerated the dose may be gradually increased to as much as fifteen grains a day, in five-grain doses.

CASE.—Since September 10, 1900, I have had under close observation a cretin, now (November, 1901) twenty-six years of age. She is improving under thyroiodinine. The patient was born in July, 1875. At birth she weighed twelve pounds. So far as I can discover, the family history is good. The father dropped dead on the street, of heart disease, in April, 1901. He was sixty-eight years of age. The mother is a somewhat nervous woman. She was married very young. Her first husband died in bed two or three years after marriage, leaving one son, who afterward became a professional athlete. He died of pneumonia at the age of twenty-eight. After some years the mother married a second time. The patient is the result of that second union, and was born when the mother was forty-three years old. The patient walked when she was twenty months old. She was large for her age and seemed to be all right until between the age of four and five. Then she seemed to stop growing, and her mind made no further progress. Her disposition remained good until about the age of seven,

when she began to be irritable. She became very stout and presented all the characteristics of a cretin.

In 1896 the patient fell into the hands of a young physician, who has since either died or gone out of practice, as I can find no trace of him to get a history of the case. This unknown physician placed the child, then twenty-one years of age, on some form of thyroid treatment. The mother says the change was marvelous. The child lost in weight and grew in height. The most marked change was about the neck. Before treatment the neck was short and thick; afterward it shaped out like a normal one. Menstruation appeared. Later, the patient went to the Vanderbilt Clinic, where she was exhibited for clinical demonstration and in consequence never returned.

In September, 1900, the patient came to me, after having been without treatment for two years. She had retrograded to some extent, the mother told me. The family could not afford a private physician and were too proud to have the patient exhibited in public clinics. That was the reason for discontinuing the thyroid. When the patient came to me she was twenty-five years and two months old. She measured $53\frac{1}{2}$ inches in height, and was rather stout. The features were small, but not clean cut; the forehead was low; the mouth rather large, showing the teeth regularly placed, but not in very good condition; the nose broad. The base and back part of the skull seemed well developed. The skull sloped forward to the low forehead; the hair was black (Rotch says the hair is usually light), coarse, and not in good condition; the eyes and complexion dark. She walked rather slowly and heavily. In going up and down stairs she went one step at a time, always putting the same foot forward, like a child too small to use one foot after the other. Her mental equipment was like that of a child of six or seven, without the eagerness to learn the why of things that a normal child develops. She appeared to be very shrewd and let no remarks escape her. She was very sensitive, self-willed, and irritable. Her mother told me that she had violent fits of temper. She never becomes violent in actions, although she does in her language.

In watching her I have found her clever in some things. For example, one day her mother took her to a dentist. She fussed around his office for four hours, but would not let him look at her teeth. She said she had perfect confidence in the dentist, but none in herself. I have found her extremely egotistical; she is all self. She suffers somewhat with her stomach, complains of cramps and heartburn. Occasionally she has a vomiting attack.

On September 10, 1900, I placed her on thyroiodinine, five grains, once daily. For the first four days the temperature remained normal; on the 15th, the temperature ran up to 100° F., and she had a vomiting attack. On the 16th and 17th the thyroiodinine was stopped. The remedy was then resumed without further trouble. On October 13th she menstruated, and after that she was very regular every four weeks while taking the medicine. During the two years' interval between the thyroiod and the thyroiodinine she menstruated, but irregularly. During a part of the summer of 1901, owing to trouble with her teeth, the medicine was taken irregularly, and during that time her menstruation again became irregular.

October 20, 1900, the dose of thyreiodinine was increased to ten grains a day, and on December 2d to fifteen grains daily. It was given in divided doses of five grains morning, noon, and night. On March 16th of this year (1901), after six months' treatment, the height was $53\frac{3}{8}$ inches; July 6th, nearly four months later, it was $54\frac{1}{4}$ inches, a total gain of $\frac{3}{4}$ of an inch. The features seem more clearly defined than they were; the hair is growing and shows better nutrition. The patient walks better, stepping more gracefully and faster. I do not notice much change in the mental condition. Her mother tells me that the patient is fond of reading, and that she can memorize and recite quite long pieces. The cranky fits I do not hear quite so much about; she has always been perfectly genial and charming to me personally. If the girl could be put in good surroundings, with a good teacher of inexhaustible patience, I believe much could be done in the way of mind training. During the summer and early fall the thyreiodinine was taken irregularly. The patient was under a dentist's care and had many teeth filled. She developed an alveolar abscess that bothered her a great deal. During this time, as noted above, menstruation became irregular. There was also noticeable blurring of the features of these retrograde symptoms all cleared up on a renewal of the thyreiodinine.

I have reported this case somewhat at length for several reasons. It shows the tendency of a case to retrograde when treatment is discontinued for any length of time. It shows the value of treatment even in older subjects; the thyreoid medication should be tried no matter how old the patient. It demonstrates that the active principle of the thyreoid gland isolated by Baumann is efficacious.

154 WEST ONE HUNDRED AND NINETEENTH STREET.

Correspondence.

LETTER FROM TORONTO.

The Medical Department of Toronto University.—Report of the Inspector of Lunatic Asylums in the Province of Ontario.—Death Statistics for the Province of Ontario in 1901.—Proposed Changes in the Ontario Medical Council.—Liquor Prohibition in Ontario.—Small-pox in Ontario.—Discussion on Capsular Nephrotomy at the Toronto Clinical Society.

TORONTO, February 15, 1902.

The Medical Department of Toronto University proposes to have a new building for the growing requirements of its largely increased sphere of work. During the past week a deputation largely representative of the medical faculty, headed by Dean Reeve, waited upon the government with a view to obtaining a grant of \$50,000, which would enable them to go on with the erection of the new physiological

building. It is estimated that the total cost of this new building will be \$125,000, the faculty undertaking to finance the balance, \$75,000. While, primarily, the proposed physiological building will be for the housing of the medical department under one roof, part of it will be let to the faculty of arts, and the arrangement would be that the medical faculty would bear two thirds of the cost, while the arts would be chargeable with the balance. The government does not seem precipitately willing to fall in with this proposal, the Hon. the Minister of Education, Mr. Harcourt, suggesting that the medical faculty undertake to raise the \$125,000 themselves, and that the faculty of arts, for their share in the building, contribute \$2,000 per annum, the interest on \$50,000.

From the report of the Inspector of Lunatic Asylums in the Province of Ontario, it appears that there were in these institutions, on September 30, 1901, something like 4,604 patients, as compared with 3,318 in 1890. In Toronto there were 724; London, 1,032; Kingston, 509; Hamilton, 1,029; Mimico, 605; Brockville, 613. Ontario's population has increased from 1,396,091 to 2,182,942, or 56 per cent., in the last forty years; and, during the same time, the insane and idiotic population, officially known, has increased from 1,631 to 5,880 or 260 per cent. It would appear from this report that insanity was increasing progressively year by year, and while the percentage in increase seems enormous, it can probably be attributed in most part to the growth of liberal ideas, as public sentiment has been greatly modified in the last quarter of a century with regard to the commitment of patients to asylum for treatment.

The Provincial Board of Health has issued a statement with regard to the death roll throughout Ontario in the year 1901, ninety per cent. of the population being represented in this report. During the past year there was a total number of 25,736 deaths, or 13.1 per thousand. This was slightly in excess of the previous year, in which there were recorded 25,382 deaths. As usual, tuberculosis caused more deaths than any other contagious disease, namely-2,236, which is a trifle less than in 1900, when the total number was 2,360. This would put the death rate from tuberculosis in this Province at a trifle over ten per cent. June appears to have been the month when there was less sickness prevailing than at any other time during the year, as there were only 1,608 deaths reported in that month; while March showed the heaviest rate, there being recorded in that month a number as high as 2,525. Of other contagious diseases, 209 died from scarlet fever; 512 from diphtheria; 120 from measles; 112 from whooping cough; 345 from typhoid fever.

Legislation has been introduced into the Ontario

Parliament, at present sitting at Toronto, looking toward a reform of the Ontario Medical Council. The proposed amendment to the Ontario Medical Act is the outcome of a long struggle on the part of certain members of the profession, who object to the homœopathic and appointed, or college, representatives on the council. As at present constituted, the homœopathic body, which numbers about forty practitioners in the Province, has a representation of five out of the thirty members of the council, while the appointed, or college representatives, number eight, these latter being taken from the medical colleges in connection with the Toronto, Trinity, Queen's, and Western universities. The remaining seventeen representatives are elected by the regular profession, the Province being divided into territorial districts for the purposes of election. Each of these elective representatives represents about 250 regular practitioners. The legislation proposes to abolish the homœopathic and college appointees, and to have the entire thirty members elected by the medical profession of the Province without regard to colleges, homœopathic practitioners, or regular practitioners. The bill, after having been read a second time in the House, has been referred to a special committee which up to the present time has not yet reported. It is not likely, however, that any change will be made at the present time in the constitution of the council.

The question of prohibition is to be referred to the electors of the Province of Ontario on October 14th of the present year. "The Liquor Act, 1902," provides only for the sale of all fermented, spirituous, and malt liquors, and all drinkable liquors which are intoxicating, under wholesale and retail druggists' licenses. Under a wholesale license, ten gallons of alcohol may be sold to any person for mechanical or scientific purposes, and "liquor" to that quantity to any physician or retail druggist. Druggists under a retail license may sell "liquor" to private individuals on physicians' prescriptions alone. Dentists will be allowed to purchase one pint for professional use only, and veterinary surgeons two gallons for the same purpose. A sick person will be allowed to keep liquor in his room, if prescribed for him, but he must not allow any other person to drink it. Hospitals will also be allowed to have it for the same purpose, but for that purpose alone. This prohibitory legislation, as it affects the liquor traffic, will place it largely in the hands of the doctors and druggists, and it will be interesting to watch the outcome, should the measure become law, with regard to "repeat" prescriptions.

A big increase was noted in small-pox in Ontario during the month of January. At the end of that month there were no less than 629 cases in the Province. The patients were scattered over twenty-

eight counties and eighty-seven centres. Dr. Hodgetts, the Provincial inspector, lectured on the subject recently before the Toronto medical students. He spoke of the state of ignorance which existed among the medical profession throughout the Province with regard to the diagnosis of the disease, which he attributed to the lack of proper clinical instruction in the hospitals in regard to contagious diseases in general. The efficacy of vaccination has recently been put to a severe test in Montreal. Since May last there have been two hundred and forty cases of small-pox in that city, and in no instance had any patient been vaccinated. During all that time, a staff of nurses and doctors had been in daily and hourly contact with the small-pox patients, but not one of them contracted the disease.

A very interesting discussion took place on capsular nephrotomy, at the last regular meeting of the Toronto Clinical Society, on February 5th. Dr. W. P. Caven reported a case, in conjunction with Dr. George A. Peters, in which the latter had operated. Dr. A. Primrose also reported a case in which he had himself operated. The former occurred in a man, aged thirty-four years, who had suffered from migraine from childhood. His kidneys were considered sound in 1892, when he was passed for life insurance. When he came under Dr. Caven's observation he was passing from 60 to 80 ounces of urine in the twenty-four hours, with from three to seven grammes to the litre of albumin. Hyaline, granular, and fatty casts were present in great abundance, while the urea ranged from one and a half to two per cent. On January 3d of this year he was placed under chloroform, and Dr. Peters performed encapsulation of both kidneys at one sitting. The patient was very ill for some days after the operation, but a few days prior to the reporting of the case he was beginning to improve. Dr. Caven stated that there were no casts now found in the urine. There was no material change in albumin, the quantity of urine passed, or in the urea. Dr. Caven then referred at some length to Dr. Edebohls's work in this connection. Dr. Primrose then reported his two cases, stating that the first operation was performed before Dr. Edebohls's paper had been published. His first operation had been done on the right kidney and the second on the left. The first was described at length, being illustrated by means of a chart. It was performed on a boy ten years of age, who for six months had had general anasarca and ascites. Dr. Primrose showed photographs of the boy, both before and after operation. Albumin, which had existed, completely disappeared after operation. In the discussion that followed it appeared to be the consensus of opinion that Dr. Edebohls had not given Mr. Harrison due credit for having done the first work along this line in connection with the acute disease.

Therapeutical Notes.

The Treatment of Syphilis by Injections of Yellow Oxide of Mercury.—M. E. Loison (*Archives de médecine et de pharmacie militaires*, January, 1902) reports on the use of injections of the yellow oxide of mercury in an outbreak of syphilis in the Twentieth Regiment of Artillery, the results of which treatment were very satisfactory.

Very freshly prepared yellow oxide is used, as this salt is unstable, becoming reddish under the action of light, and acquiring irritant properties. For the injection, the powder is held in suspension by the following formula:

R Yellow oxide of mercury (fresh)... 22½ grains;
Gum arabic. 5 "
Distilled water. 450 minims.
M.

Before each injection, the quantity of the liquid necessary is sterilized by heating to the point of ebullition in a test-tube, but prolonged ebullition must be avoided lest red oxide be produced.

The amount injected at each *séance* is 15 minims. The injection should always be made deep, the place of election being the buttock at a point at the intersection of a horizontal line passing two fingers' breadth above the great trochanter, and a vertical one at the junction of the anterior two thirds and the posterior third of the haunch. This spot is remarkable for the absence of important vessels and nerves. The skin is cleansed first by soap, then by alcohol or ether. In this region the needle may be passed down to the iliac bone. After waiting a few moments to see that no blood issuing indicates puncture of a vessel (if any should come, the needle is withdrawn and inserted elsewhere), the injection is made very slowly, the needle withdrawn and the puncture covered with a pad of collodionized cotton. One injection is made weekly, in either the standing or the prone position, preferably the latter. Four injections, necessitating a treatment of twenty-eight days, usually suffice to cause disappearance of the actual accidents and to "blanch" the patient. After that, treatment must be continued after Fournier's intermittent method, or the injections may be repeated once a month for the first year, every two months during the second, then alternately with the proto-iodide treatment.

Facility, efficaciousness, and harmlessness are said to be the characteristics of this method, which permits of exact dosage, avoids the intestinal irritation of internal administration of the proto-iodide and other forms of mercury, does not soil the clothes as mercurial inunctions do, and is rapid and powerful in its effects. Its disadvantages are that it sometimes induces a little pain after injection, often, however, only slight and of no long duration, though at times it persists for two or three days. The author has never seen an abscess in over a thousand injections.

Treatment of the Nasopharynx in Scarlatina.—A. Seibert (*Archives of Pediatrics*, August, 1901; *American Journal of Obstetrics*, January, 1902) says that one of the gravest dangers to scar-

let-fever patients consists in the invasion of the mucosa of the nasopharynx by streptococci and their associates. The infected tonsils may be washed over by an antiseptic solution if swallowed every hour in a reclining posture, and thus a superficial disinfection of the visible pharynx may be accomplished. The author has found the following mixture to be the best for the purpose:

R Tincture of iodine. 30 minims;
Potassium iodide. 15 grains;
Distilled water. 4 ounces;
Carbolic acid. 10 drops.
M. A teaspoonful every hour.

This may safely be given (night and day) for four or five days successively to children of one year of age, as well as to adults. An experience of twenty years has failed to produce a single carbolic intoxication with this mixture. Now and then patients will complain of gastralgic pains after taking this solution for a day or two, due, no doubt, to artificial hyperacidity induced by the contact of this fluid with the stomach. Mild iodism, manifested by a slight watery discharge from the nose, is not infrequently noticed, but disappears usually after a few days. To clean and to disinfect the infiltrated mucosa in scarlatinous nasopharyngitis, the author has used irrigations with 1 to 5 per cent. warm solutions of ichthyol, repeated every six hours. A half-pint is allowed to flow through the nares and the nasopharynx from a fountain syringe suspended about three feet above the patient. When there is obstruction of the passageway between nose and throat, irrigations will be of no use. In this case make local applications of a fifty-per-cent. resorcin solution, wind a cotton plug around the curved end of a wire, dip it into the solution, gently pressing it against the neck of the bottle to get rid of superfluous fluid (which might run into the larynx), and then introduce it over the handle of a dessertspoon into one side of the nasopharynx. The soft palate will instantly contract and press the solution out of the cotton, thus spreading it over the inner surface of the nasopharynx in the course of a few seconds. The cotton is then withdrawn and another fresh cotton plug introduced on the other side of the uvula and withdrawn instantly. *No force and no swabbing are to be employed.* This treatment is most efficacious and harmless.

For Migraine.—M. Kowalesky, according to Maurange in the *Gazette hebdomadaire de médecine et de chirurgie* for January 19th, prefers the sodium salt to other bromides, and associates with it strophanthus to regulate the heart and cocaine as a calmative. Here is his formula:

R Sodium bromide. 120 grains;
Tincture of strophanthus. . . . 30 minims;
Cocaine hydrochloride. 1½ grain;
Orange-flower water. 6 ounces.
M.

A tablespoonful, three times daily, in a little milk.

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THE STUDENT'S NEED OF LABORATORY WORK.

In one of those masterly surveys that reach us all too seldom from Professor Adami, of Montreal, an address lately delivered on the occasion of the laying of the corner-stone of the new medical building of the University of Michigan (published in the January number of the *Montreal Medical Journal*), we find a remarkably clear exposition of the necessity of giving prominence to laboratory work in the training of medical students. While announcing, with excess of modesty we think, that he himself is "no clinician," but purely a laboratory teacher, Dr. Adami fully recognizes that clinical teaching is the supreme element in the undergraduate course. "Rather, for myself," he says, "I wish to see that training more thorough, to see the student permitted to a greater extent than he is in most medical schools to undertake full study at the bedside, and for this reason I am against what is now spoken of as the Harvard method, that of giving to the student histories of cases and from the symptoms noted in those histories asking him to work out the nature of the disease and course of treatment to pursue. For if such a system, admittedly attractive and of some value, becomes at all general, the infinitely more valuable training to be obtained from the study of the patient himself is liable to be replaced or not striven after."

But, supreme as is the necessity of clinical teaching, it must come late in the course, for it cannot be pursued to the greatest advantage until the student has been made over again, so to speak—that is, taught how to observe phenomena critically and scientifically for himself, how to correlate facts and realize their bearings upon each other, and delivered from his blind reliance on authority, whether that

of a text-book or that of a clinical lesson that may have made such an impression on him as to lead him to the adoption of it as of unfailing applicability. To accomplish all this, the necessity of which is in great measure due to the sluggishness with which improvement in preparatory education still goes on, there is nothing like laboratory work. It is not expected, of course, that after graduation the student will keep up such work more than is requisite as an aid in his own practice; far less is it expected that he will continue it to the extent that will ultimately make him a great anatomist, a great microscopist, or a great bacteriologist. But it is expected that it will serve as the best possible foundation for effective clinical study. We may add—and in this we have no doubt Dr. Adami will coincide—that, having been once well started on his clinical course, the student does not need very prolonged undergraduate clinical study, for such study he is to pursue all the rest of his life, and it is work in the subsidiary sciences that will best fit him to acquire a mastery of the art of healing. As the late Professor Robert Watts was wont to say, the diploma is nothing but a license to study. The diploma is, or ought to be, a trustworthy certificate that its holder has been trained to pursue intelligently and with safety to the community the higher study of problems that his practice will never cease to raise before him; and this is what Dr. Watts's pithy remark has always been construed to mean.

VACCINATION UNDER INDIRECT COMPULSION.

We have always felt that an out-and-out compulsory vaccination law, such as for years it was attempted to enforce in England, was doomed to more or less complete failure. To those who are accustomed to take a shallow view of statutory requirements—and they are the bulk of mankind—unrestricted compulsion in the matter of vaccination is an unwarrantable encroachment upon personal liberty and therefore one to be resisted. This feeling enables the antivaccinationists to get the ears of a large and receptive audience and to hold their attention. What must inevitably result sooner or later is either the repeal of a law regarded with aversion or such a material modification of the law as to strip it in great measure of its efficiency, as has happened in England. No English-speaking people—indeed, no people not ground under the heel of a despot—

will long submit to the operation of a law which, however beneficent the results at which it aims, restricts individual liberty of action in matters that do not involve the plain question of criminality. That being the case, the government cannot compel anybody to be vaccinated, but it can exclude unvaccinated children from the public schools, and the exclusion of such children has, in our opinion, been far more operative to promote the general vaccination of children than a directly compulsory law would have been. However, it has not gone far enough, for it has done nothing to secure the revaccination of adults, which must be made well-nigh universal if small-pox is ever to be really stamped out.

But there are other agencies than the government that have it well within their power to enforce general revaccination, notably the railway companies, and the Health Department of Chicago has been quick to realize this fact and prompt to take advantage of it. The board recently had a conference with the representatives of the principal railways leading to Chicago, and laid before them a comprehensive scheme involving general vaccination and revaccination in every infected locality along the railway-lines, the thorough disinfection of premises and articles harboring the infection, and strict inspection of all persons seeking to travel from infected points, the railways to refuse to carry those who did not comply with the requirements. The railway companies readily consented to do their part in the work, and we may be sure that they will keep their word. The field of this great undertaking is estimated as an area of about 600,000 square miles of territory, containing 25,000,000 people. Besides this, the unvaccinated are as far as possible to be excluded from manufacturing establishments, and it is quite feasible to decline to employ workmen who insist on neglecting vaccination, no matter what may be the consequences to their fellow-workmen.

So long as the antivaccinationist perceives no disadvantage to himself from his harangues (for his parents have generally taken good care to protect him against small-pox), he fears no legal compulsory measures—indeed, he rather courts them, for they give him ground on which to pose as an oppressed individual; but when he finds that his children are denied admission into the public schools, that he cannot board a railway train bound for Chi-

cago, and that he is materially hampered in his efforts to obtain employment, he will realize that he cannot live up to his grotesque notions.

We believe that this comprehensive and resolute action on the part of the Chicago Health Department is destined to work a great improvement of the small-pox situation, so far as regards the area concerned, and we feel confident that a like course by the sanitary officials of other great centres of resort, kept up indefinitely, would practically rid the country of small-pox. We are glad to note that vaccine is to be furnished free only in "all proper cases"; the indiscriminate dispensation of free vaccination is injurious to the medical profession and demoralizing to the public.

A BRITISH APPRECIATION OF AMERICAN SURGERY.

In the *British Medical Journal* for January 25th are some interesting Notes on a Visit to some American Hospitals, by Dr. G. B. Ferguson, president of the British Medical Association. Dr. Ferguson refers approvingly, and withal wonderingly, among other things, to the admirable training obtained by the hospital resident physicians and surgeons in America, serving as they do for periods of several months in various department; to the beauty of many of the hospitals; to the operating conveniences, as surgeons' baths and lavatory; to the complete attire worn by all engaged in operation and the care taken to keep out of the "charmed circle" all not properly prepared; to the hospital ambulance system, whereby each hospital has a district assigned to it, with "ambulance wagons and the ready-harnessed horses, as at a fire station," to fetch the injured promptly, instead of leaving them to get to the hospital as best they can; to the deference shown to, and the admirable provision for, the comfort and convenience of the nurses; and, above all, to the "great characteristic of the American hospitals, the worship of asepsis," which the author has "never seen so consistently and completely carried out anywhere else."

But not only is he, from a positive point of view, full of admiration for, and wonder at, what he finds, but he is equally so from a negative standpoint, at what he apparently expected to find, but did not. "In the American hospitals," he says, "was to be seen none of the radiant polypharmacy of the great

American manufacturing chemists, which is, indeed, much more *en évidence* in Britain than in America. There was a simplicity and directness in the American hospital prescriptions which told of strength and knowledge." He expected all kinds of novelties in the treatment of fractures and saw none; no ingenious swings or novel splints or anything new. "American ingenuity," he says, "seems to have tired of splints, and to be exercising itself rather in the direction of perfect asepsis and ingenious suturing."

The injections of normal saline fluid in bad cases of insolation, he commends "as a truly valuable treatment, diluting, as it does, the inspired blood."

The author describes especially the German Hospital and the Pennsylvania, in Philadelphia; the Victoria Hospital, at Montreal; Johns Hopkins Hospital, Baltimore; and the Bellevue, the Presbyterian, the Roosevelt, and St. Luke's hospitals, in New York, and that throughout in terms of enthusiastic admiration and wonderment. The structural beauty of many, the provisions for cleanliness, convenience, and comfort of patients and staff, the perfection of sterilizing arrangements, all arouse his interest.

He attended quite a number of operations and seems much struck with American surgery and surgeons, of whom he states that they "are careful, painstaking, and successful rather than quick and showy surgeons." In the matter of deadhouses, he says: "We have really much to learn from the Canadians and Americans."

In conclusion, he speaks generously and feelingly of his reception by his American *confrères*, and adds: "My advice to others is to do as I did. A visit to America is in many ways a great eye-opener. The American hospitals are second to none, and will, I venture to say, surprise, as much as they will delight and instruct, many British physicians and surgeons." His last remark is equally gratifying: "See the Americans at home, and you will see some of the cleverest men and handsomest women in the world."

We can only heartily reecho Dr. Ferguson's advice to British surgeons to do as he did and come and see us for themselves. Those who have done so, have, we believe, all gone away gratified with their visit. The trouble is, there have been too few of them. When there shall have been more, the naive surprise, which is as amusing as it would be pleasing, were it not just a little irritating, on finding that really there is something admirable outside

of stereotyped Europe, will speedily vanish, to the great advantage of both nations and of the comradeship, as well as the scientific progress, of the world-wide brotherhood of the healing art.

THE WOMAN'S MEDICAL JOURNAL.

With the initial number of its new volume our respected contemporary appears in a much improved form, that of large double-columned pages, and we fancy we notice an improvement of its typography. A department of mental and nervous diseases has been added, under the charge of Elizabeth Dunn, M. D. We are glad to see these signs of continued prosperity.

THE SIN OF STREET-SALTING.

It is with great regret that we notice that the new city government has not interfered with the practice of salting the pavements over which the street railways pass, the lazy man's way of saving trouble for himself and imposing damage to property and danger to health upon other people. The salt slush clings to the pedestrian's shoes, rotting the leather of which they are made and chilling the feet that they would otherwise protect. We believe that this outrage might readily be stopped by the board of health.

A WARNING CONCERNING SUPRARENAL MEDICATION.

Commenting on an article by Dr. John J. Kyle, published in the January number of the *Therapeutic Gazette, Pædiatrics* for February 15th says: "We are beginning just now to realize that with suprarenal extract, as with all the other vasoconstrictors of recent memory, there may be disadvantages. Cocaine and antipyrine were once the boast of rhinology, but are now rarely used—at all events for the purpose named." The commentator goes on to say that only further experiment and observation can show whether or not the drug may frequently cause secondary hæmorrhage or induce a subsequent "doughy" engorgement of the erectile tissues of the nose worse than the original coryza. He proceeds as follows: "A fresh case of influenza with severe coryza is a distinct contraindication to its use. The drug sets the apertures to all the cranial sinuses gaping, and if the patient unguardedly uses his handkerchief while the mucous membranes are under the influence of the drug, bacteria will be certainly blown into the antrum of Highmore, probably into the ethmoid cells and the middle ear, and possibly into the frontal sinuses as well. Cases of this kind with resultant empyema of all the sinuses named are already on record."

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 24th.*—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *February 25th.*—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *February 26th.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield); Philadelphia County Medical Society.

THURSDAY, *February 27th.*—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, *February 28th.*—New York Clinical society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *March 1st.*—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Dr. Charles G. Child, Jr., has been appointed assistant visiting gynecologist to the City (charity) Hospital.

Brooklyn Cares for Its Own Small-pox Patients at the Kingston Avenue Hospital for Contagious Diseases, an order to that effect having recently been issued by the health commissioner.

No Post-graduate School for Cincinnati.—The project for establishing a post-graduate school in connection with the Cincinnati University, which has been under consideration for some time has been definitely abandoned.

Congress of Russian Surgeons.—The second meeting of the Congress of Russian Surgeons was held at Moscow in the early part of January, under the presidency of Professor W. Rasumowski, of Kasan. The congress was attended by about 200 members.

To Study Mosquitoes in New Jersey.—A bill has been favorably reported to the Legislature of New Jersey appropriating the sum of \$50,000 for carrying out a series of experiments as to the best methods for the extermination of mosquitoes.

The Boston City Hospital Relief Station, which was erected in Haymarket Square at a cost of \$120,000, the money being furnished by a legacy from Thomas T. Wyman, has been formally opened. There will be a resident staff of two or three surgeons and a house staff of the same number. The hospital has four ambulances and is most completely equipped in every way for relief or emergency work.

The Ramsey County (Minn.) Medical Association held its annual meeting in St. Paul on January 27th and elected the following officers: President, Dr. J. L. Rothrock; vice-president, Dr. Angus MacDonald; secretary, Dr. Ethelbert Geer; treasurer, Dr. Frederick Leavitt; necrologist, Dr. A. F. Whitman.

The Antivaccination Movement in Massachusetts reached its climax in the introduction of a bill into the Legislature of Massachusetts repealing the present law, which provides for compulsory vaccination. Several hearings were had on the bill and the health authorities vigorously opposed the passage of the measure.

The Northeastern Ohio Medical Association, which met at Akron on February 11th, elected the following officers: President, Dr. E. J. March, Canton; vice-presidents, Dr. C. E. Norris, Akron; Dr. E. S. Lander, Cleveland; recording secretary, Dr. J. H. Seiler, Akron; corresponding secretary, Dr. C. W. Millikin, Akron; treasurer, Dr. H. H. Jacobs, Akron.

The Pathological Institute.—Dr. Adolf Meyer, the new head of the Pathological Institute of the New York State Hospital, has reappointed Dr. P. H. Levine as head of the chemical department and Dr. Brooks as associate in bacteriology. Both were connected with the institute under Dr. Ira van Gieson, whom Dr. Meyer succeeds. Further appointments, it is announced, will be made as soon as the civil service commission furnishes a list of eligible candidates.

The Philadelphia Neurological Society.—A stated meeting of the Philadelphia Neurological Society will be held on Tuesday, February 25, 1902, at 8.15 p. m. Dr. Adolf Meyer, director of the Pathological Institute for the New York State Hospitals, will, by invitation, deliver an address entitled Conditions for Psychiatric Research. Members of the profession are cordially invited to attend. After the address a reception will be tendered Dr. Meyer at the University Club.

The Chicago Eye, Ear, Nose, and Throat College held its annual meeting Monday, February 10th. The reports of the officers were presented and showed the first year in the new building and hospital to have been a very prosperous one. The following were named as the board of directors for the ensuing year: President, Dr. W. A. Fisher; vice-president, Dr. A. G. Wippert; secretary, Dr. J. R. Hoffman; Dr. Thomas Faith, and Dr. H. W. Woodruff.

Dr. Preston Kyles a Fellow of the Rockefeller Institute.—Dr. Preston Kyles, an assistant in anatomy at the University of Chicago, has been appointed a fellow in the Rockefeller Institute of Medical Research. Dr. Kyles will devote himself to the study of the effects of various poisons on the blood. He will carry on his investigations in the laboratories of the University of Chicago until April 1st, when he will go to Germany, where he will spend several years at Frankfurt-on-the-Main.

The Clinique Laennec, Paris.—*Presse médicale* for February 5th contains an address by L. Landouzy, professor of therapeutics of the Faculty of Medicine, Paris, delivered on the occasion of the opening of the new medical clinic of the Faculty of Medicine of Paris. The building is a very handsome one and is fitted up with all the most modern equipment.

A Bill to Abolish Coroners.—The executive committee of the New York State Medical Association has made a report to the association recommending that the office of coroner be abolished, and that a bill to that effect be brought before the legislature. Senator George A. Davis, of Buffalo, has announced that he will introduce a bill in the legislature transferring the duties of the coroner to the district attorney's office and providing for a medical deputy, to be attached to the office, who will issue certificates in cases of sudden death and perform the other duties which it is now in the province of the coroner to perform.

The Physicians' and Surgeons' Association of Fulton.—The physicians of Fulton and Oswego Falls, in this State, recently organized themselves into a society known as "The Physicians' and Surgeons' Association of Fulton, N. Y.," with a membership of twenty. Meetings will be held on the first and third Thursday of each month. The following officers were elected at the last meeting, viz: President, Dr. W. M. Wells; vice-president, Dr. H. F. Marsh; secretary and treasurer, Dr. H. L. Lake; corresponding secretary, Dr. A. L. Hall; censors, Dr. S. A. Russell, Dr. Charles J. Bacon, and Dr. G. G. Whitaker.

The Physicians' Bills in the President's Case.—According to the daily papers of Buffalo, Mr. Hanna and Mr. Milburn were requested by Judge Day and Secretary Cortelyou to gather in all the bills in Buffalo resulting from the President's illness, and to forward them to Washington. Dr. Mann, Dr. Park, Dr. Mynter, and Dr. Stockton were accordingly asked to submit their bills, which they did. Dr. Rixey, of course, will be remunerated by the government, as will also Dr. Eugene Wasdin, who was in constant attendance upon the President. Dr. McBurney's bill will be submitted direct to the executors of the estate. So will the bills of Dr. Janeway and Dr. Johnson, who reached the city on special trains the night the President died. The bills of the Buffalo doctors were made out separately.

To Study Malarial Fever.—According to the *British Medical Journal* the surgeons of the ships of the Imperial Direct West Indian Mail Service, which sail between Bristol, England, and Jamaica, will in future be provided with an outfit for taking blood films in cases of suspected malarial fever. Each outfit consists of cover glasses, forceps, and small bottles of absolute alcohol for fixing and holding the films when taken; a printed form, containing directions for taking and preserving the films and for filling in clinical details of the cases, is also provided. On arrival at Bristol, the films will be sent to Dr. J. O.

Symes, of the Bristol Medical School, for report and classification, and will then be available for demonstration purposes. Although Jamaica itself is comparatively free from malarial fever, it is anticipated that a considerable number of specimens will be obtained from patients coming from other parts of the West Indies, and the careful classification of these will, it is hoped, throw some light upon the varieties of fever endemic in that part of the world.

To Abolish Quarantine in Small-pox Cases.—A special commission of physicians was appointed by the director of public safety of the city of Philadelphia to investigate the system of quarantine now practised where cases of small-pox are found. This commission was composed of Dr. John V. Shoemaker, Dr. James Tyson, Dr. Hobart A. Hare, Dr. Frederick P. Henry, and Dr. James M. Anders. The report of the commission reads, in part, as follows: "As soon as the small-pox patient falls ill he should be isolated. While he is in the house strict quarantine should be enforced. Removal to the Municipal Hospital, however, is advised in all cases. After removal to this institution prompt measures must be taken to disinfect the premises which he has occupied. Every occupant of the house in which the case has occurred must be vaccinated, and if necessary revaccinated, unless satisfactory evidence of recent successful vaccination can be shown. When vaccination is refused by such occupants quarantine should be enforced for a period of eighteen days. The premises should be visited daily by a medical inspector, acting under the instruction of the board of health."

Discussing the New Law in Missouri.—A conference was held in Kansas City, Mo., on February 1st between Dr. A. W. McAllister, president of the Missouri State Board of Health and about thirty physicians representing the medical colleges of the city relative to the requirements for admission to practice under the new law. There has been some fear that the examinations would let new physicians into practice by passing them before they take complete courses in the schools, to the danger of the public and injury of the schools. The State law fixes the passing point at a grade of 75 per cent. The identity of the student taking the examination is concealed from the examiners until the papers on ten points out of twelve are passed upon, as a precaution to preserve impartiality. The ownership of the number of a certain set of papers is not knowable till it comes to therapeutics, the elective point where the different schools divide, so far as the examination is concerned. Short course students can take an examination as readily as a student who has completed a full course and must be licensed if they make the required grades. This fear seems to have been ill founded, for after the conference a resolution was passed indorsing the State board in its conduct of the examinations and giving an expression of confidence in its methods.

Compulsory Vaccination.—In the House of Lords an attempt has been made to secure the immediate repeal of the clause in the British vaccination law, which permits persons to refuse to

be vaccinated on the ground of conscientious objections, but the effort failed. The government asserts that this clause will be abolished when the time limit expires next year.—A bill has been introduced in the Legislature of the State of New York by Senator McCabe providing for compulsory vaccination. The bill provides, first, that all boards of health must provide, free of charge, means of vaccination and revaccination to all persons who may apply, thereby precluding any possible charge that there was any commercialism in which the profession of medicine could be interested. It requires that all schools, colleges, almshouses, prisons, and factories shall provide vaccination. It provides for the vaccination of employes of large corporations, directing the officers to see that their force be vaccinated to prevent the spread of the disease; it also suggests that under certain conditions the vaccination of the police and fire departments in cities and villages would be expedient, and provides certain punishments for interfering with or hindering the board of health or their authorized agents in performing their duties under this law. The bill also suggests the possible necessity of vaccination of the National Guard.

Defining the Authority of a Medical Officer in the Navy.—Mr. Darling, as Acting Secretary of the Navy, in reply to an inquiry from Surgeon O. D. Norton, of the *Monadnock*, as to the extent of the authority of medical officers, has made the following ruling:

"While the department will not undertake to lay down, as a general rule, that a man must, particularly in cases involving risk of life or loss of limb, submit to a surgical operation, it cannot, on the other hand, accept the opinion of the junior squadron commander on the Asiatic station that it is optional with the man concerned whether or not he shall submit to such an operation in the course of medical treatment. By a judicious application of the principles set forth in an indorsement of the bureau of medicine and surgery, friction in cases of the character therein referred to will probably be avoided.

"In ordinary cases, when, in the opinion of the medical officer, after consultation, if advisable, with other surgeons available, it is deemed necessary, in order to restore a man to his capacity for the performance of his duties, that a minor surgical operation be made upon him, he can be required to undergo the same, under penalty of punishment, as by sentence of court-martial, in case of his refusal to submit thereto. If the particular case under consideration was of this character disciplinary action would have been proper upon the report, made to the commanding officer of the *Monadnock* by the surgeon of Private Walker's disobedience of orders."

Christian Science Condemned in Germany.—Much satisfaction is expressed in Germany over the Emperor's opposition to the spread of Christian Science and similar movements, which were beginning to find support, especially in court society and among the wealthy classes. The *North German Gazette* says: "On the strength of the most authentic information his Majesty summoned President

Von Windheim, of the police, and Dr. Faber, superintendent of the Lutheran Church, to tell them his opinion in regard to a nuisance which, he said, was equally disgraceful to our time and the capital of the empire. The emperor left it beyond doubt that persons taking part in the doings of Spiritualists, faith healers, Christian Scientists, and similar occultists shall not be admitted at the Imperial Court." The disciples of Mrs. Eddy were not admitted to the Victoria Lyceum recently, and were told that they would never be admitted again. Herr Windheim says that when he dined with the Emperor on Thursday his Majesty asked for suggestions for measures to check the spread of the various cults. Herr Windheim deprecated repressive measures on the ground that they would prove merely an advertisement. The Emperor, while expressing disapproval of such morbid tendencies in emphatic terms, agreed that it would be a mistake to make martyrs of the followers of the different cults, and said that other means must be found for dealing with them.

The Confederation of Members of Reciprocating State Medical Examining and Licensing Boards is the official title adopted by the Federation, the organization of which was referred to in our issue for January 25th. Owing to the differences which exist in the medical laws in the different States, it was only possible for the Federation to recommend the policy upon which the reciprocal exchange of certificates could be accomplished. The details of such reciprocal exchange of certificates must be arranged between States reciprocating, also the standard of preliminary education as well as that of the medical qualification of licentiates must be a matter of agreement between reciprocating States. Carrying out this idea, the following propositions were adopted by the Federation and the secretary instructed to lay them before the various boards throughout the United States, with a view to securing their cooperation:

(1) That a license or certificate of qualification of at least one year's date, based upon presentation of a satisfactory diploma and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued.

(2) That a license or certificate of qualification issued by a State Board of Registration or Medical Examiners of at least one year's date, based upon presentation of a satisfactory diploma and upon the recommendation of a State Board of Registration or Medical Examiners as to the reputeability of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued.

The Tuberculosis Hospital.—At the request of the commissioner of charities, the Academy of Medicine recently sent a committee, consisting of Dr. Loomis, Dr. Janeway, and Dr. Alfred Meyer, to examine the new tuberculosis hospital on Blackwell's Island. Their opinion was requested with reference to the desirability of the site and the possibility of making the old Manhattan State Hospital buildings into useful consumptive sanatoria. The building at present in use has a capacity of 120 beds, 113 of which are now occupied. There is a much larger unoccupied building just east of this one which has room for 350 beds. This committee submitted a report of the meeting of the Academy, held on Febru-

ary 6th, which contained the following recommendations: "First—That it would recommend the use of Blackwell's Island for the care only of advanced cases of consumption.

"Second—That in its opinion the buildings inspected can be adapted for the care of this class of cases, but that the advice of the department architect should be obtained in reference to many details. In addition, the interior of the buildings will need to be painted and to have the cellars made dry."

Dr. Thomas Neill Penrose, Medical Director U. S. N. (retired), who died on Wednesday at the United States Naval Hospital, in Philadelphia, was born in that city on June 6, 1835. He was a graduate of the University of Pennsylvania and served as a surgeon in the civil war. He retired with the rank of medical director in 1897. He married Margaret A. Stewart in 1863, and his sons are Thomas Norwood Penrose, a New York lawyer, and Paymaster Charles W. Penrose, U. S. N.

Lieutenant-Colonel Benjamin F. Pope, chief surgeon of the Medical Department of Manila, died on February 14th of Bright's disease. He had been sick for two weeks. Lieutenant-Colonel Pope was a native of New York and had been in the Medical Department of the United States Army for thirty-six years. He entered the service as assistant surgeon in 1864 and served to the end of the civil war, attached to the Tenth Regiment, New York Volunteers, Horse Artillery. In 1867 he entered the regular army as assistant surgeon, and was advanced steadily until as deputy surgeon-general he was assigned to duty as chief of the Medical Department of Manila.

The Death of Mr. William Martindale.—The death is announced from London of Mr. William Martindale. Mr. Martindale was not a physician, but his many years' service as pharmacist and teacher of pharmacy at University College Hospital, in London, and demonstrator of materia medica at University College, brought him into closer contact with the medical profession than that attained by most pharmacists, even of eminence in their science. In conjunction with Dr. Wynn Westcott, the coroner for North-east London, he brought out, and successfully piloted through its tenth edition in 1901, the *Extra Pharmacopæia*, a work which has done as much, perhaps, as almost any text-book on materia medica to familiarize practitioners of medicine with advanced therapeutics. Mr. Martindale's assistance was gladly rendered to and accepted by many English authors on pharmacology and therapeutics, some of whom have freely expressed their indebtedness to him for valuable aid and suggestions. He also rendered good service to the committee for the revision of the *British Pharmacopæia* and to the Privy Council's Poisons Committee. He was a fellow of several learned societies, and his loss will be felt beyond the domain of pharmacy in that of medicine.

Railroad Authorities Will Aid in Abating Small-pox.—The railroad authorities of all the lines in the Chicago territory have agreed to aid the health officers throughout the infected district in abating small-pox. The chief surgeons of the several companies will collect data concerning the number of cases and the conditions prevailing in the afflicted cities and towns, and report the result to the Illinois State Health Commissioner. Station agents have been instructed to send to headquarters detailed statements of the situation in each city and town within the infected district. In the meantime each railroad company will have its train crews vaccinated.

The Hospitals of New York.—The New York County Visiting Committee for Bellevue Hospital and other public institutions declares in its annual report just issued by its president, Dr. George G. Wheelock, that larger quarters are needed in the Harlem and Fordham reception hospitals and in the City Lodging House. Bellevue, the committee reports, needs repainting throughout, with new floors, new plumbing, a system of electric lighting and elevators, though a new set of buildings would be better. The Harlem Hospital needs a new site and building. In the present hospital there is only one bath, and that is in the middle of the floor of the ward kitchen. Fordham Hospital occupies leased property owned by a member of the medical board of the hospital, and the buildings do not belong to the city. Building operations in the neighborhood have made it very uncomfortable for the patients, and there is no ward for children, of whom many are received as patients. Nor has the hospital any crematory. The used dressings, etc., are burned in a vacant lot, whose owner, the committee thinks, will some day stop the practice. Another feature of the hospital's service which the committee criticizes is the long distance over which patients are transported. Some of them have to be carried seven miles, and in emergency cases this has at times resulted in death. During the heated term the mortality of patients overcome by heat and taken to this hospital was much greater than at the others. The committee recommends the erection of a small emergency hospital in the eastern part of the Bronx. It is also recommended that female nurses be employed in preference to men, with orderlies to assist them in the heavy work of caring for the patients.

Hospital Buildings and Endowments.—Options have been obtained by the Woman's Hospital, which the New York Central is to oust from its home, at Fiftieth Street and Lexington Avenue, on property on the east side of Amsterdam Avenue, from One Hundred and Ninth to One Hundred and Tenth Street, with a depth of 200 feet along each street. About fourteen lots are comprised in the property.—The Health Commission of New York has decided to erect a small-pox hospital and disinfecting plant on Staten Island, at a cost of \$10,000.—Under the will of William McClory, of Philadelphia, \$25,000 was left to various Philadelphia hospitals.—

The House Committee on Interstate and Foreign Commercial Relations has reported favorably a bill appropriating \$125,000 for the erection of a Marine-Hospital Service hospital building in Buffalo.—Mrs. Mary H. Castle has given \$10,000 to the Huron Street Hospital and a like sum to the Lakeside Hospital, in Cleveland, O.—Jacob E. Friend has offered a building site for the new non-sectarian hospital at Milwaukee, Wis. The site is to be worth \$10,000, and the building is to cost \$75,000. A contribution of \$25,000 toward the building fund has already been made by Abraham Slimmer, of Iowa.—Under the will of the late J. Alfred Kay, of Philadelphia, the following charitable bequests are made, their payment to be made on the death of Hannah Kay Furness, a sister: To the Pennsylvania Hospital, Germantown Hospital, University Hospital, Jefferson Hospital, Orthopaedic Hospital, and Polyclinic Hospital, for the purposes of endowing free beds in each institution in memory of Mary Kay, \$5,000 each; St. Agnes's Hospital, \$1,000; St. Joseph's Hospital, \$1,000; Jewish Hospital, \$1,000; Hahnemann Hospital, \$1,000; Presbyterian Hospital, \$1,000; Old Man's Home, \$1,000; Pennsylvania Society to Protect Children from Cruelty, \$1,000; Pennsylvania Society for the Prevention of Cruelty to Animals, \$1,000; Pennsylvania Institution for the Instruction of the Blind, \$1,000; Philadelphia Dispensary, \$1,000; German Hospital, \$1,000; Gynæcean Hospital, \$1,000; Howard Hospital and Infirmary, \$1,000; Medico-Chirurgical Hospital, \$1,000; Church Home for Children, \$1,000; Children's Hospital, \$1,000.—A bequest of \$1,000 to the Germantown Hospital is contained in the will of Katharine P. Bockius, late of No. 5227 Germantown Avenue, Philadelphia, who left property valued at \$22,666.—Under the will of Edward J. Bimline, the Hebrew Hospital of Baltimore is to receive a bequest of \$250.—The new hospital buildings of the Jefferson Medical College, Philadelphia, will entirely occupy the block bounded by Tenth, Moravian, Clifton, and Sansom streets. Work will be begun first on the new hospital, extending on Tenth Street from the north side of Moravian Street, across from the college building, to Sansom Street, and on the Da Costa memorial building. When the new hospital is completed the patients will be transferred from the old, which will be torn down, and the Maternity and Nurses' Home will be erected on its site. The new buildings will be absolutely fireproof and modern in every respect. Ideas have been taken from all the finest hospitals in this country and abroad, and no point looking to comfort, hygienic and sanitary arrangements, and hundreds of other matters pertaining to modern hospital work, will be neglected in the construction of the buildings. The frame will be of steel, the stone work of granite, and the ornate work stucco and brick. When completed the hospital will furnish ample accommodation for 275 patients, which is more than double the capacity of the present hospital.—A movement is on foot looking toward the erection of a Jewish Hospital in Brooklyn at a cost of \$100,000. Of this sum \$25,000 has already been pledged.—The Legis-

lature of the State of Ohio is to be asked to authorize the issue by the city of Cincinnati of bonds for \$1,000,000 for the erection of a new city hospital.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 15, 1902:

DISEASES.	Week end'g Feb. 8		Week end'g Feb. 15	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	23	5	20	8
Scarlet fever.....	337	31	321	43
Cerebro-spinal meningitis.....	0	7	0	8
Measles.....	891	34	1,022	32
Diphtheria and croup.....	333	55	281	18
Small-pox.....	61	10	58	14
Tuberculosis.....	358	150	238	100

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ended February 13, 1902:

BLUE, RUPERT, Passed Assistant Surgeon. To proceed to Des Moines, Iowa, for special temporary duty.

BROWN, F. L., Pharmacist. Granted leave of absence for ten days from February 10th.

SPRAGUE, B. K., Passed Assistant Surgeon. To assume command of the service at Detroit, relieving J. J. KINYOUN, Surgeon.

SWEETING, C. B., Acting Assistant Surgeon. The Bureau letter of January 16th, granting him leave of absence for five days from January 23d, is amended so that the said leave shall be effective from February 16th.

THOMAS, A. R., Passed Assistant Surgeon. To proceed to Liverpool, England, for special temporary duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending February 15, 1902:

FERGUSON, JAMES B., Contract Surgeon, will proceed to Fort Sheridan, Illinois, for duty.

HODSON, FREDERICK A., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

HORR, EDWARD F., Captain and Assistant Surgeon, is assigned to temporary duty as transport surgeon of the Army transport *Grant*.

LYON, PALMER H., Captain and Assistant Surgeon, United States Volunteers, will proceed to San Francisco for transportation to the Philippine Islands.

PEASE, FRANK D., Contract Surgeon, will proceed to Fort Mackenzie, Wyoming, for duty.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon, is relieved from further duty in the Philippine Islands, and, upon the expiration of his leave, will report at Fort Slocum, N. Y., for duty.

SIMONTON, A. H., Contract Surgeon, is granted leave of absence for two months, to take effect from February 8th.

SLAYTER, JOHN T., Captain and Assistant Surgeon, having tendered his resignation, is honorably discharged from the service.

TAYLOR, BLAIR D., Major and Surgeon. The leave granted him is extended ten days.

TURNER, SAMUEL S., Contract Surgeon, will proceed to Fort Yates, N. D., for duty, about February 28th.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 14, 1902:

Smallpox—United States			
District			
of Columbia.	Washington.	Jan. 25-Feb. 1.	2 cases.
California.	Los Angeles.	Jan. 25-Feb. 1.	7 cases.
"	San Diego.	Jan. 25.	1 case.
"	San Francisco.	Jan. 26-Feb. 2.	9 cases.
Illinois.	Belleville.	Feb. 1-8.	4 cases.
"	Chicago.	Feb. 1-8.	2 cases.
"	Danville.	Feb. 1-8.	2 cases.
"	Freeport.	Feb. 1-8.	1 case.
"	Galesburg.	Feb. 1-8.	1 case.
Indiana.	Evansville.	Jan. 25-Feb. 8.	13 cases.
"	Indianapolis.	Feb. 1-8.	23 cases.
Iowa.	Clinton.	Feb. 1-8.	3 cases.
"	Ottumwa.	Dec. 28-Feb. 1.	73 cases.
Kansas.	Wichita.	Feb. 1-8.	1 case.
Kentucky.	Covington.	Feb. 2-9.	3 cases.
"	Lexington.	Feb. 1-8.	3 cases.
Louisiana.	New Orleans.	Feb. 1-8.	3 cases.
Maryland.	Baltimore.	Feb. 1-8.	8 cases.
Massachusetts.	Boston.	Feb. 1-8.	54 cases.
"	Brockton.	Feb. 1-8.	1 case.
"	Cambridge.	Feb. 1-8.	4 cases.
"	Everett.	Jan. 25-Feb. 8.	4 cases.
"	Fall River.	Feb. 1-8.	1 case.
"	Holyoke.	Feb. 1-8.	1 case.
"	Lowell.	Feb. 1-8.	4 cases.
"	Malden.	Feb. 1-8.	1 case.
"	New Bedford.	Feb. 1-8.	1 case.
"	Newburyport.	Jan. 25-Feb. 8.	3 cases.
"	Somerville.	Feb. 1-8.	1 case.
Michigan.	Bay City.	Jan. 25-Feb. 8.	12 cases.
"	Detroit.	Feb. 1-8.	6 cases.
"	Ludington.	Feb. 1-8.	2 cases.
Minnesota.	Minneapolis.	Jan. 25-Feb. 1.	18 cases.
Montana.	Butte.	Jan. 24-Feb. 2.	1 case.
Nebraska.	Omaha.	Feb. 1-8.	45 cases.
N. Hampshire.	Nashua.	Feb. 1-8.	3 cases.
New Jersey.	Camden.	Feb. 1-8.	8 cases.
"	Jersey City.	Feb. 2-9.	15 cases.
"	Newark.	Feb. 1-8.	33 cases.
New York.	Binghamton.	Feb. 1-8.	1 case.
"	New York.	Feb. 1-8.	61 cases.
Ohio.	Cincinnati.	Jan. 31-Feb. 7.	12 cases.
"	Cleveland.	Feb. 1-8.	5 cases.
"	Dayton.	Feb. 1-8.	3 cases.
"	Hamilton.	Feb. 1-8.	3 cases.
"	Toledo.	Feb. 1-8.	2 cases.
Pennsylvania.	Allegheny City.	Feb. 1-8.	1 case.
"	Norristown.	Feb. 1-8.	110 cases.
"	Philadelphia.	Feb. 1-8.	1 case.
"	Pittsburgh.	Feb. 1-8.	3 cases.
So. Carolina.	Providence.	Feb. 1-8.	4 cases.
"	Charleston.	Feb. 1-8.	2 cases.
So. Dakota.	Greenville.	Jan. 25-Feb. 8.	2 cases.
"	Sioux Falls.	Feb. 1-8.	15 cases.
Tennessee.	Memphis.	Feb. 1-8.	1 case.
"	Nashville.	Feb. 1-8.	32 cases.
Texas.	Houston.	Feb. 1-8.	20 cases.
Washington.	Tacoma.	Jan. 24-Feb. 2.	3 cases.
Wisconsin.	Fond du Lac.	Feb. 1-8.	19 cases.
"	Green Bay.	Feb. 2-9.	7 cases.
"	Milwaukee.	Feb. 1-8.	
Smallpox—Foreign.			
Austria.	Budapest.	Jan. 15-21.	11 cases.
"	Prague.	Jan. 11-18.	6 cases.
Belgium.	Antwerp.	Jan. 11-25.	94 cases.
Brazil.	Rio de Janeiro.	Dec. 21-Jan. 12.	3 cases.
Canada.	Halifax.	Jan. 25-Feb. 8.	80 cases.
"	Quebec.	Jan. 25-Feb. 3.	10 cases.
"	Winnipeg.	Jan. 25-Feb. 1.	
Colombia.	Cartagena.	Jan. 26.	8 cases.
Gt. Britain.	Liverpool.	Jan. 19-25.	9 cases.
Italy.	Naples.	Jan. 18-25.	1 death.
"	Rome.	Dec. 16-21.	1 death.
Russia.	Moscow.	Jan. 4-18.	15 cases.
"	Odessa.	Jan. 11-25.	13 cases.
"	St. Petersburg.	Jan. 12-25.	12 cases.
"	Warsaw.	Jan. 4-11.	2 deaths.
Spain.	Corunna.	Jan. 18-25.	1 death.
Uruguay.	Montevideo.	Dec. 28-Jan. 4.	77 cases.
Yellow Fever.			
Brazil.	Rio de Janeiro.	Dec. 21-Jan. 1.	15 deaths.
Mexico.	Vera Cruz.	Jan. 25-Feb. 1.	1 death.
Cholera.			
Java.	Batavia.	Dec. 7-14.	3 cases.
Straits Settlements.	Singapore.	Dec. 21-28.	1 death.
Plague Insular.			
Hawaii.	Honolulu.	Jan. 23-24.	2 deaths.
"	Kauai, Elele.	Jan. 22-26.	3 deaths.
Plague Foreign.			
Brazil.	Rio de Janeiro.	Jan. 4-12.	8 deaths.

PAGE, J. E., Passed Assistant Surgeon. Ordered to report at Seattle, Washington, March 1st, for temporary recruiting duty.

RIXEY, P. M., Rear Admiral. Commissioned surgeon general of the Navy, and chief of the Bureau of Medicine and Surgery, with the rank of rear admiral, from February 10th.

SPRATLING, L. W., Surgeon. The order to proceed to the Naval Hospital, Portsmouth, New Hampshire, is revoked, and he is ordered to continue on waiting orders.

Births, Marriages, and Deaths.

Born.

RYAN.—In Havana, Cuba, on Thursday, December 26, 1901, to Dr. J. Ryan, United States Army, and Mrs. Ryan, a son.

Married.

BARNSBACK—WHITBREAD.—In Edwardsville, Missouri, on Wednesday, February 5th, Dr. Roy Smith Barnsback and Miss Minnie Elizabeth Whitbread.

QUEREAU—PACKARD.—In Syracuse, N. Y., on Tuesday, February 11th, Dr. Edmund Chase Quereau and Miss Elizabeth Ford Packard.

Died.

ANDREWS.—In Lynn, Massachusetts, on Monday, February 10th, Dr. John Burbank Andrews, in the sixty-first year of his age.

BALSER.—In New York, on Friday, February 14th, Dr. Henry Balser, in the sixty-second year of his age.

ELLIS.—In Detroit, on Thursday, February 13th, Mrs. L. E. Ellis, wife of Dr. L. E. Ellis.

FORD.—In Wheeling, West Virginia, on Thursday, February 13th, Dr. H. T. Ford, father of Dr. Clyde S. Ford, United States Army, in the sixty-first year of his age.

FRANK.—In Detroit, on Thursday, February 6th, Dr. Charles P. Frank, in the forty-fifth year of his age.

HINE.—In New Milford, Connecticut, on Monday, February 10th, Dr. James Hine, in the seventy-ninth year of his age.

LOVEJOY.—In Mount Morris, N. Y., on Wednesday, February 12th, Dr. Milton E. Lovejoy, in the forty-first year of his age.

MILLION.—In Springfield, Ohio, on Friday, February 14th, Dr. John L. Million, in the seventy-fifth year of his age.

PENROSE.—In Philadelphia, on Thursday, February 13th, Dr. Thomas Neall Penrose, United States Navy, in the sixty-seventh year of his age.

POPE.—In Manila, Philippine Islands, on Friday, February 14th, Dr. Benjamin F. Pope, United States Army.

RODMAN.—In Huntington, Long Island, on Monday, February 10th, Dr. Samuel H. Rodman, in the sixty-fourth year of his age.

Obituary.

LEVI COPPER LANE, M. D.,

OF SAN FRANCISCO.

Dr. Levi Cooper Lane, of San Francisco, died at his home, in that city, on February 19th, at the age of eighty. Dr. Lane was the founder of the Cooper Medical College of the Lane Hospital and of the Lane Lectures, which were delivered annually at the Cooper Medical College by some distinguished teacher. The last series was delivered by Mr. Malcolm Morris and was published in the last volume of the *New York Medical Journal*, the subject being the Social Aspects of Dermatology.

Dr. Lane graduated from the Jefferson Medical College, Philadelphia, in 1851 and was a member of the Royal College of Surgeons of England.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending February 15, 1902:

ARMSTRONG, E. V., Passed Assistant Surgeon. Detached from recruiting duty, February 17th, and ordered to the *Olympia*.

Pith of Current Literature.

Boston Medical and Surgical Journal, February 13, 1902.

Surgery of the Gall-bladder and Ducts. By Dr. John W. Keefe.—The author makes the prediction that within the next decade the general practitioner will become as familiar with gall-stone surgery as he is at the present day with that of appendicular inflammation.

Faulty Uterine Growth. By Dr. Daniel H. Craig.—In women who have passed the period of growth, treatment holds out but very little hope. If the cervical canal in the least exceeds the body a most unfavorable prognosis is the only one justifiable. An outdoor life is essential; all forms of gymnastics, Swedish movements, etc., are indicated. As a means of inducing congestion, the author recommends the intracervical application of impure carbolic acid, negative galvanism and Faradism, and very hot two-quart douches each night. A small soft or hard rubber retroversion pessary, with or without a bulb, according as the ovaries show a tendency to prolapse or not, should be used.

Treatment of Inversion of Uterus. By Dr. E. W. Cushing.—The author asserts that the use of the Trendelenburg posture is of so great advantage in Thomas's operation for inversion of the uterus, that with this modification it becomes the operation of election, being easier, safer, cleaner, and more surgical and satisfactory than any other.

Variola, or Small-pox. By Dr. Joseph E. Duxbury.—The author accounts for the mildness of the recent epidemic in various parts of the country on the hypothesis that, inasmuch as the disease has been nearly entirely obliterated, the severity of certain cases may have been mitigated. The average age in fifty-one cases coming under the author's observation was fourteen years and a quarter—too high an average for it to have been chicken-pox. This particular series of cases occurred in Manville, R. I. After the premonitory symptoms and the appearance of the eruption, the lesions progressed to their final destruction in regular order. The shot-like feeling, the vesicular element, the umbilication and the corrugated appearance were all present one after another, and finally cicatrices were left to mark the site of the disease, although more marked in some instances than in others. Outside of rigid and proper hygienic care, the less medication a small-pox patient receives, the better he will get along. Complications that may arise must be promptly dealt with.

Journal of the American Medical Association, February 15, 1902.

The Problems of Serum-therapy. By Dr. Joseph McFarland.—The recognition of the chemical nature of the reaction, and the discovery that the laws governing it are not unlike laws governing other reactions with which we are familiar, together with the discovery that the toxine-anti-

toxine reaction is but one of a large series of vital reactions, has opened the way to new applications of serums in practice, and has suggested entirely new lines of research. The lesson that is to be learned from the achievements thus far consummated, is that the action of immune serums is far from simple, depends upon many factors with which we are just beginning to become acquainted, and that the failure of our efforts in many directions in the past may simply be referable to our ignorance of how to use materials at hand.

The Prevention of Pelvic Diseases during and after Labor. By Dr. J. F. Baldwin.—"Meddlesome midwifery is bad"; but, as the author points out, the misuse of this aphorism has done much mischief, since timidity born of ignorance does not properly weigh the meaning of the word meddlesome. Meddlesome midwifery is not that which intervenes in abnormal or pathological conditions, but it is that which interferes officiously with normal processes. The author concludes that the prevention of pelvic diseases during and after labor consists in cleanliness, patience, and intelligent intervention.

Prevention of Inflammatory Diseases after Marriage. By Dr. Rufus B. Hall.—The author emphasizes the statement that prevention of pelvic inflammation in women must come largely through the enlightenment of the laity by the medical profession.

The Prevention of Pelvic Disease before and during Puberty. By Dr. W. H. Humiston.

Isolation of Bacillus Typhosus from Unusual Localizations—Cholecystitis, Meningitis, and a Five Months' Fetus. By Dr. O. McDaniel.

Cold Weather Accountable for Turbidity of the Urine. By Dr. L. Napoleon Boston.

On the Treatment of Obesity. By Dr. Heinrich Stern.—In treating the metabolic variety of polysarcia the author advises the descending of mountains or stairways as being a valuable adjuvant. For the first week the patient is ordered to descend fifteen or twenty stories from one to four time daily. This is done slowly at first, then from step to step in a jumping manner. Later on, the same exercise is continued, but the individual is ordered to perform it at his utmost speed. This exercise affords a most convenient means of stimulating the abdominal muscles to increased activity.

The Modern Subjugation of Science and Education to Propaganda. By Dr. William T. Sedgewick.

Acute Morphine Poisoning in an Infant; Recovery. By Dr. Charles D. Slagle.

American Medicine, February 15, 1902.

Surgical Treatment of Injuries and Diseases of the Pancreas. By Dr. Roswell Park.—The author makes an earnest appeal for the earliest possible surgical intervention in lesions of the pancreas. So much harm comes from delay, so much good may be done by promptness, that the author suggests that the rule applied in dealing with acute appendicular inflammation, or with

certain injuries to the cranium and brain, namely "when in doubt, operate," be applied also to pancreatic lesions. The cases in which one should not operate, are those about which he feels very confident that the matter of surgical intervention will not have to be raised at all.

A Consideration of Twenty-eight Cases of Tuberculous Peritonitis at the Boston City Hospital, with Particular Reference to the Results of Operative Treatment. By Dr. John T. Bottomley.—According to the author, we may reasonably expect cures (*i. e.*, one year or more after operation) to follow the operation in from thirty to forty per cent. of all cases. In fatal cases the patients usually die within a few months after operation. Family history does not appear to be important ætiologically. Previous inflammatory affections of the abdominal viscera may have ætiological significance. Operation usually affords at least temporary improvement, either locally or generally, even in cases that later may prove fatal. The use of drainage following the operation should be avoided when possible. Inferences as to the remote results of the operation should be drawn very guardedly, if at all, from the immediate results; though, in cases which do not immediately receive from an operation either local or general benefit, the prognosis is very favorable.

The Inhibition of the Contraction of Striated Muscle. By Dr. Alexander Spingarn.—All motor nerves probably contain two sets of fibres, one excitatory and the other inhibitory—the excitatory ones ordinarily predominating in their effect on the muscles. The function of the inhibitory fibres is to prevent an excessive manifestation of the energy of the muscle, when the latter has been aroused to contract; the inhibitory fibres bearing a relation to the muscle machine, somewhat like that of the governor to the steam engine.

Respiratory Gymnastics; Pulmonary Atelectasis; Pulmonary Anæmia. By Dr. Albert Abrams.—The author records several observations to show that great importance attaches to pulmonary anæmia as an early sign of tuberculosis. If, as the author asserts, pulmonary anæmia is dependent on lung atelectasis, the treatment indicated is lung development. The author has produced good results by the use of daily inhalations of compressed air.

One of the Ætiologic Factors in the Production of Deflected and Deformed Nasal Sæptums and the Methods for Its Relief. By Dr. Nelson M. Black.—In cases of deflected sæptum, the bony structure has become weakened primarily by traumatism, strumous or rhachitic diathesis, nasopharyngeal adenoids, or by some of the infectious diseases of childhood. The ætiological features which tend to produce irregularities of the superior maxilla are causative factors also. In order to achieve a satisfactory and permanent result in deflected and deformed nasal sæpta with the high arched palate, we should go to the orthodontist and primarily have the active factors removed, the high arched palate and acute-angled alveolar processes.

Popular Dose Measures and their Relations to the Use of the Metric System in Prescription Writing. By M. I. Wilbert, Ph. G.

Medical Allusions in Shakespeare's Plays. By Dr. P. S. Donnellan.—The author offsets Macbeth's "Throw physic to the dogs," by showing that, while Shakespeare portrayed the starved apothecary in *Romeo and Juliet*; the supercilious Dr. Caius in *The Merry Wives of Windsor*, and the courtier, Dr. Butts, in *Henry the Eighth*, he has also sketched with matchless skill in *King Lear* and *Macbeth*, physicians that are types of all that is best in medical ethics.

Philadelphia Medical Journal, February 15, 1902.

A Case of Osteitis Deformans. By Dr. J. C. Wilson.

A New and Improved Method of Closing Vesico-vaginal Fistulæ, with Report of a Case. By Dr. A. Laphorn Smith.

What Constitutes "Septic Poisoning" in Accident Policies? By Dr. G. W. H. Kemper.—The author believes that the surgeon who is insured and receives a disabling wound, is entitled to an indemnity, whether he contracts septic poisoning or not. A surgeon, while operating, may become infected through an old injury or a new wound. The effects are the same in either instance. There is no valid reason why a policy should not indemnify alike in both cases. If a surgeon cannot recover indemnity from an infection received through a sore or an abrasion, then he gains nothing from a clause or rider attached to his general policy. In other words, the term "septic poisoning" in an accident policy is simply an aid to secure policy holders.

The Progress of Knowledge concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen years. By Dr. Joseph McFarland.

The Surgery of the Spine. By Dr. Samuel Lloyd.

Medical Record, February 15, 1902.

Tumors of the Central Nervous System; Remarks on Noteworthy Cases. By Dr. Joseph Collins.—The author believes that the surgeon's field of usefulness is larger in spinal-cord tumor than in brain tumor, although tumors of the spinal cord offer much greater difficulty of diagnosis than those of the brain. The latter are almost constantly attended by a symptom-group, made up principally of headache, vertigo, vomiting, hebétude, apathy, staggering, spasm or paresis of an extremity, and optic neuritis, which can scarcely be paralleled by any other condition. On the other hand, tumors of the cord have no such constant clinical picture, and, to make the diagnosis, much more minute observation and closer analysis are called for than when the brain is similarly affected.

Latent and Masked Malarial Fevers. By Dr. Charles F. Craig.—The author gives an analysis of one hundred and ninety-five cases and demonstrates the importance of an examination of the blood in all cases of disease originating in the

tropics, or in localities which are known to be malarious. It is an undoubted fact that a malarial infection complicating any disease-process injures the patient's chances of recovery, while its elimination greatly facilitates recovery. The discovery of cases of æstivo-autumnal malaria is especially important, as it is this form of the disease that may become at any time pernicious, and may cause death within a few hours. The author urges the importance of a knowledge of malaria sufficient for an accurate microscopical examination of the blood in these cases.

Auto-intoxication and Disease from a Practitioner's Standpoint. By Dr. Beverley Robinson.—The author asserts that the specialist is disposed to over-emphasize intestinal self-intoxication as a cause of neurasthenia, and to medicate with drugs in such form as to be soluble only in the intestine and not at all in the stomach. The author, however, does not believe in changes in a limited portion of the digestive tract, as separated from the rest. Drugs must be in solution to be useful, and they must affect the stomach favorably, and not solely the intestine. There are three drugs which the author would support with unqualified praise in numerous cases. The first is creosote, properly combined, and in minute repeated doses; the second is wood charcoal, and the third, the subnitrate, and perhaps other salts, of bismuth. Phosphoric acid is useful in checking intestinal fermentation and decomposition directly, and as a useful tonic to the nervous system. Static electricity is useful in those cases with a torpid engorged liver, due to alcohol or over-eating.

Diabetes Mellitus — Ætiology and Pathogenesis. By Dr. Charles E. Nammack.—It is improbable, according to the author, that all cases of diabetes mellitus depend upon a single cause; and in default of a demonstrable pathogenesis, we must fall back upon a comprehensive definition, and say that diabetes mellitus is a disease of nutrition, sometimes acute, generally chronic, characterized by the persistent presence of grape sugar in the urine, by polyuria, and by a progressive loss of strength, and that this sugar appears in the urine because it is present in excess in the blood.

Medical News, February 15, 1902.

Address to the Graduates of the Training School for Nurses of the Colored Home and Hospital. By Dr. T. Gaillard Thomas.

Heredity. By Dr. J. W. Kiernan.—According to the author, heredity obeys no absolute law in detail, but is governed by a struggle between contending forces. Initial hereditary velocity is an important factor, but so likewise are intra- and extra-uterine environment, especially as constituted by maternal strength during intra-uterine periods, during periods of nutrition by the mother, and during periods when the child is under maternal training. Heredity is a prophecy of what may be, not a destiny which must be.

The Limitations of Medical Therapeutics. By Dr. Frank Billings.—Nihilistic therapy is not jus-

tified by the experience of the past, or by present knowledge, in either private or hospital practice. Nihilistic therapy and the symptomatic drug treatment of the theorist are opposite extremes of practice. Both are wrong and both are supported by ignorance. Clearly then, according to the author, there is marked limitation in drug therapy, but still there is a drug treatment which, if rationally applied, will be of much aid to the physician in combating disease and in alleviating human sufferings.

A History of the Army Post Exchange or Canteen. By Dr. Dunning S. Wilson.—The author writes an interesting article on this subject, tending to show that it is better for soldiers to drink beer on a military reservation where they can be cared for, than to drink alcoholic liquor off of it, and that the legislation of last winter abolishing the canteen was ill advised.

The Röntgen Method in the Diagnosis of Renal and Ureteral Calculi. By Dr. Charles Lester Leonard.—The author points out that the accurate determination of the position and number of the calculi has resulted in limiting the field of operation, and in rendering the intervention more accurate and complete, while it excludes the danger that menaced from the unrecognized involvement of the other kidney or ureter in the calculous disease. The chance of error in the negative diagnosis is very slight, and the calculi that may be overlooked are so small that their final expulsion is certain.

Retinal Lesions of Chronic Interstitial Nephritis. By Dr. Edward Jackson.—The author lays special emphasis upon the close relation that exists between these retinal lesions and the degenerative changes in the walls of the blood-vessels. They throw light on what goes on in the central nervous system, and, *pari passu*, in other organs of the body. Whether considered as a means of understanding the essential nature of this disease process, or as throwing light on the character and course of the individual case, they have an importance that the mass of physicians very imperfectly appreciate.

Exostosis of Femur Due to Traumatism. By Dr. W. R. Townsend.

British Medical Journal, February 1, 1902.

A Clinical Lecture on a Further Series of Cases of Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. By Dr. P. J. Freyer.—The author reports a further series of four cases in which he has undertaken the operation previously introduced and described by him, *viz.*, total enucleation of the prostate in its capsule, the urethra being left behind intact (*British Medical Journal*, July 20, 1901). In the present series the patients ranged from sixty-five to seventy-six years of age, and the prostates removed, from 3 to 10¼ ounces. Three made perfect recoveries, and were benefited in every way by the operation. The fourth patient did well for two weeks, when he suddenly developed acute mania and died from exhaustion twenty-two days after the operation. The his-

tory of the author's eight cases goes to show that no such condition as "atony of the bladder" exists, even in the most advanced cases of the disease. Even where complete catheterism has prevailed for many years, the bladder walls retain their expulsive powers. The comparative absence of shock from so seemingly grave an operation in aged and broken-down patients is remarkable.

Remarks on Ten Cases of Movable Kidney.

By J. S. Riddell, M. B.—Movable kidney is an acquired condition, is usually found on the right side, and is eight to ten times more common in women than in men. The causation of the condition is obscure. It occurs frequently in neurasthenic women who have borne many children, whose abdominal walls are lax, and in whom, along with general emaciation, the fatty capsule has diminished in thickness, leaving the organ room to move inside it. Other alleged causes are pressure by corsets and enteroptosis. Once started the excursion of the kidney rapidly increases, so that in old-standing cases the organ passes as far down as the sacro-iliac synchondrosis, or even partly into the pelvis. The greater frequency on the right side has been attributed to the downward pressure of the liver, the less resistance of the right meso-colon, and the greater length of the renal artery on the right side. The symptoms range from mere discomfort to acute pain, febrile disturbance, vomiting, and collapse. These acute attacks are known as Dietl's crises, and are caused by twisting of the renal vessels. Mistakes in diagnosis are common, usually due to imperfect examination. The palliative treatment of movable kidney is only fairly successful. Operation should be advised only in those cases, however, where the discomfort is extreme or where complications exist.

Operation aims at fixing the kidney firmly in the loin. A simple plan is to separate the kidney from its capsule by free dissection with the finger, to irritate the fibrous capsule by scratching with a scalpel, to fix the lower part of the kidney by two sutures of catgut, silk, kangaroo tendon, or silkworm-gut to the lumbar muscles and aponeurosis, and, most important of all, to insert alongside the kidney large drainage tubes or packs of gauze, which are left in for a week to produce aseptic inflammation or granulation.

Methods of Incising, Searching, and Suturing the Kidney. By Dr. H. A. Kelly.—The author finds the urethral catheter of value in operations for renal calculi, in two ways: First, before the operation the catheter is passed up the ureter into the pelvis of the kidney, which is then thoroughly irrigated and washed out by letting water flow into it from a funnel, in this way distending the pelvis; the water then escapes down the ureter into the bladder, and out through an urethral catheter. In this way pus may be washed out from the pelvis of the kidney with boric or carbolic acid solution. The second use of the catheter is by its means rapidly to distend the renal pelvis, thus causing the kidney to swell up, making prominent certain surface landmarks which serve as a guide for a correct incision into the organ.

The best place to incise the kidney is down

through the lateral portion of the posterior pyramids between the anterior and posterior vascular trees. Through such an incision, laying open the calices, both anterior and posterior systems of calices can be readily explored. Where it is advisable to close the wound into the kidney, three sets of sutures may be used to advantage, one of fine catgut placed between the calices, including the fat and fibrous tissues without involving the mucous surfaces. The second series of sutures consist of one or two series of mattress sutures extending through the entire substance of the kidney. These control the bleeding. Finally, for perfect accuracy, the capsule may be closed by a continuous catgut suture.

Clinical Observations in the Treatment of Severe "Stammering" Bladder and Urethra. By E. H. Fenwick, F. R. C. S.—The term "true stammering of the bladder and urethra" should be confined to that class of patient, male or female, in which urination cannot be effected at will, although all the organs for the completion of the act are sound or anatomically perfect. The cause of the obstruction is often a tonic spasm of the compressor urethræ, and the cure of the trouble is a longitudinal section of that muscle. Spasm of the compressor urethræ is induced in a small percentage of cases by stricture of the urethra; free division of the stricture cures the spasm. In some of the cases of vesical irritability in women which are relieved by exploration of the bladder with the finger, the beneficial result is due to overstretching the sphincter muscle, the analogue of the male compressor urethræ.

The term "false stammering" should include cases of prostatic inflammation or senile enlargement, atony of spinal origin, or of urethral stricture.

Partial Nephrectomy, with Three Illustrative Cases. By B. G. A. Moynihan, F. R. C. S.—The author reports three cases which illustrate the possibility of saving portions of the kidney in cystic disease (two cases), and myxo-sarcoma (one case). In all three cases the patients made perfect recoveries from the operation, and were entirely cured.

Recurrent Carcinoma Treated by the Röntgen Rays. By Dr. G. B. Ferguson.—The author reports the case of a woman, suffering from a recurrent scirrhus growth, of the size of a hen's egg, on the manubrium of the sternum; she had been operated on for scirrhus mammae three years previously. The Röntgen rays were employed for twenty minutes a day, for twenty days, with the result that the sternal growth entirely disappeared, and the patient is to-day in excellent health in every way.

Lancet, February 8, 1902.

Two Cases of Solid Abdominal Tumor with Ascites. By Dr. T. W. Eden.—The author reports two interesting cases of solid abdominal tumor with ascites, both occurring in women. In both cases disease of the liver, spleen, and kidney could be ruled out by means of percussion and palpation. In the first case, that of a woman

aged sixty-four years, the uterus was freely movable and not connected with the tumor; further tumors of the uterus and broad ligament are rarely, if ever, associated with ascites. No pedicle could be palpated, thus ruling out disease of the ovary and making disease of the omentum the most probable diagnosis. In the second case, that of a woman aged forty-seven years, besides the large abdominal tumor, nodules were to be felt behind the uterus in Douglas's pouch. The large tumor had a pedicle, which was distinctly palpable, and was thought to be a solid ovarian tumor. Such tumors of the ovary are usually associated with ascites. The nodules behind the uterus were thought to be subperitoneal fibroids of the uterus. Operation confirmed the diagnosis in the latter case, the ovarian tumor being a fibroma with extensive cystic degeneration.

Preliminary Note on the Possibility of Treating Mitral Stenosis by Surgical Methods. By Sir Lauder Brunton, M. D.—The author calls attention to the hopelessness in cases of mitral stenosis of ever finding a medical remedy which will enable the auricle to drive the blood in a sufficient stream through the small mitral orifice, and suggests the possibility of dividing the constriction by surgical means. He has started a series of experiments upon animals and upon diseased hearts from the post-mortem theatre, but, so far, has been able to accomplish but little. He therefore publishes his suggestion for the benefit of others who may wish to carry out the necessary investigations. Should the mitral orifice be enlarged by elongating the natural opening, or should the valves be cut through their middle at right angles to the normal opening? The former would be the better plan, but the latter is the more easily performed and might be sufficient. The knives should be similar to tenotomy knives, and sufficiently strong to divide the thickened edge of the valves. The plan used for exposing the heart (in the dead animal) is that of Minni, of Naples. The author has been astonished at the way the heart stood handling of all kinds. The pericardium should be opened to permit the escape of any blood, yet this is not likely to occur, as needle wounds of the ventricle rarely bleed, and the knife used need not be much larger than a needle.

The Trial, Execution, Necropsy, and Mental Status of Leon F. Czolgosz, alias Fred. Nieman, the Assassin of President McKinley. By Dr. C. F. MacDonald. With a Report of the Post-mortem Examination. By E. A. Spitzka. — (*Concluded.*)

Ovarian Tumors and Ovariectomy during and after Pregnancy. By A. H. G. Doran, F. R. C. S. —The author reports two cases of ovariectomy performed during pregnancy. In the first, all complications and dangers were anticipated, none existing at the date of the operation. In the second, torsion of the pedicle occurred and the tumor lay in a position prejudicial to labor. In both cases the patient made a good recovery from the operation, and was successfully delivered of a normal, healthy child at term. He has performed ovariectomy in fifteen cases where pregnancy had existed recently and the tumor was known to be

present before labor. Fourteen of the cases recovered, only one proving fatal. In no less than eleven cases was the pedicle distinctly twisted, and adhesions were present in seven cases. The fatal case died of *Bacillus-coli* infection, a frequent complication after separation of intestinal adhesions in ovariectomy where malignant or strongly adherent dermoid tumors are removed. The above facts show that postponing the operation till after delivery exposes the mother to considerable danger during pregnancy, labor, and, above all, the puerperium.

Four Cases of Word-blindness. By Dr. J. Hinchelwood.

A Case of Tumor of the Left Pre-frontal Lobe Removed by Operation. By Dr. W. Elder and Dr. A. Miles.—The authors report the case of a man, aged forty-seven years, who for five months had been suffering from headache in the left frontal region, causeless vomiting, and general mental deterioration. He continued at work for some months, but ultimately took to his bed. His memory failed and he lost all sense of decency. A swelling appeared over the left frontal eminence, and the headache became severe. The affection of the memory appeared to be a want of power of associating memories, rather than an actual failure. There was no aphasia, but some degree of dysarthria. Paresis of the lower right side of the face and of the right arm was present. The patient denied having had syphilis. He gradually became more and stuporous, and operation was decided upon. A firm, nodular mass, lobulated and of the shape of a tomato, was found to occupy the tip of the left frontal lobe of the cerebrum. The tumor was easily shelled out, without any hæmorrhage. The patient's mental condition improved at once, and in a month he was apparently perfectly well. Microscopical examination of the tumor showed it to be a syphiloma. The right pre-frontal region should no longer be looked on as a "silent region"; it is the seat of faculties, the loss or deterioration of which completely changes the character of a man. The form of mental disturbance in lesions of the frontal region consists in a loss of self-control and a subsequent change of character. It does not conform to any type of insanity.

Acute Suffocative Pulmonary Œdema. By T. Lissaman, M. R. C. S.—The author reports a case of acute suffocative pulmonary Œdema occurring in a woman aged forty-five years. The case corresponded exactly with those recently described by Steven, being characterized by attacks of terrible dyspnœa, during which every expiration was accompanied by the expectoration of a copious, thin, pinkish fluid. The attacks would last a few hours, and then pass off, leaving the patient little the worse. Nitrate of amyl having proved unsatisfactory, the administration of chloroform was tried with the most beneficial results. Only a small amount of chloroform vapor was inhaled, a breath of pure air being given at each alternate inspiration. In from ten to thirty minutes the patient became much easier, and in an hour she had entirely recovered. She is better in every way than she has been for years, and is no longer

an invalid. The author thinks the condition due to spasm of the pulmonary venous (or efferent) system. It is very similar to ordinary acute asthma, and the author speaks of it as "wet asthma"; in acute spasmodic, or "dry" asthma, it is the pulmonary artery or afferent system, that suffers from spasm. The patient used to have three or four attacks a week; since beginning the use of chloroform, she only has two attacks a month, and their duration grows steadily less and less. Chloroform is also recommended in ordinary acute spasmodic asthma.

Two Cases of Acute Delirium. By Dr. R. H. Cole.—The author reports two cases of acute delirium, both of which ended fatally in a very short space of time. Acute delirium is generally regarded as the most convenient term to apply to a somewhat rare but fatal group of clinical cases. In all, practically, there is a predisposition to mental instability, hereditary or acquired. Some observers have described a bacillus associated with this condition, and others have found various forms of cocci, while in many cases, no organisms can be found at all. It seems probable that the toxins arise autogenetically.

The Decay of Auscultation and the Use of the Binaural Stethoscope. By Dr. H. W. Syers.—The author unqualifiedly condemns the popular binaural stethoscope, and states that it "should be altogether done away with and abolished off the face of the earth." He much prefers the straight wooden single stethoscope. As an instance of the unreliability of the double stethoscope, he states that in many cases of aortic regurgitation in which the bruit is soft and low-pitched, the murmur is entirely overlooked, the second sound being described as "clear." The author has constantly found that systolic murmurs have been described as presystolic, when the binaural instrument has been used. Equally grave errors are made when it is used in the auscultation of the lungs.

British Medical Journal, February 8, 1902.

Two Cases of Perityphlitis (Commonly Called Appendicitis). By Dr. D. W. Finlay.—The author calls attention to the fact that many cases of inflammation in the right iliac fossa occur, in which we have no proof that the appendix is at fault, however much we may suspect it; and that in some others, even after the evacuation of pus, the complicity of the appendix is only a matter of strong inference; so that the term "appendicitis" assumes too much, and he prefers to use "perityphlitis" in its stead. The early recognition of, and the surgical dealing with, the fulminating class of cases is of paramount importance. In the simple cases where there is much pain, the application of two or three leeches over the swelling may often give relief. Purgatives should never be used. Opium, not pushed too far, is the only useful drug, on account of its power to alleviate pain and to check peristalsis of the bowels.

Remarks on Appendicitis and Its Treatment. By J. Taylor, F. R. C. S.—I. *Simple acute appendicitis.* The important symptoms of this condition are: Pain, tenderness, and rigidity. To these must

be added vomiting. Pyrexia is almost always present, but the rapidity and character of the pulse furnish more valuable information than observation of the temperature. The attack may terminate in: 1. Complete recovery; this is not very common. 2. Localized suppuration. 3. Apparent recovery, but with pain at times. 4. Apparent recovery, but with recurrences of the acute attack weeks or months later. 5. A continued state of slightly raised temperature, with tenderness. (The last three groups belong to the class of chronic cases). 6. A sudden change for the worse, taking on the characters of a fulminating attack.

II. *Fulminating appendicitis.* This is a violent explosion of the most grave character.

III. *Chronic appendicitis.* This includes all cases where, after an acute attack, there are any symptoms remaining which can be referred to the appendix.

In an ordinary case of acute appendicular inflammation the best results are obtained by absolute and complete rest. Certain cases must without question be operated upon. These are: 1. Fulminating attacks. 2. Cases of chronic appendicular inflammation (except during an acute recurrence). In these interval cases the mortality is slight.

During an ordinary acute attack the author's opinion is against operation.

Some Cases of Chronic Non-malignant Gastric Ulcer. By A. E. Barker, F. R. C. S.—The author reports nine cases of chronic non-malignant gastric ulcer which have been under his care. In two cases the hæmatemesis was moderate or absent, and the patients recovered without operation. The remaining seven cases were operated upon; of these, one died of fatal recurrent hæmatemesis, a second of pulmonary embolism due to septic thrombosis of the inferior iliac vein from ulceration into the vagina, and the third of general peritonitis following perforation. The remaining four cases underwent gastro-enterostomy, and were completely cured. All the author's operations for non-malignant disease (without perforation) have been successful, and he is led to reflect whether surgical treatment ought not to be employed in a far larger proportion of cases where proper medical measures are not leading to a cure, than is at present the case. Operation, as a rule, is only a desperate last resource where hæmorrhage or perforation are surely killing a patient.

An Address on some Points in Connection with Ulceration of the Stomach and Duodenum. By Dr. C. R. Box.—As regards the causation of ulceration of the stomach and duodenum, the author inclines to the theory of microbic infection of the lymphoid follicles of the stomach wall. Attention is called to the fact that there are cases where hæmatemesis is present, associated with gastric pain and vomiting, in which there is, nevertheless, no gastric ulcer at all. Such a state of things may occur in uræmia, and a diagnosis of gastric ulcer should never be made without careful examination of the urine. The vomit in cases of gastric crises in locomotor ataxia often contains blood. There are also those instances where hysterical patients simulate hæmatemesis. The blood is often obtained by producing some lesion of a mucous surface, such as the mouth or vagina. And, finally, hæmatemesis occasionally occurs in connection with mitral disease. All the above-mentioned causes must be eliminated

before arriving at a diagnosis of gastric ulcer. Constant vomiting in young people may be due to early pregnancy, uræmia, or to cerebral tumor. In doubtful cases it is necessary to see the vomited materials oneself, if this be possible, and better still to observe the actual act of vomiting. An examination of the stomach contents for the presence of excess of free HCl should always, where practicable, be made. Hyperacidity is a valuable sign of gastric ulceration. The eyes should always be examined, particularly with a view to the presence of the normal light reflex, and the occurrence of changes in the fundus. It is important in all cases of perforated ulcer, whether these have been operated upon or not, to keep a careful watch upon the pelvis as well as upon the upper parts of the abdomen and the lung bases, and particularly to do this should the presence of fever indicate that all is not going on well. Every patient in whom gastric ulcer is diagnosed should be looked upon as seriously ill. Prolonged rest in bed and proper dieting for some time are essential in early cases.

The Treatment of Intestinal Obstruction from Malignant Disease. By L. A. Bidwell, F. R. C. S.—The author reports seven cases in which he performed ileocolostomy for obstruction from malignant disease. The important conclusion which he draws from these cases is that colotomy should never be performed for any growth which is situated above the middle of the sigmoid flexure, and that an artificial anus formed in such a case should be only a temporary one left after the removal of the growth, to be subsequently closed by ileo-sigmoidostomy.

Two Cases of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix. By C. A. Morton, F. R. C. S.

On Intracranial Thrombosis as the Cause of Double Optic Neuritis in Cases of Chlorosis. By Dr. C. O. Hawthorne.

Arsenic in the Hair of Beri-beri Patients from Penang. By R. Ross, F. R. C. S.—Since the similarity of beri-beri and peripheral neuritis has been pointed out, and since the recent epidemic of neuritis in Manchester has been shown to be due to chronic arsenical poisoning, the question whether many cases ascribed in the tropics to beri-beri may not be caused by arsenic, has been much discussed. The author has had twenty samples of hair from beri-beri patients examined for arsenic, with the result that six out of the twenty showed the presence of arsenic. Nearly all the positive cases were recent (within twenty days), and nearly all the negative cases were older.

Contract Practice; the Evil and Its Remedy. By A. B. McKee, M. B.

Presse médicale, January 15, 1902.

Truncceh's Serum.—M. Léopold-Lévi describes under this title the serum suggested by Truncceh for the subcutaneous treatment of arteriosclerosis. It is of this composition:

Sodium sulphate.	$\frac{4}{10}$ of a grain;
Sodium chloride.	4.92 grains;
Sodium phosphate. . . . .	.15 “
Sodium carbonate. . . . .	.21 “
Potassium sulphate. . . . .	.4 “
Distilled water, q. s. ad.	100 “

The serum works efficaciously in cases of general arteriosclerosis; in sclerosis of the great vessels, in cerebral arteriosclerosis, and in arterial cachexia and chronic rheumatism. Beginning with one third of a cubic centimetre, the dose is gradually increased to six cubic centimetres. Not only the local phenomena are improved, but the vertigo, the headaches, visual disturbances, the weakened memory, and ringing in the ears are much benefited. The author gives no explanation of its mode of action, but reports a number of successful cases.

Bacteriotherapy of Tuberculosis. By M. R. Romme.

Constant Presence of Eberth's Bacillus in the Blood of Typhoids. By M. Busquet.

Berliner klinische Wochenschrift, January 13, 1902.

Case of Tumor of the Spinal Cord.—Professor H. Oppenheim narrates the case of a man who, for two years and a half, complained of severe pain in the left hypochondrium, which gradually increased in intensity. There was some sensitiveness over the fourth and fifth dorsal vertebræ and a certain weakness of the left abdominal muscles could be demonstrated. The abdominal reflex on the left side was also absent. Three weeks later, there was diminished sensation in the left hypochondrium and adjoining abdominal regions and a diminution of temperature sense in the right thigh. No other disturbances could be demonstrated. Compression-symptoms continued to appear until, two months later, paralysis of the left lower extremity was complete. A diagnosis of a spinal growth at the level of the sixth dorsal vertebra was made, and operation proved its accuracy, the tumor being a fibroma. The patient died of meningitis.

Electric Light and Internal Infection. By Dr. Krebs.

Simple Method for the Determination of Urea. By Dr. I. Ruhemann.—(*Continued article.*)

Riforma medica, November 25, 1901.

The Determination of Minute Quantities of Iodine in the Urine. By Dr. Attilio Caccini.—The author describes three methods of determining the presence of small quantities of iodine in the urine, which are adapted for clinical use. These methods are as follows: (1) A small quantity of starch or flour is added to a few cubic centimetres of urine, the test tube is shaken and immersed for about a minute in a mixture of salt and snow. A trace of brown nitrous acid is now added while the test tube is in the freezing mixture, and if iodine is present a violet color will be observed. This reaction is accelerated and assisted by the addition of a very small drop of 25-per-cent. sulphuric acid before the nitrozo nitric acid is added. This test is very sensitive. If the urine is rich in coloring-matters, it should be filtered through animal charcoal. (2) Still smaller quantities of iodine may be detected by treating the urine in the manner above described, taking care that the starch or flour is added in very small quantities. The urine is shaken, centrifugated, and the sediment examined under the

microscope for masses of blue iodide of starch. The examination must be rapid, so as to prevent the decolorization of the starch granules at room temperature. (These two tests depend on the fact that iodide of starch forms more readily at low temperatures.) (3) Ten cubic centimetres of urine decolorized with animal charcoal are shaken repeatedly in a test tube with a little starch or flour. A freshly prepared one-half or one-per-cent. solution of hydriodic acid is now added drop by drop, and if iodine is present a blue color will at once appear. This method is more sensitive than the preceding, but requires more care. The reagents must be pure and it is well to test them by executing this test with distilled water. The urine must always be decolorized with animal charcoal, which must be perfectly pure and of neutral reaction. Finally, the blue color must appear instantly, otherwise it may be due to the reducing action of organic substances in the urine.

Roussky Archiv Patologyi, Klinitcheskoy Meditsiny y Bakteriologii, November 30, 1901.

On the Development of Ammonia in the Course of the Digestive Action of Trypsin and Pepsin on Proteids. By Dr. Salaskin and Dr. Dzierzgowski.—This article will appear *in extenso* in the *Centralblatt für Physiologie*. The authors have found, as a result of a series of experiments, that under the influence of gastric juice more ammonia is developed from the digestion of proteids than from the influence of the acids of the gastric secretion in the proportion in which they occur in normal stomachs (of dogs). Under the influence of the pancreatic juice, also, a part of the nitrogen of the proteids is given off in the form of ammonia. It must be assumed that under the influence of the digestive ferments affecting proteids, that part of the nitrogen of the latter which is easily taken away is given off in the form of ammonia. The experimental figures obtained by the authors show, however, that a part of the nitrogen of the proteids remains in the original molecule.

On the Structure of the Crystalline Lens. By Dr. F. Lominsky.—By the aid of new methods of injection the author has found that (1) the interstices which separate the fibres of the crystalline lens are accessible to staining fluids and to injection masses; and (2), the crystalline fibres consist of a series of lamellæ, the grouping of which is such as to constitute the hexagonal outline which is characteristic of the transverse section of these fibres. The materials for his studies were furnished by the crystalline lenses of frogs, fishes, and children, and he employed chloride of gold and nitrate of silver as stains, and a colored gelatin mass as injection fluid. The gold stain used by the author was one described by him some time ago (*Archiv*, Vol. xii, 5, p. 474) and consisted of immersing the crystalline lens in a $\frac{1}{20}$ to $\frac{1}{40}$ -per-cent. solution of gold chloride for from twenty-nine to twenty-four hours respectively. The capsule was either left entire, or was previously opened. The lens was then rinsed in water and then transferred to a $\frac{1}{2}$ or 1-per-cent. solution of chloride of tin until the metal was reduced in the tissue.

New Methods of Metallic Impregnation for Tissues. By Dr. F. Lominsky.—A special article

dealing with the technics of the methods employed in the investigation of the structure of the crystalline lens abstracted above.

Calcium Peroxide and Its Therapeutic Value.

By Mlle. Sophie Hornstein.—This article will appear in German in the *Zeitschrift für Biologie*. The presence of certain bacteria is supposed to be necessary for the processes of normal intestinal digestion. Nencki and Saleski recently tried to determine what would happen to the germs in the intestine if an animal were given a chemical substance that developed oxygen in the gut. They gave dogs small doses of calcium peroxide (2 to 10 grammes daily) and found that the elimination of indican and sulphuric ethers was considerably diminished, showing that the peroxide of calcium had an antifermentative action in the intestine. As calcium peroxide decomposes in the presence of organic substances at body temperature into calcium hydroxide and oxygen, it was uncertain which of these substances produced the antifermentative effect. The author found that the antiseptic action of calcium peroxide and that of calcium hydroxide were nearly identical, the former being slightly more efficient. In addition, she performed a series of interesting experiments with calcium peroxide as a disinfectant for the mouth. She found that carious teeth kept in a solution of calcium peroxide in distilled water lost their germs in a short time. A tooth powder containing peroxide of calcium (about 10 per cent.) proved efficient in destroying all germs in carious teeth in thirty minutes of contact. Roschowsky, of Warsaw, used calcium peroxide in various gastro-intestinal troubles in children with success, especially in acid dyspepsia. As the remedy is partly decomposed in the stomach, it is better to give it in glutoid capsules as suggested by Sahli, so as to preserve it until it reaches the intestine. The dose is from 0.5—1.0 gramme, and 5 or 6 grammes per day. The development of hydrogen peroxide and calcium chloride from calcium peroxide on addition of hydrocyanic acid may be utilized in cyanide poisoning, for cats poisoned with potassium cyanide and given after eight minutes one gramme of calcium peroxide recovered.

A Case of Pseudo-cirrhosis of the Liver. By Dr. Strajesko.—These cases present a clinical picture identical with that of true cirrhosis, but the connective tissue of the liver does not proliferate, except to a very slight and negligible extent. Curschman, in 1883, first described this rare disease under the name of *Zuckergussleber*. The disease consists of a chronic inflammation of the serous cavities, resulting in a complete obliteration of the pericardium, the pleura, and the adhesion of the peritoneal layers lining the liver under the diaphragm. The cause is still unknown, the diagnosis very difficult, but heart disease and tuberculosis are often found coexistent, or tuberculous heredity may be noted. The size of the liver is reduced, the spleen is not enlarged, and the ascites returns very rapidly after aspiration. The treatment consists in regulating the heart's action and evacuating the ascites. On autopsy in the case reported, tubercles were found under the hepatic capsule, the tissue of the liver was not proliferated, and adhesions existed in the pericardium, the pleura, and the peritonæum over the upper surface of the liver. An interstitial myocarditis and an old apical tuberculosis were also found.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

*Eleventh Annual Meeting, held in Chicago on
December 18 and 19, 1901.*

The President, Dr. A. F. JONAS, of Omaha, in the Chair.

An Address of Welcome was delivered by Dr. ALEXANDER HUGH FERGUSON, of Chicago, to which an eloquent response was made by Dr. JOSEPH EASTMAN, of Indianapolis.

An Old Shoulder Dislocation, with Report of a Case.—Dr. J. RUDIS-JICINSKY, of Cedar Rapids, Ia., read a paper with this title. The object in making this report of an apparently simple case was to show what the x ray could do for the profession in the investigation of injuries to the joints, in luxations, in fractures, and in observations of the growth of the callus, the bones themselves, etc., and to furnish an aid in the interpretation of the x-ray findings. Before one could interpret correctly the fluoroscopic image or the skiagraph of certain parts, when their relationships were altered by disease or injury, he should have always before him a skiagraphic picture of the normal parts and of their normal relations. After taking all proper technical precautions, one could not go astray. Moreover, the eye would be prepared to take in much which would otherwise not be seen. After reporting at great length a case of old shoulder luxation, the author dwelt upon the value of the x ray in cases of fractures, etc.

Dr. LEWIS SCHOOLER, of Des Moines, Ia., endorsed the value of the x ray in old dislocations of the shoulder, especially in cases where the swelling was so great as to obscure some of the landmarks and render the diagnosis difficult by the usual method. While in nearly all cases the examining surgeon could make a diagnosis with satisfaction without the aid of the x ray, yet it was a consolation to have one's diagnosis verified by a competent operator of the x-ray machine.

Dr. RUDIS-JICINSKY said the x ray enabled one to determine through a plaster-of-Paris or any other dressing the exact position of the fragments, and whether the object sought, namely, the reduction of the dislocation, was accomplished.

Treatment of Irreducible Backward Dislocation of the Astragalus by Opening the Joint and Repositing the same.—A paper on this subject was read by Dr. W. JEPSON, of Sioux City, Ia. After detailing a case and going extensively into the literature of the subject, the author summarized his observations as follows: 1. His own experience and the results of recorded cases led him to believe that it would rarely be possible with our present knowledge to bring about a reduction of a backward dislocation of the astragalus without opening the joint and employing direct manipulation. 2. With our present command of aseptic surgery, he could see no reason why this should not be undertaken, in all cases uncomplicated by severe infection, with good prospects of securing nearly a perfect result. 3. Removal of the astragalus should be reserved for cases in which the bone was completely separated

from its ligamentous attachments and consequently had no adequate source of blood supply. 4. If amputation was resorted to only when the dislocation was compound and infected to a degree impossible of removal, the patient's life was jeopardized by the septic intoxication or infection.

Some Internal Injuries of the Knee Joint.—In a paper on this subject, Dr. M. L. HARRIS, of Chicago, called attention to two varieties of injuries to the inner structures of this joint which, he believed, were more common than the attention heretofore given them would seem to indicate. These injuries might be produced in one of two ways: 1. By the direct application of force, as might occur in a fall upon the knee, or by the forcible impingement of a more or less pointed object against this portion of the joint. 2. By pinching or crushing the apex of the mass in the angle between the femur and tibia, as might occur when these bones were slightly separated during superflexion or sudden wrenching. The cases narrated by the author illustrated the serious and persistent disability that might occasionally result from comparatively slight pathological changes affecting the inner structures of the knee joint, and showed the necessity of operative treatment in cases following an injury in which the characteristic symptoms persisted after the usual treatment of the joint by rest and immobilization.

Ankylosis of Joints.—Dr. JOHN B. MURPHY, of Chicago, read a paper on this subject in which he recommended arthroplasty for the relief of ankylosis without destructive bone defects. Ankylosis and contractures were of three varieties: 1. Atrophy of soft parts. 2. Union (fibrous and bony) between joint surfaces. 3. A combination of the first and second. The essayist referred to the experimental work of Chlumsky, of Würzburg, who had decided that the best way to relieve such joints was to treat them precisely on the same basis as one would treat non-union of fractures from the interposition of foreign material between the fragments. He had experimented with several kinds of material, absorbable and non-absorbable, to determine the best to use, but had finally abandoned the use of foreign materials and resorted to a plastic operation in the neighborhood of the joint for its relief. The method of Chlumsky was described, the essayist stating that he had adopted it in several cases with good results.

The Treatment of Dislocation of the Clavicle through an Open Wound.—Dr. JAMES E. MOORE, of Minneapolis, said that some recent writers had advocated the treatment of such a dislocation by wire suture, but he had been unable to find any literature upon the subject. Quite recently he had treated a case by cutting down upon the dislocated bone, replacing it and the surrounding soft parts, and fastening them in place by means of silver wire and catgut sutures. The result had been very satisfactory and the findings instructive.

Ætiological Factors in the Production of Tumors.—Dr. GEORGE HALLEY, of Kansas City, Mo., read a paper with this title. The origin of the term tumor went back to the infancy of medical knowledge, and simply meant a raised or elevated part of the body, unnatural, and only found in morbid conditions. The early concept was that something had raised or enlarged the part. Scientific investiga-

tions had been enlarging the scope of our knowledge along the lines of ætiology; hence tumors were very early divided into benign and malignant. No theory had been broad enough to account for all the phenomena characteristic of benign and malignant tumors. Inflammatory conditions that almost invariably produced some kind of tumefaction were for a long time regarded as the principal factor in their production. Many things, however, in the inflammatory conditions in no way comported with the ordinary processes found in tumor growths, and the products of most of the tumor growths were utterly unlike those of the inflammatory process. But, as inflammation was believed to be principally due to irritation, it was held to be the prime factor in the production of morbid growths. The author dwelt at length upon the various forms of tumors.

One constantly occurring element in all benign tumors was the connective tissue. Sometimes it predominated and sometimes it was slight in amount. Its presence was never wanting. Of all the tissues in the body, it most readily responded in physiological activity to irritating processes. In inflammatory changes it was found to be the reconstructing agent. It was not wonderful, therefore, that we had in tumors the essential part, if not the entire mass, composed of this tissue. Was the connective tissue germ cell altered in quality? Had it been inoculated by a plastic material altered in quality by an irritant, or had there been a coalescence of protoplasmic germs from other tissues? We had not yet determined this, but he took it that along these lines, if not exactly, yet relatively near to it, would be found the true ætiology of the benign tumor.

Surgical Procedures in the Removal of Fibromyoma of the Uterus.—A paper on this subject was read by Dr. JOSEPH EASTMAN, of Indianapolis. He said the morphology of the tumor and the environment of the patient should be considered before selecting the method to remove the tumor. Clay, of Manchester, in 1844, operated, for the first time for the removal of fibromyoma of the uterus. After speaking of the early history of removal of myoma of the uterus, Dr. Eastman described the first one that he had operated upon, in February, 1887, also the method pursued by him at that time, which could be found in the literature on this subject.

Myomectomy; its Place in the Treatment of Fibromyoma of the Uterus.—This was the title of a paper read by Dr. O. BEVERLY CAMPBELL, of Chicago. The operation of myomectomy was not applicable to all cases of fibromyomata of the uterus, but could apply only to well-selected cases. This operation did not supplant pan-hysterectomy, hysteromyomectomy, and other different procedures for the relief of fibromyomata, but took its place as one of the recognized rational procedures, and, as it was a conservative measure, it should be the favorite procedure when possible. A critical bimanual examination through the vagina and rectum, under complete anæsthesia, would usually admit of the diagnosis of cases amenable to this operation. All the different varieties of fibromyomata, namely, the subperitoneal, the interstitial, and the submucous, might be treated by this method. By many operators it had been limited to the pedunculated subperi-

toneal variety. However, it had now been successfully applied to every variety of fibromyomata with satisfactory results as to the immediate mortality rate and permanency of cure. The author concluded that myomectomy should be the preferred method in every case where it was possible to follow it without extra risk to the patient, and where the ovaries could be conserved with the uterus. Operative intervention should be advised in every case of fibromyoma where, after a careful examination, myomectomy was considered possible. The operation of myomectomy was, at all times, as safe in cases where it was applicable, as hysteromyomectomy and pan-hysterectomy, and very many times almost a minor procedure practically free of risk; and the early diagnosis of fibromyoma should be insisted upon with a view to enlarging the percentage of cases in which myomectomy might be applicable.

The Management of Uterine Fibromyomata Complicated by Pregnancy.—Dr. MILES F. PORTER, of Fort Wayne, Ind., followed with a paper thus entitled. After referring to the literature of the subject and reporting an interesting case, the author concluded: 1. That pregnancy was a frequent and serious complication of uterine myofibromata. 2. That if, because of their size or location, they were likely to interfere with gestation or jeopardize the patient's life, they should be removed. 3. That each case was a law unto itself, and should be treated accordingly. 4. That the tumor, and not the pregnancy, was the disease, and therefore any procedure which resulted in leaving the tumor and interrupting the pregnancy was unjustifiable. This, of course, was not meant to apply to cases in which the fibroids did not interfere in any way either with gestation or with labor. 5. That pregnancy did not materially add to the risk of operations for uterine fibroids, so far as the mother was concerned. 6. That the life of the mother, the life of the child, and the question of future offspring were the most important matters to be considered in reaching a conclusion as to the treatment of a case of uterine fibroids complicated with pregnancy.

The Treatment of Fibroids of the Uterus by Electricity was the subject of a contribution by Dr. FRANKLIN H. MARTIN, of Chicago. In the light of our knowledge, he said, there had been a time when the galvanic treatment of fibroids of the uterus by experts was legitimately the most conservative treatment possessed for a majority of those troublesome neoplasms. Now, the removal of fibroids with the knife by experts was the most conservative treatment for the majority of these difficulties. There had been a time when the author submitted practically all his fibroid cases to the Apostoli treatment, because this treatment scarcely ever failed materially to benefit the patients; it symptomatically cured quite a large percentage, and occasionally the tumor seemed to disappear. It accomplished these results without subjecting the patient to a procedure which possessed any legitimate mortality. Gradually the evolution of the surgery for fibroids had reversed the relative position of the galvanic treatment. He considered vaginal and abdominal hysterectomies and myomectomies for fibroids, giving rise to serious symptoms, with their legitimate mortality reduced to one and two per cent., as remedies more conservative in their results

than the treatment of the same tumors with electricity. He believed this, because hysterectomies and myomectomies, with a small percentage of risk, were the only remedies which absolutely relieved the difficulties in all cases. Electricity relieved frequently, symptomatically cured, but seldom actually removed the tumor, and the treatment was tedious to the patient and occupied much time of the physician in administering it. The present status of the electrical treatment of fibroids of the uterus was, in his opinion, that it had been properly superseded by operative treatment as a conservative remedy. He now recommended its employment in the following cases only: 1. As a local and general tonic and for the relief of pressure and reflex pains and of hæmorrhage in cases with complications contraindicating an operation. 2. In all interstitial fibroids where operative assistance was absolutely declined by the patient. 3. In tumors of small size of the interstitial variety in which hæmorrhage was the principal symptom in women within one or two years of the menopause.

Dr. W. O. HENRY, of Omaha, thought that the electrical treatment of these tumors had been overdone, and that to-day it was largely abandoned. As to myomectomy, where there were no complications requiring the removal of the tubes and ovaries where the growth did not involve the entire depth or thickness of the uterus, so that this organ might be left intact, it was *the* operation to be performed. He agreed with Dr. Porter as to the removal of fibroid tumors that complicated pregnancy. As to pan-hysterectomy for uterine fibroids, he objected to it as a rule. He thought it was better to save as much of the cervix as possible, thus securing a better vault for the vagina and a better support for the uterus.

Dr. VAN BUREN KNOTT, of Sioux City, Ia., said that myomectomy as a conservative procedure in the treatment of neoplasms of the uterus needed no support. It was commonly accepted to-day as the method of election in cases in which it was applicable. He recalled a case of myomectomy performed on a woman three months advanced in pregnancy who was subsequently delivered at full term of a healthy male child.

Dr. B. B. DAVIS, of Omaha, said, as to myoma complicating pregnancy, that the tumor should be removed, if possible, before the woman became pregnant, but frequently patients consulted physicians with that complication. He endorsed practically all Dr. Porter had said in regard to the subject. He condemned the induction of abortion before removing the tumor.

Dr. C. H. MAYO, of Rochester, Minn., mentioned the case of a woman, thirty years of age, upon whom he operated last June for a tumor complicating her first pregnancy. The tumor proved to be a degenerating fibroid, with free fluid in the abdomen. The adhesions and tumor were much larger than the gravid uterus. The tumor was removed; the woman made an uninterrupted recovery, and he had expected to be compelled to do a Porro operation, but in due time the woman was delivered of a healthy living child and recovered.

Dr. AUGUSTUS C. BERNAYS, of St. Louis, expressed himself in favor of myomectomy where it could be done. He recalled two cases of very large fibroids in which he had found that myomectomy was an excellent method of enabling him easily to

do a hysterectomy. He believed that in both those cases he could not have done a hysterectomy without doing a myomectomy of the very large tumor first.

Dr. CHARLES H. WALLACE, of St. Joseph, said that myomectomies were of recent origin. Myomectomy was comparatively easy of performance in properly selected cases. As to tumors complicating pregnancy, he would follow the advice of Dr. Porter.

Dr. J. N. WARREN, of Sioux City, Ia., combated the idea that myomectomy was an easy operation to do, and without any particular danger attending it. He regarded it as a formidable operation, and always attended with considerable hæmorrhage, except in the subserous variety, where there was a pedicle and the surgeon could incise the serosa around it and simply peel the tumor out; but in the majority of cases, where we had a combination of the interstitial and subserous varieties, it might be necessary to cut through the entire thickness of the uterine wall. Then it was not a simple operation; it was one that required not only great dexterity, but good judgment in determining exactly the limits of the myomatous mass which was to be removed.

Dr. W. A. TICHENOR, of Chicago, seconded the remarks of the last speaker as to the formidability of myomectomy. If there were one or two small tumors close to the peritoneal surface, it was not difficult to shell them out. On the other hand, if there were eight or nine tumors of fair size, and the surgeon undertook to remove them all from the surface of the uterus, he would get the uterus pretty well riddled with incisions for their removal, and it was not a safer operation, in his judgment, than hysterectomy.

Dr. JAMES E. MOORE, of Minneapolis, endorsed the paper of Dr. Campbell. All would agree that what had been conservatism a few years ago was no longer conservatism. There was one point he wished Dr. Campbell had emphasized, namely, the possibility of doing myomectomy through the vagina. Within three weeks he had operated through Douglas's pouch for the removal of a tubal gestation sac before rupture, and incidentally removed two fibroids, one of which was situated in the anterior wall of the uterus, well down toward the bladder, yet it had not been difficult to remove it.

Dr. DONALD MACRAE, JR., of Council Bluffs, commended the paper of Dr. Campbell, and said it was the sinew of conservatism. These fibroid tumors should be operated upon and removed as soon as they were diagnosticated.

Dr. LEWIS SCHOOLER, of Des Moines, Ia., said the trend of the discussion seemed to be in the direction of operating on uterine fibroids by some method or other. He thought there was hardly a practitioner in the room who did not know of some of these fibroids having existed for ten or fifteen years in women without producing any disturbance. He did not think it was well to operate for their removal as soon as they were discovered. There were some women who had passed the menopause, others who were near it, and still others who would probably not give birth to children, in whom these fibroids caused absolutely no trouble. Some of these cases could be let alone.

(To be continued.)

Miscellany.

The Treatment of Tabetic Ataxia by Exercises.

—Dr. Edwin Bramwell (*Edinburgh Medical Journal*, September, 1901) reports a systematic series of exercises for the treatment of tabetic ataxia. The selection of exercises suitable to each individual case is, of course, left to the discretion of the physician.

For the Lower Limbs: Exercises while in Bed.—The patient lies on his back in bed and slowly raises his extended leg until he touches with his great toe the finger of the attendant held immediately above his foot, at a distance of 18 inches to 2 feet from the bed. This exercise should be repeated several times with either leg.

Still lying on his back, he flexes the leg on the thigh to its full extent, and then slowly flexes the thigh on the abdomen; the whole limb is then gradually extended until he touches with his great toe the finger of the attendant, which is held in the same position as in the previous exercise. The limb is then slowly lowered to the bed.

For the next exercise a simple piece of apparatus is necessary, namely, two boards $3\frac{1}{2}$ feet long and 9 inches in breadth. One long edge of board A is attached along the middle of B, so that, looked at from the end, the extremities of the board form the letter T, the limbs of the T corresponding to the breadth of the boards, namely, 9 inches. The apparatus is placed across the foot of the bed, resting on board B. Along the unattached edge of board A are six grooves $1\frac{1}{2}$ inch deep, 3 inches in width, and at a distance of 3 inches from each other.

The patient lies on his back with his heels resting in two of these grooves; at the word of command, he lifts one heel from the groove in which it lies, and places it accurately in the groove named by the attendant. For this purpose it is convenient to have the grooves numbered; they should, too, be well padded.

Standing Exercises.—A very ataxic patient who has been long confined to bed has forgotten how to stand, and when helped out of bed his legs slide away from under him. His feet are to be placed in position, and, with some one supporting him on either side, he is to be encouraged to practise his balancing power, gradually putting more and more weight upon his legs. He is to practise standing with his feet close together, lifting one foot off the ground and placing it down again accurately.

Other and more difficult exercises are the following: Standing with eyes closed and feet close together, standing on tip-toe, standing on one foot with closed eyes, etc. Sudden giving way of the legs is a symptom which may prove troublesome when an ataxic patient first begin to stand and walk. Even where there is not a high degree of ataxia, this symptom is sometimes present. The author has found that the support which may be obtained by bandaging the knees firmly is of value in such cases.

Walking Exercises.—A black stripe 12 inches broad is painted across the floor of a room or on a piece of waxcloth. The patient walks along this stripe, either with support or in the go-cart, taking care to keep his feet within its margins. He may walk with bare feet or with his boots on (more than

one ataxic patient has mentioned to the author the benefit he has derived when walking, from an india-rubber heel attached to his boot); the former he will probably find the more difficult. Having mastered this exercise, he practises walking along a similar stripe, on which at distances of one foot cross lines are painted. This is more difficult than the last exercises, for here he has not only to keep his feet within the limits of the black stripe, but whenever he takes a step the toe must be placed down exactly at the cross line. This exercise is very important, since, by teaching the patient to take steps of regular length, it necessarily greatly simplifies the co-ordination required in the act of walking.

There are two features of the tabetic gait which are often noticeable even when the ataxy is slight. First, a tendency to bring the heel to the ground before the toe—in other words, to walk upon the heels; and, secondly, a tendency for the patient to turn his toes outward when he walks. Special attention is to be directed to the correction of these points.

When the patient has acquired skill in the exercises already described, he proceeds with similar exercises upon a narrower stripe (6 inches in breadth); as he is now obliged to walk upon a "narrower base," this exercise is more difficult than that last mentioned.

The patient is to practise walking sideways along these stripes, and turning round within a circle of small radius. Having attained proficiency in the above, he may attempt the same exercises on tiptoe or with bent knees.

According to the degree of the ataxy, support may or may not be necessary in carrying out all these exercises. Thus at first the patient may require some one on either side to prevent him falling, or he may be able to walk the lines with the go-cart. As he improves he is able to walk with sticks, and, finally, unaided. The "step" from walking in the go-cart to walking with sticks is a difficult one, and improvement is often delayed at this point; more especially is this the case with patients who have little confidence in their own capabilities, and will risk nothing. The author has found a pair of low parallel bars of great service at this stage. The patient walks between the bars and in this way learns to do with less and less support, gaining the confidence in his own powers which is necessary when he first begins to walk with sticks.

As soon as the patient has learned to walk on level ground fairly steadily and confidently, he may be taught to walk up and down stairs. In a hospital, where cases of tabes are constantly being treated, a specially constructed staircase of several steps, 3 or 4 feet in breadth, will be found of value. With a rail in each hand the patient sooner acquires confidence, and makes more rapid improvement than on an ordinary staircase. In a private house, where such a staircase is not available, he will probably at first require the support of an arm while he holds the banister in his other hand. Each step has to be taken just as carefully as when he walks on level ground. A tabetic is not uncommonly to be seen going upstairs in the following fashion: he raises the foot and puts it down on the next step correctly, then, instead of taking the step by contracting his quadriceps, he straightens the leg, and, using it as a

lever, pulls himself up by the aid of his hands. He has forgotten how to use the legs when going upstairs, and until his error is pointed out, he will make no progress.

Again, the patient must practise sitting down and getting up from a chair. A chair with arms will be found useful for this purpose, or, better still, a seat placed between parallel bars. He is to persevere with this exercise until he can sit down perfectly naturally.

For the Upper Limbs.—A great number of exercises have been recommended. The physician may devise exercises suitable to the peculiarities of any case he meets with, and provided that he adheres to the principles of the treatment, he will obtain good results. Such exercises as piling draughts one upon the top of another; placing marbles of different size into the numbered cups of a solitaire board; drawing patterns and figures; connecting with a pencil points marked out on a large sheet of paper, etc., will be found to be of use.

The length of time daily which should be given to the exercises must depend on the individual case. A quarter of an hour, two or three times a day, will probably be sufficient at first. In less severe cases more time may be given to practice. After each exercise the patient should take a short rest. An exercise must be stopped on the earliest appearance of fatigue, or if there are any signs of the patient's attention beginning to wander. Clinical and experimental evidence are in accord as to the harmful effects of muscular over-exertion upon the degenerative process in the posterior columns. In this relation it is well to remember that tabetics have not unfrequently lost, to some extent, the sense of fatigue.

Frenkel attaches great importance to the alacrity with which a movement is performed upon the word of command. He insists that if good results are to be obtained, the physician must personally superintend the treatment, to keep up the interest of the patient, to encourage him, and to point out his difficulties.

Thermotherapy in Gonorrhœa.—Dr. Otón Effertz (*Boletín del Consejo Superior de Salud*, Mexico, August 31, 1901) observed in a German hospital a case in which a chronic gonorrhœa in a patient suffering with typhoid was cured spontaneously in two days, without any treatment directed thereto, and in spite of the free use of champagne for the typhoid. The explanation given by the German professor was that probably in the struggle for existence the microbes of typhoid killed those of other concurrent diseases, as those of erysipelas were inimical to those of carcinoma and sarcoma. The author saw a similar case later in Guadalajara; and later still, in Oaxaca, where there is no typhoid fever, cases in which severe malarial infection resulted in the spontaneous cure of gonorrhœa. The question then occurred to him, Is it the microbic struggle or the high temperature that kills the gonococci? When various complicated phenomena have the same result, the true cause is to be sought in the common constant characters, not in those that vary. Now, in different fevers, the temperature is a constant, the microbes a variable, factor. The author, therefore, subjected three gonorrhœal patients to Guyon's method, but used a very hot solution of

permanganate, in place of a warm one, with the result that a very rebellious chronic case of four months' duration, an acute case, and a chronic case of two years' duration, were all cured in five days. Gonorrhœa being very rare in the author's sparsely inhabited district, he has had no further opportunities of observation, but he hopes that his confrères with greater opportunities will supplement his investigation. His mode of procedure was as follows: He used an elastic catheter of small diameter connected with a fountain syringe filled with the solution and introduced it into the urethra while the fluid was flowing; letting the catheter pass very slowly up to the bladder, so that the fluid injection escaped by the side of the catheter during its introduction, and from the bladder the liquid issued *per modum urinæ* without removing the catheter. This method is said to be more pleasant for the patient. From two to three litres were used each time, in two or three injections daily.

The solution ought to be of a strength of 1 to 60,000, though the author's varied between 1 to 80,000 or 100,000, he being guided simply by the presence of the faintest perceptible rose-color. The treatment never lasted more than five days, but even after the third day, the patients affirmed from their own subjective standpoint that they were quite well. As to the temperature, the author states that the "only thermometer in the district" marked 48° C. (118.4° F.), but he considers this impossible. He, however, used the fluid as hot as the patient could tolerate it, which he estimates at 42° C. (107.6° F.). He supposes that the gonococci perish at a temperature which does not affect the mucous cells of the urethra, and that this temperature extends rapidly through the tissues, while chemical agents can only penetrate the tissue depths by destroying their superficial elements. He cites in support of this view Neumann's observation that the microbes of soft chancre die at a temperature of 40° C. (104° F.); and, according to the same authority, the microbes of syphilis die at the same temperature. The hot baths of the Japanese, which are given at a temperature of 42° C. (107.6° F.), are thought to be founded on these conditions.

From the foregoing considerations, Dr. Effertz draws the following conclusions: Thermotherapy is applicable in all microbic affections in which the maximum vital temperature of the tissues attacked by the microbes is higher than the maximum vital temperature of the microbes themselves. In all other cases it is inapplicable. Thermotherapy produces effects in direct proportion to the difference between the maximum vital temperatures of the parasitic microbes and of the tissues which harbor them.

The Incompatibility of Paraldehyde and Potassium Bromide.—The *Journal des praticiens* for January 18th says that the oxidizing properties of paraldehyde, according to the investigations of M. Brissemoret, converted potassium bromide into bromate, in the following solution: Potassium bromide, 3 grammes; paraldehyde, 4 grammes; distilled water, 150 grammes. He therefore calls attention to the incompatibility of a combination which is not infrequently prescribed, and in which the therapeutic values of both drugs seem to be weakened.

Aristotle on the Will Element in Mental and Physical Disease. — Aristotle (*Nicomachean Ethics*, III, v) says: "And further, it cannot be said that the man who acts unjustly had no desire to be unjust, or he that is intemperate, to be intemperate. For if not unwittingly a man does those things on account of which he is unjust he is voluntarily unjust; though it does not follow that if he wished, he could cease to be unjust and become just, any more than a sick man could thus become well; for it might be the case that such a one was voluntarily sick from living incontinently and not regarding the physicians. Once upon a time, indeed, it was in his power not to be ill, but he has proceeded to the point at which he can do so no longer, just as in the case of one having thrown a stone it is no longer possible that he should recall it; but, nevertheless, the aiming and throwing rested with him, for the power of originating [these acts] was his. And thus, also, to the unjust and the uncontrolled man, in the beginning it was possible for these not to be so, wherefore they are wilfully what they are. But having become such, it is no longer possible for them to be otherwise. And, not only are psychic infirmities voluntary, but in some persons also, those of the body, and these we censure, but no one blames those who are deformed by Nature but only those who are so from want of exercise and heedlessness; and in like manner also with infirmity (asthenia) or maiming, for no one would reproach one blind by Nature or from disease or accident, but would rather pity him. But one who was so from drunkenness or other excess, every one would blame. Of the diseases affecting the body, then, those due to ourselves are censured, but not those not so due. And if this is so, concerning the others those mental defects which are blameworthy must also be dependent on ourselves."

Resection of the Liver for Syphiloma. — M. Legueu, in a communication to the Fourth French Congress on Surgery (*Médecine Orientale*, etc., November 10, 1901) described the case of a woman who presented symptoms of an abdominal neoplasm. He found in the region of the liver a tumor of indefinite extent, and determined on surgical intervention. It proved to be a hepatic tumor, which he removed, together with the gall-bladder, which was involved in the neoplasm. The patient sustained the operation well. Histological examination showed it to be not cancerous, as he had expected, but a lesion either syphilitic or tuberculous in character, and he was ultimately able to satisfy himself that syphilis was the most probable. He had subsequently operated on another similar case under identical conditions with entire success. Hæmostasis by catgut had proved highly satisfactory. M. Frœlich referred to an analogous case of his own, in which histological examination had shown the syphilitic nature of the tumor. He, too, had been struck by the slight hæmorrhage which the operation had called forth.

The Indications for Surgical Intervention in Appendicular Inflammation. — Dr. Walter G. Spencer (*Edinburgh Medical Journal*, August, 1901) concludes his remarks in opening a discussion on the subject at a meeting of the East Sussex Medico-chirurgical Society, as follows:

For the purpose of this discussion I have classified cases in such a way as to lead to their being clinically distinguished at an early stage. *First*, I have referred to distention of the cæcum, the treatment of which is entirely medical. No anatomical lesion need be present; the appendix may not be included in the retention at all; there may be no return of the attack, unless it be from the same cause before, *e. g.*, constipation. *Secondly*, Perityphlitis may be set up by decomposition within the cæcum and appendix, or from other causes which may or may not leave adhesions behind involving the appendix. Such cases yield to medical treatment, and need not recur if the production of intestinal toxins be prevented. Or perityphlitic adhesions may kink, and cause obstruction in the lumen of the appendix, and thus the necessity for surgical treatment may arise. *Thirdly*, In *acute perforating appendicitis* an immediate operation is the only means of saving life. *Fourthly*, In *acute suppurative appendicitis*, whether of the sthenic or asthenic type, the appendix should be exposed as soon as the diagnosis can be made, by keeping outside the general peritoneal cavity, draining the abscess, and removing the appendix at a later date. *Fifthly*, Relapsing should be distinguished from *recurring appendicitis* by careful examination after the attack, and if signs of chronic appendicitis are found, the appendix should be removed at once. *Sixthly*, General septic anæmia may be set up by a *continuous latent appendicitis*, in which there is great danger of the disease not being recognized until too late for successful surgical intervention. *Finally*, To answer questions often asked, Can a boundary line be drawn in *obscure* cases, between the indications for medical and surgical treatment? I agree with those who put most trust in the pulse rate, when drawing the line in acute cases. A pulse rate, rising to 110, or remaining about or above that rate, points strongly toward immediate exploration of the appendix. A pulse rate below 100 suggests an expectant medical treatment. To take exceptions, the pulse rate may be above 110, and yet medical treatment be proper, in typhoid fever without perforation, also early in cæcal retention before the bowels have moved. The pulse may be below 100, and yet surgical treatment be required, when much opium has been given; also, where there is collapse from sudden extension, whether to the peritonæum or outside it. The septic influence which quickens the pulse is neutralized also when there is jaundice, which includes absorption of bile acids, tending to slow the pulse, as in simple jaundice. Thus these exceptions are not real objections to taking the pulse rate as a test in an *obscure* case, because other evidences are present to qualify the test. I have not seen or read of any case where, the pulse remaining slow, there were not other sufficient evidences of suppuration.

In chronic cases the question of treatment turns on a careful palpation of the cæcal region. If no deep-seated tenderness or thickening is discovered, the case should be considered one for medical treatment. On the other hand, tenderness and thickening discovered by palpation indicate an early exploration, which will clear up not only cases of appendicitis, but other doubtful cases, such as cancer of the cæcum, tuberculosis, actinomycosis, and pelvic affections.

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Special Articles.

CHOLELITHIASIS, CHOLECYSTITIS, AND CHOLANGEITIS.

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I.—CHOLELITHIASIS.

We often gain a good deal in the investigation of pathological subjects by following up the contrasts between conditions which in some respects seem to be similar. Thus, stone in the gall-bladder and stone in the urinary bladder are both concretions formed in a hollow viscus, and with both it is the same mechanical obstacles to the outflow which have to be relieved when we are obliged to resort to surgery. The concretions themselves also begin as a rule with a small nucleus precipitated from the fluid contents of the viscus and then grow by the accretion of further deposits from the same source. From this on, however, all resemblance ceases and the contrasts begin. Thus, calculi may be present in numbers in the gall-bladder for an indefinite period without causing any symptoms whatever. A patient once came to my office from Baltimore to consult me about dull pains which she had in her right side, accompanied with chills. Palpation through the fleshy abdominal walls was rather difficult, but led me to suspect the existence of an inflamed and distended gall-bladder. I directed that a blood examination be made, and, finding marked hyperleucocytosis, I advised her to return to Baltimore at once and consult my friend Professor Howard Kelly about having an exploratory operation performed. This Dr. Kelly did without delay, and found a gall-bladder ready to burst with the seventy-six gall-stones which he removed at the operation. How long they had been forming there could not be guessed, but if instead of seventy-six only six calculi had lain in the urinary bladder, there would not have been an hour of freedom from distress from their earliest formation. According to Kehr, gall-stones occasion no symptoms in ninety-five per cent. of all cases in which they occur. Now, this one contrast is sufficient to indicate that the gall-bladder and the urinary bladder are neither filled nor emptied in the same way, and this difference of itself must have a material bearing on the genesis of their respective derangements.

There is little resemblance also between the two morbid conditions in the elements of clinical diagnosis. A urinary calculus causes pain always, especially at the end of micturition, and gives rise to significant appearances in the urine. It can also be looked for with the cystoscope or touched with a sound. A biliary calculus gives no clue in the bile, because we cannot inspect the bile, nor can we see into the gall-bladder or feel around in its cavity.

It is, however, when we come to the origin of the calculi in either case, and their composition, that the greatest contrasts are met with. As regards the ætiology of cholelithiasis, much progress has been made of late years, and we especially owe to Professor Naunyn, of Strassburg, the demonstration of some of the most important facts connected with this subject. The first of these is that, in contrast with urinary calculi, general constitutional conditions have little to do with the tendency to their formation. Nothing like a uric-acid diathesis or derangements such as those which cause oxaluria or phosphatic deposits precede the formation of gall-stones. Instead they arise wholly from local causes and changes in the biliary passages themselves affecting the bile after it is secreted, as the following considerations show.

The bile itself is a secretion about equal in daily amount to the urine, that is, from two to three pints, but of such low specific gravity that it contains only from one to two per cent. of solids. It is secreted by the liver cells under such low pressure that it almost resembles a simple leakage, so that the slight obstruction caused by a catarrhal swelling of the mucous membrane of the biliary passages may suffice to cause jaundice. During active digestion it flows uninterruptedly along the hepatic bile-ducts directly into the intestine and not into the gall-bladder, this flow being much aided by the contraction of the diaphragm in active respiration. In the intervals of digestion, and particularly during the repose of sleep, the biliary outlet is closed by the sphincter-like contraction of the muscular wall of the duodenum, and the bile then flows into the gall-bladder instead. In proportion, therefore, to the slow digestion and to the sedentary habits of many persons the bile accumulates in the gall-bladder and becomes there more concentrated. But, however concentrated it may be, there is no danger of the formation of a gall-stone so long as the normal constituents of bile are held in solution. These con-

stituents are certain salts, of which the most important are calcium salts, then the bile pigment, then cholesterin, and, lastly, a mucoid secretion which, however, is not mucin, but a complex nucleoproteid. Now, the first step in the formation of a calculus is the precipitation of the calcium by a combination of the calcium with the bile pigment. This forms as a rule a small, hard, dark concretion around which in the gall-bladder there is soon deposited layer upon layer of cholesterin, which substance forms much the larger bulk of most gall-stones. The practical question, therefore, is, "What first leads to the precipitation of the calcium and the bile pigment, and then How does cholesterin form around this nucleus in such abundance, out of all proportion to its quantity in normal bile?"

Normally the calcium and the bilirubin, or bile-pigment, are kept in solution in the bile by the presence of the bile salts, especially the glycocholate of sodium. A deficiency of this salt, therefore, may have some effect in promoting the precipitation, but an observation of Naunyn's makes it certain that the commonest cause of the formation of calcium-bilirubin concretions is the addition to the bile of an albuminous constituent. He found that the addition of egg albumen at once led to the precipitation of calcium bilirubin from bile, and hence in every catarrh of the mucous membrane of the bile-ducts and of the gall-bladder we have just the source of an abundant supply of an albuminous ingredient which would cause the throwing down of such a precipitate. These small, hard concretions, therefore, are often found in the bile-ducts within the liver itself, and it is easy to see how some thus formed might afterward flow with the bile into the gall-bladder and become the nuclei there of gall-stones. It is important to note, however, that when such a concretion gets impacted in the common duct it then grows *in situ* by the precipitation of more bilirubin-calcium so as ultimately to become a large calculus with relatively little cholesterin. As it grows, it produces wide distention of the duct, with a continuing process of inflammation about it which further promotes the addition of bilirubin to the original calculus. In the gall-bladder itself the concretions grow mainly by accretion of cholesterin, and the source of this ingredient is not far to seek.

Cholesterin is found in abundance wherever degeneration of cells is going on. It is, therefore, present in every catarrhal discharge from a mucous membrane, as in the sputum of bronchitis and of phthisis. It constitutes about seven per cent. of the solid constituents of pus, and in the cavities of dilated bronchi in bronchiectasis it sometimes accumulates in a fashion resembling its collections in the gall-bladder. While it is always present in small amount in normal bile, so soon as a catarrhal

condition of the gall-bladder sets in, the cholesterin can be seen in discrete drops in the degenerated epithelial cells of the mucous membrane, which set it free to adhere to other similar drops, and if any acid is present it quickly solidifies into cholesterin crystals. Naunyn, therefore, is of opinion that sometimes soft gall-stones composed mainly of cholesterin may form in a few days or even a few hours. Generally, however, they form slowly and they grow by addition of both cholesterin and bilirubin-calcium, thus making the different varieties of gall-stones, according to the proportion of their respective ingredients. The important deduction, therefore, follows that the components of gall-stones are not derived from the liver itself, but are locally generated by a local derangement of the mucous membrane of the biliary passages and of the gall-bladder.

We come now to the last question connected with this process. How does catarrh of the bile passages and of the gall-bladder come about? It is evident, in the first place, that whatever tends to cause a stasis in the flow of the bile from the liver itself will cause both an accumulation of bile in the gall-bladder and its subsequent concentration in that viscus. Many experimental observations show that the active contraction of the diaphragm, conjoined with that of the abdominal muscles, greatly aids in the flow of the bile, and hence nothing so tends to produce biliary stasis as sedentary life and habits. Gall-stones, therefore, are five times as frequent in women as in men, and for the same reason they increase with the advance in years, being found in fully twenty-five per cent. of all persons over sixty years of age. The effect of laxity of the abdominal walls is illustrated by the greater frequency in women who have borne many children. So also congestion of the liver from valvular diseases of the heart predisposes to the same result. But, however concentrated the bile may become from any of these influences, something else is necessary to set up the initial catarrh which completes the process. If the mucous membrane remains healthy, the bile will remain sterile and no gall-stones be formed, however long it may remain in the gall-bladder. Here, therefore, we have one analogy to conditions occurring in the urinary bladder. An enlarged prostate may lead to the retention for indefinite periods of residual urine in an over-distended bladder which has lost the power wholly to empty itself, but no cystitis occurs till the unlucky entrance of micro-organisms brought in by a catheter starts the whole subsequent mischief. So it is that our modern progress in the pathology of cholelithiasis has demonstrated that gall-stones are the direct results of infection. Everything else may be contributory, but it is the entrance into the biliary passages of micro-organ-

isms which is the efficient cause, as it is due to them that catarrh of the mucous membrane is set up. The degree of this catarrh will then depend on the one hand upon the antecedent lowering of the nutrition of the epithelial cells by prolonged portal stasis, and on the other on the specific virulence of the invading micro-organism. According to this latter factor, we may have either a chronic inflammation with few symptoms till some sudden impaction happens, or a violent outbreak of a rapidly fatal cholecystitis with cholangitis.

Much the most common of these bacterial invaders, as we might expect, is the *Bacillus coli communis* entering from the intestine, either directly as micro-organisms ascend the ureter from the bladder and cause pyelitis, or by some roundabout route through the blood. In some cases clumps of these bacilli seem to be themselves the nuclei of gall-stones, as Professor Welch has obtained living colon bacilli from the centre of gall-stones. This micro-organism seems able under certain conditions to travel everywhere over the body. Enteritis from any cause, especially if ulcerative, may allow it to pass through the lesion in the intestinal wall into the circulation and set up pyogenic inflammation in the most distant localities, for it has frequently been found in peritonitis, pleuritis, empyema, otitis, and meningitis. I think that one symptom in disease, namely, rigor, is more common as an attendant on infection by this bacillus than by any other micro-organism except that of malaria, and on that account its chills are often mistaken for ague. Thus, I have been repeatedly called in consultation in cases of typhoid fever on account of severe attacks of rigors coming on suddenly in the fourth week or later, after convalescence had seemed to begin, and in which the patient appeared to be threatened with fatal collapse. In my first case of the kind, in a young woman, the attacks came on at regular intervals of a week and she died in the fifth attack. Two other patients, both young men, in cases apparently quite as severe, nevertheless recovered, but lately I was called five times to a lady, sixty-five years old, who had no fewer than thirteen of these rigors, after the last of which she sank, in the seventh week of her disease. Early in my visits I suggested that a bacteriological examination of her urine be made, and the report was that it contained the *Bacillus coli communis* in enormous numbers. It is the same bacterium also which is now most generally held to be the cause of the rigors of urinary fever. A severe rigor followed by urinary suppression after operations on the bladder is now no longer ascribed to reflex nervous disturbance, but, as Guyon, Rovesing, Moullin, and others have shown, is the result of microbic infection, Guyon and his school maintaining that it is always the colon bacillus which is

the offending agent. Considering, therefore, how frequently this bacterium has to do with the genesis of the catarrh which leads to the formation of gall-stones, the "hepatic chills" which so commonly attend attacks of biliary colic may reasonably be ascribed to the toxine produced by this organism. I have often, therefore, relied upon this symptom as diagnostic of a calculus as the cause of a pain in the region of the liver, as well as for distinguishing jaundice due to impaction of a calculus from jaundice due to other causes.

Another bacterium has also been proved to initiate cholelithiasis by its entrance into the gall-bladder, and that is the typhoid bacillus. As far back as 1829 Louis drew attention to the frequency with which the gall-bladder was affected in typhoid fever, and now it has been shown that this bacillus involves this viscus in the great majority of at least the fatal cases. Thus, Pratt, in thirty autopsies, found the typhoid bacillus in the gall-bladder in twenty-one, and Chiari in nineteen out of twenty-one. It is also extraordinary how long the typhoid bacillus may remain in the gall-bladder after the fever has ceased, and then set up a cholecystitis or an attack of gall-stones. Thus, Pratt, in the article referred to, quotes a case reported by Miller, in which the typhoid bacillus was isolated from the bile in the gall-bladder seven years after the fever. Van Dungern reports a case fourteen years after, and Droba one seventeen years, while Dufort reports nineteen cases of gall-stones in which the first attack followed typhoid, in twelve of them within six months. Cushing, in a review of cases of cholecystitis associated with gall-stones which were operated upon at the Johns Hopkins Hospital, found ten out of thirty-one gave a previous history of typhoid fever. Biliary calculi have also been produced experimentally in the gall-bladder in animals by the injection of typhoid bacilli by Gilbert, Fournier, and Richardson. I have no doubt that the number of gall-stones following typhoid fever will be oftener reported now that the attention of the profession is drawn to the subject, as they can be easier noted in private practice than in hospitals, owing to hospital cases being soon lost sight of. I have myself lately had a case of a first attack of gall-stones in a lady about three months after the fever.

Diagnosis.—The diagnosis in a case of cholelithiasis may be easy enough, or it may be one of the most difficult to make out of any of the disorders in the abdomen, which is saying a good deal. Moreover, different from a stone in the urinary bladder, it is not enough to make the diagnosis of a calculus, but we must be further able to form an opinion of what else is going on as a result of the local trouble, because ordinarily we can wait as we see fit with a urinary calculus without immediate danger to life,

while with a biliary calculus we may soon find ourselves under as much responsibility of decision as in any case of appendicitis. Thus, a man was admitted to the hospital a month ago from whom it was difficult to obtain any satisfactory account of the beginning of his illness or any statement that he had suffered from symptoms of gall-stones. He was often delirious and had a dry tongue and a low fever simulating typhoid. He was very little jaundiced, and his most marked symptom was a tenderness on palpation at the epigastrium. An indistinct swelling could be made out in the region of the gall-bladder, but owing to muscular rigidity it was difficult to map out its extent. The blood count showed a decided hyperleucocytosis, whereupon I had him transferred to my colleague, Dr. Brewer, for immediate operation. While he was struggling as he was going under ether, his gall-bladder burst through a gangrenous patch in its wall, but with all that he was speedily relieved from danger and made an uninterrupted recovery.

Hence, as in his case, we may have as a result of cholelithiasis general septicæmia set in with ulceration of the gall-bladder and ducts, permitting, if not interfered with, the escape of the calculi into the adjoining parts, or leading to a rapidly fatal general peritonitis or to abscess of the liver or to slower processes causing extensive adhesions of the gall-bladder to the liver and intestines, until the symptoms due to these complications may wholly obscure the original ones first caused by the gall-stones. With the great majority, however, there will be a history of preceding attacks of biliary colic, as well as other prodromic symptoms which it is important to note as elements in the early diagnosis, so that we can better appreciate the significance of those progressive developments which indicate that the time has come for medicine to give place to surgery.

Pain.—As regards the attacks, pain is the earliest symptom, and, as is always the case, pain is a symptom which repays study more than any other. In all typical cases it is very sudden, and this of itself disproves the view of Kehr and other recent writers that biliary colic is not due to the passage of a calculus from the gall-bladder through the narrow ducts to the intestine, but that it is always due to an inflammation of the gall-bladder. No other inflammatory pain that can be cited is so sudden in its onset or so quickly severe. In fact, it may kill outright, as occurred in the case of an acquaintance of mine. While it is true that inflammation may quickly follow in the parts behind the impaction, as inflammation always follows the sudden closure of any tube, *e. g.*, a bronchus, yet a biliary colic in its pain is exactly of the same nature as the colic caused by a calculus impacted in a ureter, and certainly that is not due to inflammation of either ureter or kidney.

Moreover, it has all the characteristics of stretching pains, which are different from those of either inflammatory pains, pressuré pains, or neuralgic pains.¹

Pains caused by a part being put on a sudden stretch, as by calculi in tubes or by severe sprains, always produce immediate faintness and nausea, which the other forms of pain do not. It is always paroxysmal, while true inflammatory pains rarely are so. In an inflammatory pain the patient keeps his hands at a respectful distance from the affected part. With the onset of an hepatic colic the patient grabs the side as forcibly as he does with a lead colic or a limb with the lightning neuralgia of tabes, and it is not till the subsequent inflammation sets in that he objects to manipulation. The site of the pain also is all-important to make out, and here, as in all pains, particular attention is to be paid to the gesture of the patient when asked to show where his pain is, for few can describe their pains well, and if severe they will say "it is all over," but if asked to show just where they first felt it, their fingers tell the story better than their words. I have been struck with this even in cases where from subsequent complications the area of pain was widely extended, yet the patients somewhat unconsciously begin with pointing to the first site of the pain and then pass to other regions.

If the pain is due to a calculus in the cystic duct, its site is to the right of the rectus muscle, just below the free border of the ninth rib; if the calculus has passed farther on, into the common duct, a painful point on pressure is found from an inch and a half to two inches to the right of the umbilicus. Not only do nausea and belching of wind come on with the pain, but often vomiting also, and sweat breaks out on the forehead, a characteristic of all severe stretching pains. Besides its primary site, the radiations of this pain are characteristic. The patient's hand passes to the right horizontally round to the back and then up between the shoulder-blades, and sometimes he complains of pain on the top of the right shoulder, but this rarely at the beginning of his attack. This contrasts with the pain of lead colic, in which the patient works his hand around the umbilicus, but does not pass it to the back, or the pain of renal colic, in which the hand goes at once to the back and then quickly down the side and to the front down to the groin, using the border of the hand to describe the downward course of the pain, and not the fingers as he does in hepatic colic. In the latter he often uses the thumb to locate the pain in the back, as in spinal pain from aneurysm. Now, it is important to note that so long as these paroxysmal pains continue to recur they mean impacted cal-

¹See a published lecture of mine on The Significance of Pain, *Medical News*, December 19, 1896, March 13, 1897.

culus only, and the occurrence of a chill or rigor with them is another diagnostic sign of gall-stone as the cause of the pain. It is when a change occurs in the character of the pain to a distinctly inflammatory type that we have cause for apprehension, and that is when local tenderness to pressure commences and its area progressively increases along with increasing rigidity of the overlying muscles. Other symptoms, however, will then be superadded, to which I shall soon refer.

There are, however, several forms of pain which sometimes resemble hepatic colic enough to have their points of difference mentioned. Thus, I saw a case recently in consultation in which the attending physician made the serious mistake of supposing that the pains were due to gall-stones simply from their location. He ought to have known that gall-stones did not occur in a boy ten years of age, and that both the patient's backache and the shooting pains over the region of the liver were due to Pott's disease of the spine. The pain of gastric ulcer, and still more of duodenal ulcer, occasionally seems like those from gall-stones, but careful local examination will show tenderness on palpation with rigidity in the epigastrium rather than in the region of the gall-bladder, and, what is more, very commonly there is a distinct local throbbing or pulsation which is absent in hepatic colic. The time of the pain commonly differs, for the gastric pain rarely comes on first in the night, as hepatic colic often does, and the gastric pain usually has some relation to an habitual interval after taking food. Hepatic colic, however, occasionally does seem to be excited by eating, but as a rule the pain of gastric ulcer is felt more toward the left of the median line, and terminates with a painful point to the left of the spinal column, between the tenth and twelfth dorsal vertebræ, while that of gall-stones passes to the right. Occasionally displacement of the right kidney occurs in women with relaxed abdominal walls, causing sudden pains, faintness, and gastric disturbance which may be mistaken for an attack of gall-stones, especially as a tumor may then be also felt in the neighborhood of the gall-bladder. Percussion over the swelling will be dull if the swelling is due to a distended gall-bladder, because that would be in front of the colon, and will be resonant if it is due to a displaced kidney, because the kidney lies behind the colon. Moreover, the kidney can be pushed upward and backward as a distended gall-bladder cannot. With the restoration of the prolapsed kidney the pain soon subsides.²

On the other hand some cases of gastralgia are quite difficult to distinguish from biliary colic, and

²In a few cases of prolapsed kidney it pulls on the duodenum by means of bands of the peritonæum, which cause constriction of the gut opposite the opening of the gall-duct and obscure the diagnosis by causing jaundice.

give rise to more uncertainty of diagnosis than any other pains. While they may differ widely in their causation, yet they go by the general name of gastralgia, though it is not always certain whether their seat is in the stomach or not. They have in common with hepatic colic the suddenness and severity of onset, and often the vomiting and nausea as well. In one case of a medical friend of mine I diagnosticated the attacks as malarial. They were extremely severe, but as they were distinctly periodical, I prescribed drachm doses of the fluid extract of ergot, which promptly relieved him after quinine had wholly failed. Hemmeter speaks of these malarial gastralgias as of frequent occurrence among fishermen and sportsmen who spend much time on the shores of the Chesapeake Bay in Maryland, and I had a patient who often went duck shooting in that region attacked with similar symptoms. In another instance, a physician consulted me recently for severe attacks of pain in the hepatic region, which began about the middle of last August, coming on about 5 p. m. and lasting through the night, with great prostration and vomiting, his pulse dropping down from 60 to 40. These pains recurring every other night for some three weeks, he then consulted me and I recommended him to have his blood examined, which was done and the *Plasmodium malarie* was found abundantly present. I prescribed ergot and at first it arrested his tertian nocturnal pains completely, but afterward they recurred, whereupon I prescribed paregoric with quinine.³

He then passed an interval of a week without any pain, but at the end of that time he had a very severe attack with paroxysmal pains and a temperature of 101° to 102° F., accompanied with white scybalous passages. These pains I diagnosticated as due to gall-stone, and put him on my treatment for the same, after which he soon recovered, and he writes to me that for the past two weeks he has been in excellent health. Now, here we seem to have had both malarial "gastralgia" and gall-stone colic in succession, the clinical distinction between them being definite periodic tendency of onset in the former and not in the latter.

Some cases of gastralgia are very obscure as to their origin and nature, but I fully agree with Hemmeter that the diagnosis of "idiopathic" gastralgia is not to be made until the most careful examination fails to find some organic lesion existing, such as gastric ulcer, gastritis, hyperacidity, ommental hernia, and the like. The commonest organic change to cause such pains is some form of cicatricial adhesion of the stomach or duodenum to surrounding parts, set up in the first instance by a perigastritis following ulcer of the stomach, or from ulceration

³See my article on The Treatment of Cuban Malarial Fever with Camphorated Tincture of Opium.

occurring in connection with gall-stones. Therefore a history of former symptoms of gastric ulcer or of gall-stones is a valuable aid to diagnosis. The location of the pain therefore is the same as in cholelithiasis, but the clinical accompaniments are different. Though the pains are often excruciating and frequently paroxysmal from peristalsis in stomach or intestine pulling on the adhesions, yet their chief characteristic is their permanence, for they may last for years, though they rarely leave the sufferer for a week. With all that the patients do not waste or become cachectic, as they would if the pain was due to carcinoma, nor are the pains aggravated by taking food, as they would be if the original gastric ulcer was still open. I have also seen cicatricial adhesions following syphilitic gummata in the left lobe of the liver cause like symptoms of pain. There are cases, however, of gastralgia, especially in women, which seem to be due to a pure neurosis and in which the attacks come on so suddenly and without warning that for a while we may have to remain in doubt whether they are cases of biliary colic or not. The chief distinguishing marks are the predominance of nervous antecedents in such patients, many being of a pronounced hysterical type, and the long-continued efforts of the patients during the attacks to turn upon or to double up on the painful part, which they soon cease to do in hepatic colic from the early supervention of local tenderness.

The gastric crises of tabes may resemble biliary colic in the pain and the accompanying vomiting, and, as they sometimes precede all other developments of tabes, their nature may not be suspected. The persistent vomiting and total absence of tenderness on pressure in spite of the continuance of gastric symptoms should lead to examination for other signs of tabes, which usually are readily found.

The sequence of events which end in a calculus leaving its resting place in the gall-bladder and becoming impacted in a bile-duct, with the consequent pain, is probably, first, an irritable sensitiveness of the walls of the bladder induced by catarrh. While in this state a fresh influx of bile regurgitating from the common duct distends it so as to produce expulsive contractions which dislodge a calculus first into the neck of the bladder and then on into the cystic duct, where it may stick, or else be further pushed on by peristaltic action into the common duct. This may account for the greater frequency of the first attacks of biliary colic occurring at night, when the flow of bile is greatest into the gall-bladder, as above mentioned. But as surgeons usually do not see the patients until both cholecystitis and pericholecystitis have also supervened, the theory that biliary colic is due wholly to inflammation of the gall-bladder is owing to the later date of their clinical observation.

Tumor.—The impression is a common one that when a calculus plugs the outlet of the gall-bladder, this viscus must soon become distended and form a tumor which can be felt. The unconscious influence on the mind of the case of the other bladder, the urinary, which must fill up if its outlet is closed, doubtless has much to do with producing this conception, but the facts are that in common-duct obstruction the reverse usually happens. Thus, Courvoisier found the gall-bladder contracted in fifty-three cases of common-duct obstruction and distended in only seventeen. We should remember that the gall-bladder is both filled and emptied like a bottle, through one neck. That neck ends in a short tube which is soon joined by another tube, the hepatic duct, which conducts all the bile which is secreted. Plug the first tube, or the cystic duct, and nothing can get either in or out that way. Plug the second, or hepatic, duct, and no bile can then pass back into the bladder, while the bladder may still be able to empty what it has past the obstruction in the common duct. With the first, or the cystic, duct closed, the gall-bladder may fill up and become greatly distended, but ordinarily not with bile. A watery fluid instead is secreted from its walls, much as if it were a closed cyst, and on drawing this off it is frequently found to contain but little admixture of biliary ingredients. So long as it remains uninfected, it is striking how little pain or disturbance this tumor causes, though it may grow to a great size and reach the pelvis or even cross the median line to the left. That it is a distended gall-bladder may be first inferred by the general rule in abdominal tumors that they spring from the region where no free border can be felt. In this case, that is above, for it seems to be continuous with the liver, and, unless bound by adhesions, descends plainly with inspiration. Its lower portion is often easily movable and wider than its attachment. Usually it gives the sensation of being smooth and rounded and of containing fluid, but sometimes it may seem solid. On the other hand, a gall-bladder tumor which is painful and sensitive to manipulation has then a significance of its own, for it means that there is cholecystitis, and all its other accompaniments must then be carefully investigated.

Jaundice.—In fully one half of the cases of trouble from gall-stones there is no jaundice. Thus, in all cases in which the impaction is in the cystic duct alone there will be no jaundice. In order for jaundice to be caused by gall-stones, they have to pass through the cystic duct into the common duct, and then the jaundice will depend for its continuance and degree on the behavior of the calculus. If it is much delayed in its passage, shortly after the pain and inflammation which it has occasioned the conjunctivæ become yellow, then the loose folds of

the face, and then the trunk of the body. In florid or swarthy complexions the skin of the trunk may show the discoloration better than the face, and at all times jaundice requires daylight for its detection. At first the urine becomes dark, but often clears up before the skin does. Jaundice from gall-stones has a varying significance according to whether it is transient, intermittent, or permanent. If transient, it means that the obstruction has been in some way removed; if intermittent with similar intermittent attacks of pain, chills, and fever, it is generally the result of distention of the common duct, which allows the gall-stone to float back in the duct and thus allow the bile to pass, until like a ball-valve it descends and again plugs the outlet; if the jaundice is permanent, it means fixed impaction, the commonest seat of which is at the sphincter in the wall of the duodenum. There may then be deep jaundice with neither colic nor pain, but the history of a preceding attack of colic suffices to distinguish this from jaundice due to other causes. But in some cases it is curious how slight the previous attack of pain may have been, though the obstructing calculus afterward proves to be quite large, so that we must be particular in questioning for the very earliest symptoms ere we exclude gall-stones as the cause of the icterus. In general, we may say that in favor of the icterus being due to gall-stones would be the constant or intermittent presence of bile in the *faeces*; also a jaundice which comes and goes. This is a valuable sign, for all other causes of jaundice, even catarrhal jaundice, either occur as a rule but once or change but little when once developed. In jaundice due to calculus, the rule is that the liver is but slightly enlarged, if at all, and likewise the gall-bladder is not commonly distended. Jaundice caused by tumor pressure also is not generally accompanied with chills and rigors as in the case of calculus. The jaundice which marks most cases of acute yellow atrophy of the liver generally begins like a catarrhal jaundice, with none of the initial clinical symptoms of calculus impaction.

Fever.—A rise of temperature is a symptom of much importance when it occurs in cholelithiasis, and becomes more serious in proportion to its continuousness. As septic chills are of toxic origin, so does the fever which follows imply absorption into the general circulation of toxins from inflamed or ulcerated biliary passages. In many cases of obstruction of the common duct by a movable calculus, the chills are followed by a transient rise to 101° or 102° F., and this soon afterward subsides. Should the fever persist, whether with or without jaundice, and signs of local inflammatory conditions develop, with tenderness to pressure and rigidity of the overlying muscles, we should not then neglect having the blood examined to determine the presence of

hyperleucocytosis. I regard this procedure as one of our most important modern aids to diagnosis. I have repeatedly found it of the most timely service in indicating the danger of delay, where there were reasons for suspecting suppurative processes in connection with the biliary passages, yet the exact nature of the local trouble was uncertain. Should the febrile condition be also accompanied by repeated sweats, pus formation becomes still more probable, but these signs do not tell us certainly where the pus is, for it may be collected in one or more abscesses, or be diffused, as in suppurative cholangitis, as we shall see in discussing the indications for surgical measures.

The repeated irritation of the liver by biliary calculi is very prone to disturb gastric digestion as well. The symptoms then are of a subacute gastritis, causing a painful uneasiness after meals, with tenderness at the epigastrium and with a more or less constant sense of distention. Hyperacidity is quite common. In proportion to the continued hepatic derangement, especially when fever is a frequent symptom, the general nutrition suffers, and if jaundice also persists, emaciation becomes pronounced. A vicious circle sometimes seems to be present, of hepatic irritation causing gastric derangement, and this in turn, with its acid fermentation of the ingesta, increasing the inflammatory condition in the biliary passages. Careful attention to the attendant dyspepsia is therefore a leading indication in the treatment of cholelithiasis.

Now, all these symptoms of cholelithiasis which we have been reviewing may be present, either severally or conjoined, and yet not be due to cholelithiasis in any form. We have already enumerated the cases in which this is true of the symptom pain, but the same may be said of the other symptoms, tumor, jaundice, and fever.

Thus, tumors may be found occupying the anatomical area of the gall-bladder and ducts, accompanied with intense jaundice and occasionally with pain, rigors, and fever. The presence of these last symptoms may make the differential diagnosis very difficult, for, as remarked above, new growths which cause biliary obstruction and jaundice, as a rule, are painless and afebrile. If, therefore, we find a persistent jaundice coexisting with a palpable hard, and especially a nodular tumor, we have good reason to diagnosticate obstruction by a neoplasm as the cause of the jaundice. But cancer of the liver sometimes causes suppurative inflammation, as in a hospital case of mine in which, with antecedent symptoms only of hepatic abscess, with fever, sweats, etc., a large collection of pus first flowed on operation, but in a week afterward the discharge contained both bile flowing from a communication with the gall-bladder and milk taken into the stomach from a hole

in the adherent pylorus, each due to an ulcerating carcinoma. Tumors of the head of the pancreas are particularly deceptive, for they almost inevitably cause jaundice, while hepatic cancer is accompanied with jaundice in only about half the cases. I once had a man in my wards who came in deeply jaundiced and with a large, painless, smooth tumor, of the size of a cocoanut, evidently containing fluid, and just like a distended gall-bladder, except that it was bisected longitudinally by the median line. Two days afterward sugar appeared in his urine, and I made the diagnosis of a pancreatic cyst. He was operated upon by my colleague Dr. McBurney and the cyst was successfully drained, the gall-bladder then appearing distended behind it. In every case of the kind, therefore, it is not the present but the past which gives us the most probable clues to the truth of the case. The present symptoms may be consistent with more than one condition, but a careful investigation into the beginnings will often illustrate the advantages of the clinical rule that you cannot be too particular in your questions about the first signs. Thus, with neoplasms, pain is rarely the first symptom, and still more rarely is it of a colicky kind. Tumor is often the first symptom, with jaundice long afterward.

Carcinoma of the gall-bladder or of the biliary passages, when it occurs, seems to be definitely related to the local antecedent irritation by gall-stones. Thus, Bodrowski found gall-stones present in every one of forty cases, and Courvoisier in seventy-four out of eighty-four. In the bile-ducts the commonest seat of carcinoma is at the outlet in the duodenum, which is also the commonest place for permanent impaction. So far as they go, these facts support the theory of the infective nature of cancer. The experiments of Orth and Wyssokovitsch show that traumatic lesions produced anywhere will cause a local predisposition to infective processes, and this is confirmed by Meltzer and Cheesman, who showed that slight wounds inflicted on various viscera, such as the mucous membrane of the uterus, became afterward almost the sole seats in the body for the development of bacteria injected in the first instance into a vein of the ear. The products of chronic inflammation, therefore, caused by gall-stones, instead of degenerating into cancer, as was once thought, may simply have afforded the best nidus for a subsequent malignant infection, just as sarcoma likewise too often follows traumatism to be merely a coincidence.

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SOME NOTES ON THE EARLY DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS.

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With the advance in knowledge of treatment of pulmonary tuberculosis, there is impressed strongly on the minds of observers the fact that cures are attained in exact proportion to early diagnoses. By early diagnosis we do not mean the usually accepted condition as representing that term, for at least seventy-five per cent. of the so-called early or incipient cases, met with in consultation, should be more properly defined as moderately advanced, and we may venture to say that sometimes, with all justice, they might be relegated to the far-advanced or incurable stage. Why is it that there is so much discussion regarding the existence or non-existence of a prebacillary stage in pulmonary tuberculosis, if it is not that we fail to recognize the signs of tuberculosis in its very incipency? Certain prodromes, while possibly common individually to other diseases, are collectively almost positive proof of tuberculous infection.

Symptoms.—It must be acknowledged that the physical signs are often very indefinite, and, even when they are heard, considerable doubt may exist as to their significance. Added thereto the factors of tact and policy necessary in family practice, and the strong determination on the part of the patient and his friends to believe that they or theirs, above all others, cannot be victims of this dread disease, and we may more fully appreciate some of the obstacles to early diagnosis. Every known method having the slightest bearing on such diagnosis should be brought into use before one can honestly and conscientiously declare an applicant for examination free from tuberculosis, not only in the patient's own interests, but for the protection of the physician as well. For how often do we hear, when a patient finally discovers the real character of the disease, that he blames Dr. So-and-So for permitting him to get into such a condition, with the remark that he had been repeatedly examined by him, who declared his lungs perfectly sound or that he was suffering from weak lungs or bronchitis! Whether justly or unjustly, the confidence of the patient in that physician has been forever destroyed, and, if he has knowingly deceived his patient, he

reaps a proper reward. This brings up the question of the duty of the physician to a patient in suspected or determined cases of tuberculosis. Is it right or proper, under any circumstances, to conceal the true condition of affairs from the patient? Is it right to permit him to go on living in the environment in which he contracted his disease? A brave man or woman always prefers to know the truth. If we meet one coward out of every ten patients, it is better, if such a thing were possible, to scare that coward to death than to deprive the nine brave ones of an opportunity to recover. A patient goes to a physician for diagnosis, and he is entitled to an honest statement of his exact condition, as nearly as it can be given. Again, accurate early diagnosis of pulmonary tuberculosis has an all-important bearing on prognosis. In support of this statement, I will state that, out of one hundred cases, taken at random from the case-book at the Loomis Sanitarium in Liberty, in all of which the patients were in the incipient stage, fifty-one per cent. were discharged apparently cured and twelve per cent. more with the disease arrested, so that we find a total of sixty-three per cent. returned to their homes as useful citizens and in a condition enabling them to resume all the responsibilities of life.

In contrast to this, listen to the results gleaned from one hundred cases in the moderately advanced stage, gathered in the same manner: Two were cured and seven had their disease arrested, thus giving a total of nine per cent. as against a total of sixty-three per cent. of the incipient cases in which the patients were discharged in satisfactory condition. These statistics, being taken at random from a group aggregating nearly 1,600 cases, speak for themselves.

By what means are we to make this early diagnosis, what definite physical signs shall we find and what less definite ones which, taken in connection with rational symptoms, still have considerable bearing on a final decision? First, we may consider predisposing factors: Heredity, scrofulosis, defective and insufficient food associated with imperfect ventilation, privation, grief, and overwork, frequently recurring bronchial catarrh, damp localities, race (negro), shape of chest, traumatism, former pulmonic or pleuritic disease, and chronic catarrhal inflammations of the upper air passages. Vital capacity, as defined by H. P. Loomis, when found below the normal standard, is a strong predisposing factor. Perhaps the most important of all signs of early tuberculosis are to be found in the general condition of the patient. Gradual loss of weight and increased activity of heart action should always lead to an examination of the chest. These are accepted principles, but it is just because they are acknowledged and accepted, with the absence of de-

cided physical signs, that we are too prone to attribute the general poor condition to other than tuberculous causes, and so many patients, with their disease unrecognized in an incipient and curable stage, are allowed to pass into a moderately advanced condition.

Among the other symptoms, in very incipient cases of tuberculosis, may be any of the following, alone or severally: A slight hacking cough, with or without some expectoration—first eliminating any possible local cause in the larynx or pharynx—slight night sweats, perhaps only sufficient to cause a "moist feeling," rise in afternoon or evening temperature, possibly of but two or three fifths of a degree; loss of appetite and deranged digestive functions, accompanied by the loss of a few pounds in weight, hoarseness, feeling tired in the afternoons; blood-spitting or even small hæmorrhages. I have seen cases in which, after a small hæmorrhage of two or three ounces, no physical signs could be definitely determined until weeks afterward. A rapid pulse, accompanying some of the above-mentioned symptoms, always over 100 or 110, should lead us to suspect tuberculosis. The physical signs may be scant, and therefore should be searched for very carefully. Inspection may show the clavicle more prominent, with flattening in the supra- and infra-clavicular regions. Expansion may be slightly diminished and is very often difficult to determine; to say the least, it is very indefinite. Many cases have come under the writer's observation in which the vertical expansion in front was apparently equal on both sides, and yet, on reversing the patient and observing the scapulæ, in a large majority of instances, the signs were more positive posteriorly than anteriorly. Again, cases are seen in which even the scapulæ fail to give any decided information, and, as I shall state more fully when speaking of the x-ray signs, the only positive evidence on inspection is found in a restricted action of the diaphragm upon the affected side.

My observations with the fluoroscope, taken in connection with the subsequent histories of cases which were classed as suspicious, have led me to believe that we should place very little reliance, in early diagnosis, upon the absence of deficiency of expansion as determined by inspection or palpation. Probably a large majority of patients who show by these two methods even slight deficiency of expansion have already passed into the moderately advanced stage; in other words, decided consolidation is present. In very early cases, the respirations may be more frequent than in health, but it is not the universal rule. We may or may not recognize the increase in vocal fremitus. The high-pitched dulness of the percussion note may be so slight as to be appreciated only by a very practised ear, and I have

seen cases in which even this sign was a doubtful one to some of our best diagnosticians. In most instances, however, we shall be able to elicit a very slightly high-pitched percussion note in the infra-clavicular space, and in the areas of this dulness we shall also be able to appreciate a very slight increase of vocal resonance, which is almost universally accompanied by a prolonged expiration. All these signs, if taken singly, may be so indefinite as to be unrecognized or to have their significance ignored, but, taken together, especially with the fact that we have prolonged expiration, slightly high-pitched in character, with a bronchovesicular rather than a bronchial breathing, should make us exceedingly suspicious that we are dealing with a tuberculous area. Occasionally we find cog-wheel respiration, but not, as a rule, in the very early stage. Râles, at this stage of the disease, are rarely heard, but occasionally a faint r  le or moist, sticky sound may be made out after coughing, or at the end of the first deep inspiration.

As a large number of the very incipient cases of tuberculous infection such as we have under consideration, present no expectoration whatever, and, as in the prebacillary stage, even should expectoration be present, the bacilli will be absent, bacteriological examination of the sputum loses much of its value as a *negative* factor. Should there be slight expectoration with bacilli, as is at times the case, of course we need to go no further before we can decide that the patient has tuberculosis, and therefore subsequent examination would be simply to decide the area and intensity of degree of involvement of lung tissue, as well as to discover all complications. If, however, we find no bacilli in the sputum, we should not allow this to have very much bearing upon the physical signs and other symptoms under consideration which point toward a possible diagnosis of tuberculosis.

In support of this statement, allow me to say that, out of thirty-four cases of incipient tuberculosis seen at the Loomis Sanitarium, fifteen showed bacilli at the first examination, and nineteen were negative at that time and subsequently. Incidentally, it may be remarked that of these nineteen, one had tubercle bacilli in the urine. Of the thirty-four incipient cases, eighteen patients were discharged apparently cured; the sixteen others would probably have been discharged in the same condition had they remained long enough.

Tuberculin has not fulfilled our expectations as a diagnostic agent, for the reason that it not only fails to cause a reaction in all cases of tuberculosis, but reactions can be obtained in a certain number of cases of syphilis. Otis has presented sixty-two tests with tuberculin, undertaken with two objects in view, namely (1), to determine how many cases

of known syphilis react to tuberculin, and (2), to determine how reliable the test is in suspected or incipient tuberculosis both of the lungs and of other organs or portions of the body. He used Koch's original tuberculin, imported and diluted as used to a one-per-cent. solution, $\frac{1}{10}$ of a cubic centimetre of which solution being 1 milligramme of the original product. The dose was never over 10 milligrammes. In some few cases of tuberculosis there was a marked and definite local reaction, but no general one. In thirty-five cases of the tuberculin test in syphilis, there were six undoubted reactions and five abortive reactions in which there were temporary symptoms of a reactive nature, but which could not be called genuine reactions. In using the tuberculin test, one must always bear in mind the fact that syphilis, at whatever stage, may give a reaction. Further, there does not seem to be any guide in the activity or quiescence of the syphilitic infection as to whether or not a reaction is likely to occur.

Twenty-six cases of suspected or proved tuberculosis gave some interesting and perplexing results. Taking the eight cases in which the physical examination showed sufficient evidence of tuberculosis, or in which tubercle bacilli were found in the sputum, there were four reactions and four failures to react. In the three cases in which tubercle bacilli were found in the sputum, two did not react; in one of these seven milligrammes were used, and in the other, five and ten milligrammes. In the third case, in which two, five, and eight milligrammes of tuberculin were used successfully, only a local reaction was obtained. Of the remaining eighteen cases of suspected tuberculosis, there were six reactions and twelve failures to react. In not one of these cases which failed to react could tuberculosis be more than suspected, with greater or less probability, by the physical examination. A case of lupus of the face, besides giving a general reaction, showed a very pretty local one. In a case of chronic laryngitis, in which either syphilis or tuberculosis might have been the cause, a reaction was obtained, thus leaving the origin doubtful as before. In using the tuberculin test for suspected tuberculosis, experience would teach one to look carefully for syphilis.

Examination of the larynx may or may not give us definite information. If any changes were present, there would be a slight an  mic condition.

Blood.—Some observers have stated that there is a condition of an  mia which antedates the development of tuberculous infection, and that, therefore, valuable diagnostic information may be obtained in very incipient cases by examination of the blood. While not willing to assume, at the present time, that this assertion is not correct, I simply wish to state as a matter of record that, according to data

compiled in the laboratory of the Loomis Sanitarium during the past year, forty-two cases show that *pure tuberculous disease itself*, whatever its seat (Cabot), *has no effect upon the blood*, that fluid being normal in every instance; second, that sixty cases would seem to show that the *Diplococcus lanceolatus*, associated with the tubercle bacillus, is the primary cause of the severe anæmia; third, that twelve cases showed that, when we have a case of tuberculous diarrhoea, it is the drain upon the body albuminoids, and not the tuberculosis, which is the cause of the severe chloranæmia met with; fourth, that the slight rise in temperature we often get in pure tuberculosis has not the slightest effect upon the hæmoglobin; fifth, that the temperature we get in mixed infection drains the red corpuscles of their vitality and lowers their number; sixth, that in mixed infection, with cavity and moist râles, and secondary anæmia with leucocytosis, seventy-five cases showed the polymorphonuclear cells increased at the expense of the leucocytes, the leucocytes being of the large variety. But when the moist râles disappear and the cavity dries up, leucocytosis disappears. Seventh, the blood of pulmonary hæmorrhage does not show any nucleated red cells.

Conclusions.—It would seem, therefore, that the examination of the blood in suspected cases of very incipient tuberculosis would not be of very much value other than indicating some other organic disease of the body which may have an indirect bearing upon the possibility of tuberculous infection on account of the proper soil having been prepared. The action of the tubercle bacillus itself does not appear to have any effect upon the blood. Arguing from these results attained, we may fairly assume that a perfectly normal blood accompanying progressive loss of weight and all other rational symptoms, as well as suspicious physical signs, pointing toward tuberculous disease, should cast the weight of evidence in favor of the other symptoms being due to tuberculosis, provided expectoration is not present.

Having exhausted all the methods of examination mentioned without arriving at a positive conclusion, we are fortunate in having at our command in the Röntgen rays a further diagnostic agent of great value, especially in uncertain or incipient forms of tuberculosis. Opponents of this method of diagnosis have alleged that it would give us no information other than that attainable by other methods of examination, especially auscultation, and that, therefore, it was simply a corroborative agent. It is now nearly five years since the writer published a series of seventy-three cases showing, in parallel columns, the absolute harmony existing between the fluoroscopic examination and ordinary physical examinations in pulmonary tuberculosis. The belief that

the x ray shows its greatest value in surgical cases only is fast giving way before the vast amount of accumulating evidence that it can be of even greater assistance in the field of medicine. It is true that, generally speaking, the x rays are valuable in corroborating signs discovered by auscultation and percussion, but at times we can discover by their aid incipient lesions or small isolated foci of infection not recognizable by ordinary methods of examination. In addition, the fluoroscope enables us to recognize more fully and accurately the degree, position, and relation of areas of infiltration and consolidation, and also delineates plainly the limits of these areas.

Method of Examination.—A certain amount of practice and a primary knowledge of the fluoroscopic picture of a normal thorax are requisite for the successful use of the fluoroscope. The thinner the subject, the more immediate and easy the diagnosis. In all subjects one has (as does the tyro with the ophthalmoscope) to look for nothing until he can see something. The patient is placed standing before or lying above the Crookes's tube for examination by the fluoroscope; a better method, how-tient's shoulders concentrate all the light upon the chest, and the whole outline of the thorax appears as a picture upon the screen in front of the patient. It is better to use the fluoroscope rather than the screen in determining the finer details of a given diseased area.

The proper distance between the light and the patient is generally conceded to be about one inch, which would ordinarily mean a distance of twelve inches between the light and the screen; the light should be placed directly in line with the spinal scapulæ and the spinal column. When the fluoroscope is used, it should be applied firmly and evenly to the bared chest, and the two clavicles having been located, their relative distinctness of outline will generally indicate the site which is involved. Having examined the apices, the fluoroscope is passed up and down the whole thoracic region in search of other foci of infection.

The Normal Chest.—In about fifty per cent. of normal chests the right apex is not quite so clear as that on the left side, the normal lung is more transparent, and the reflex is brighter at the end of inspiration. The ribs are more clearly defined during inspiration, and in a healthy chest an evenly clear transmission of light is visible between them. Slight shadows are cast by the deltoid muscle at the outer borders of the apices. The heart and portions of the aorta are distinguished as a dark shadow, extending from the first rib to the seventh interspace, and broader below than above. A small portion of the aorta is seen as a light shadow in the first interspace, slightly to the left of the sternum.

The shadow of the heart is generally black, except on the right in the fourth and fifth interspaces, where the shadow cast is of less density; very often the cardiac impulse is distinctly visible; the apex of the heart appears to be invaginated during systole. The action of the diaphragm is well defined, and during the act of inspiration it assumes a dome-like outline. In stout patients it is much more difficult to discern the outline of the ribs than in thinner subjects, and the effort required in diagnosis is relatively greater.

In very incipient cases, where the pathological condition consists of very slight infiltration, the picture thrown upon the fluoroscope is as follows: There is a haziness, or fog, between the light and the observer, or the clavicle may, in other instances, appear to have a gauzy veil thrown over it.

Very often, when there is only a suspicion of any physical signs at an apex, there may be present enough infiltration to give us, instead of the slight haziness, or fog, spoken of, a light shadow, the ribs become more indistinct, and, finally, the lower border of the light shadow shades off into a haze which gradually fades away into the normal reflex. At times, even in normal chests, there may be a slightly thickened pleura on each side, giving a hazy appearance or even a light shadow, and, again, as often with physical signs in incipient cases, we are at a loss to interpret the exact meaning of what we see. Allow the patient to take a deep inspiration, and if there is a slight tuberculous infiltration at one apex or the other, the haze or shadow on the unaffected side will become less apparent, while that on the diseased side remains the same. One writer on this subject has maintained that the haziness with an infiltrated apex may be simulated by emphysema, and that forced inspiration will cause the haze to disappear entirely. This, it will be seen, does not occur where the haziness is due to infiltration. Again, supposing we do see a shadow due to slightly thickened pleura at one apex instead of a haze of infiltration, when we remember that nearly all sharply defined spots of pleuritic thickening cover an underlying tuberculous condition, we again have strong presumptive evidence that we are dealing with incipient tuberculosis. Now, let us move the fluoroscope down the chest and we may discover a few small isolated foci of infiltration, or, again, we may find a generally spotted lung, these spots being due to the presence of tuberculous foci, none of which are large enough or close enough together to give rise to physical signs. Again, we find that, as in inspection and auscultation in most cases of incipient disease, the signs are more apparent posteriorly than anteriorly. Now, by placing the fluoroscope directly over the spinal column, the apices are brought simultaneously into the field of vision, a

result impossible to obtain in front without a screen. Here let me say that it is very important not to remove the eyes from the instrument while sliding it over the chest, lest by so doing the fine points of comparison be lost by submitting the retina to a different character of light. The force of this remark will be appreciated when we remember that one often has to gaze into the fluoroscope some length of time before the landmarks of the chest are seen. Ordinarily, by these simple methods a practised eye can clearly distinguish areas of the most incipient infiltration, sometimes before abnormal sounds are heard on auscultation or percussion, and very often before their presence has been suspected. Often, when examining a lung known to be diseased, we find an unsuspected focus of infection at the opposite apex. I have found foci of disease in the lower portion of the lungs in a number of cases under treatment for apical disease. In some instances these spots cleared up; in others auscultatory signs subsequently developed.

We now come to a more accurate and almost invaluable test, as far as my observation has gone, in diagnosing a very incipient tuberculous deposit in one lung, especially at the apex, namely, a more or less restricted action of the diaphragm. Being acquainted with the distance of the normal excursion of the diaphragm on either side, it is very easy to recognize the least restricted movement of these muscles, and in every case of incipient tuberculosis, no matter how indefinite the signs may be at the apex, there is more or less restricted excursion of the diaphragm on that side. A moment ago I referred to the spotted lung. We all know how often cases come under our notice in which the physical signs are indefinite or positively negative, and in which all the rational symptoms of miliary tuberculosis are rapidly developed. I do not mean to say that, even if we were able to diagnosticate this unfortunate form of the disease before the rational symptoms appeared, its fatal career could be checked; nevertheless, it would be gratifying to the physician and friends of the patient to at least make the effort, and it does seem reasonable to assume that, if this unfortunate condition could be discovered before great activity was present, there would be much more hope of arresting its progress.

Miliary tuberculosis shows itself in the form of scattered dark spots, giving the lungs a mottled appearance; there is nothing regular about the arrangement or size of the spots; when cavation has occurred, it is, as a rule, relatively difficult to define the outlines of the cavities.

TREATMENT.—We now come to the very important question of treatment in cases of incipient tuberculosis. Nothing is more detrimental to the interests of such patients than the advice so often given by

the family physician, "Go to a good climate and keep away from doctors, and, once in a while, write to me and tell me how you are getting on." A patient once came to me in the town of Liberty with the ridiculous request that I should examine him and see if he had improved enough to allow him to return to his home. He had been in the mountains a number of months without seeing a physician, and, because he had gained in weight and felt very much rested and stronger, had written to his physician stating he was all right. His physician, very properly, insisted upon his being examined. I found numerous tubercle bacilli in his sputum and an active process in one lung. Of course, it was impossible to tell what his anterior condition had been. Climatic influences, hygiene, and diet must, at the present stage of our knowledge in the treatment of this disease, form the basis of all treatment, but that climate alone will cure many of even incipient tuberculosis, I do not believe, and I know that it will not in cases of moderately advanced disease. There are too many concomitant conditions associated with nearly every case of pulmonary tuberculosis to make it other than reasonable to suppose that there should be a certain amount of medical supervision and treatment of all patients. This statement is amply borne out by the comparatively better results obtained in sanatoria than in outside practice. I should expect to attain better results in a case of incipient tuberculosis, treating the patient in my office in New York, than by sending him to any health resort where he would be without supervision and treatment. A great deal could be said about the various auxiliaries to the climatic treatment of phthisis, that is, covering all stages of the disease, but, as we are dealing only with the incipient stage, I will confine myself to a few brief statements.

The Upper Air-passages.—The condition of the upper air-passages should always be looked into. It is astonishing how large a percentage of even incipient cases of pulmonary tuberculosis present lesions of more or less severity in the upper air-passages, and it is a question whether quite a number of patients may not attribute their trouble primarily to conditions of the nose and pharynx which have, by reflex irritation, created a nidus for pulmonary infection. It is my invariable practice to examine the nasopharynx and larynx of all patients the first time I see them, whether or not there are subjective symptoms leading to the suspicion of disease of these parts. By these routine examinations, cases of chronic congestion or infiltration of the ary-tænoids are discovered early enough to be easily cured in nearly every instance by prompt local treatment, though they may have given rise to no symptoms sufficient to alarm the patient. Unrecognized and left to themselves and climate, such cases, at

least in a fair majority, either progress to a fatal laryngeal condition or are the indirect cause of prevention of cure of incipient pulmonary lesions.

Anæmia.—Where anæmia does exist in incipient cases, it should be corrected. High altitude, good diet, and outdoor life would remedy this condition to a certain extent, but the administration of iron and arsenic, combined with static electricity, will cause this improvement to take place much more certainly and rapidly.

Hydrotherapy is also a very powerful factor in placing the victim of incipient tuberculosis in a condition to overcome the disease. *Exposure to the parallel rays* from a powerful arc light, especially when followed by static electricity in the form of negative insulation, appears, in many instances, to improve the nutrition and increase the hæmoglobin.

Inhalations.—Where expectoration is present, especially with mixed infection, hot air inhalations, as well as cold sprays from the multi-commuter, are valuable as auxiliary methods of treatment, and also serve, in a minor degree, as lung gymnastics.

Serum.—Much has been written within the past few years regarding the use of antitubercle serum, especially in cases of pulmonary tuberculosis. There seems to be some evidence that this serum is of value in reinforcing the phagocytic powers of the blood, and it is possible that this gives to the patient some degree of immunity against recurrence of the disease.

Diet, in the treatment of tuberculosis, is a much abused and poorly understood term. It is a difficult thing to persuade the patient in many an incipient case that he must not, of necessity, stuff his stomach with concentrated nourishment from four to six times daily. In advanced cases at all times, and in a very few incipient cases when they first come under observation, specially arranged diets are necessary. In ninety per cent. of incipient cases nothing is better than three substantial meals a day. The appetite of convalescent tuberculous patients is something extraordinary. Climate, out-of-door life, and tonic treatment all tend to increase the powers of digestion; nevertheless, in most cases periodically there will arise disorders from over-feeding which will require treatment. Nothing is more simple to overcome than these so-called bilious attacks, and after a rest of a few hours the patient will resume with avidity and benefit his process of stuffing. However, we know that a large percentage of tuberculosis is due, primarily, to lack of assimilation, and it is not strange that we find quite a percentage of patients with chronic gastritis and dilated stomachs. Most cases of this nature can be relieved by siphon irrigation of the stomach three times a week, and, if dilatation is present, Einhorn's electrode may be introduced and faradization prac-

tised. This is another auxiliary treatment, not only necessary, but often imperatively demanded. Surprisingly brilliant results generally follow, not only as to digestion, but indirectly affecting the tuberculous disease.

Finally, I have not attempted, in speaking of treatment, to touch upon any of the well-tried methods of medication by creosote, ichthyol, and other drugs commonly used in moderately and far advanced cases, as they have no place in the treatment of the class of cases under consideration. On the contrary, to their routine and injudicious use may be justly attributed a large proportion of the cases of gastritis which accompany incipient tuberculosis.

In closing, I will simply refer, without comment, to the experiments now in use as to the results of x-ray illumination upon intracorporeal tuberculosis. The value of this agent in lupus, or extracorporeal tuberculosis, is an established fact.

Note.—The writer wishes to acknowledge with thanks, valuable laboratory statistics furnished for this paper by Dr. S. W. Wells and Dr. T. I. Shannon, of the Loomis Sanitarium, also the interesting radiographs lent by Dr. M. K. Kassabian, of Philadelphia.

October 15, 1901.

A BOUGIE REMOVED FROM THE ABDOMINAL CAVITY; RUPTURED UMBILICAL HERNIA.*

By JOSEPH TABER JOHNSON, M. D.,
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It has occurred to me that it might be a little change, and possibly a relief, to step aside from the usual custom of presenting a lengthy and scientific discussion on one of the many unsettled questions in surgery and gynecology, and read a brief description of two rather unusual but still very practical and important cases which have recently occurred in my practice. Perhaps some points of interest may be brought out should the subjects referred to be deemed worthy of a few moments' discussion.

The first case was that of an unmarried young lady, about twenty years of age, who had "loved not wisely, but too well." As a result of her indiscretion, she found herself pregnant, and with the advice and assistance of her lover, found a medical man who attempted to produce an abortion at about the tenth week of gestation by inserting into the uterus a No. 8 flexible bougie. Some difficulty was experienced in getting it to pass the internal os, as

I learned later on, but finally, after persistent effort, it passed in suddenly, and was pushed up nearly its entire length, leaving perhaps two inches protruding into the vagina. The bougie was supposed to be coiled up in the uterus. Its expulsion was prevented by a cotton tampon pushed high up in the vagina. The patient returned to her home and, upon some pretext, went to bed. During the night pains came on; they gradually increased in intensity until they reached a climax, when they ceased entirely. In the morning a physician was called, to whom the patient made a confession, and begged him to keep her secret from her family. He did the best he could under the embarrassing circumstances. He informed me that when he removed the tampon, the foetus and a portion of the membranes came away also. He made a vigorous attempt to remove the remaining shreds and pieces of membranes with his finger, assisted by the curette. He was unable with the most diligent search to find the bougie, and finally came to the conclusion that it must have slipped out, without her knowledge, during one of her many visits to the closet in the night.

The second day after the abortion, the patient had a severe chill, followed by a considerable rise of her pulse and temperature, with gradual but steady increase of abdominal pain and distention. I was requested to see her in consultation on the morning of the third day, when I learned the points in the history narrated above. I was requested by the attending physician to curette the uterus still further, as he feared her condition had been caused by the absorption of septic material from possible decomposing membranes which he had been unable to remove in his hasty and imperfect curettage. The doctor thought I might also find the missing bougie. The patient was etherized and put on an improvised table, and after the usual preparation, I passed a uterine sound by way of exploration. Nothing was felt in the uterus, but with the gentlest possible handling of the instrument, and without the slightest use of force, it went on and on until only the handle remained outside of the os uteri. One of two things was evident: The sound had either perforated the uterus or had passed through an opening already made, presumably by the missing bougie. This latter was considered the most probable. The sound was slowly withdrawn and a loose antiseptic tampon was inserted in the vagina. Believing that the bougie was in the peritoneal cavity, I recommended immediate abdominal section for its removal. The patient agreed to this rather startling suggestion, with only one proviso, namely, that her parents should never know the cause of her peritonitis. She was at once removed to a hospital, and the abdomen opened as soon as the necessary preparations could be made. After a little search the bougie was found almost entirely folded in and covered over by the omentum, in the effort of Nature to repair the damage and prevent injury to the abdominal viscera. Flakes of gray lymph and considerable grayish fluid were wiped out of the cavity. The opening in the uterus had become so thoroughly closed that it was not found. The abdomen was closed without drainage, and the patient made an unusually rapid and uneventful recovery. I saw her recently at a patient's house, looking the picture of blooming health, and she informed me that she was perfectly well.

*Read before the Southern Surgical and Gynecological Association at its fourteenth annual meeting, held in Richmond, Va., on November 12, 13, and 14, 1901.

I have seen a number of different injuries, in consultation, from the effects of attempts to produce criminal abortion, but never one like this. I have known of quite a number of cases where the uterus has been perforated by the uterine sound, and also by the curette in routine gynæcological practice, but I have never seen an instance of a bougie used for the purpose of inducing premature labor or abortion perforating the uterine wall and subsequently passing clear up through it and disappearing in the abdominal cavity.

Several of our text-books mention cases and give illustrations of the perforation of the uterus by laminaria tents used to dilate the cervix uteri with fatal effect. On page 243 of the August number of the *American Journal of Obstetrics* is the report of a case very similar to mine by Dr. P. F. Chambers, one of the surgeons to the Woman's Hospital in the State of New York. The operation performed, however, was decided upon after a council with two of the consulting staff. They all agreed that the case was one of osteosarcoma, although there was present an unusual number of leucocytes (21,000). An exploratory coeliotomy was advised. The following is Dr. Chambers's description of the operation:

"On Thursday, April 25th, I made the median incision, thinking that I could at least get at the median tumor better by that route. Upon opening the abdomen, I found the two masses firmly fixed, and, extending from each mass up toward but back of the transverse colon, a cord-like band of what we took for a chain of lymphatics. Determined to explore the central mass and get a specimen for examination, I cut into it and to my surprise saw a white glistening substance, which I caught with forceps and pulled out. This substance was a silk gum-elastic bougie, No. 8; one end of it was coiled up, resting against the pubes, enclosed in a mass of inflammatory tissue; the other end against the crest of the ilium. The recovery has been uneventful. My first impression regarding the rubber tube was that it was a catheter which had been lost in the bladder and had worked its way through, but, upon inspection, I found it to be a bougie, and at once expressed my belief that it had been used to produce a criminal abortion."

After her recovery the doctor learned that his suspicion was correct, the patient having confessed that she had visited an abortionist in the preceding November and that a "rubber thing" had been passed into her uterus for the purpose of causing an abortion. The day following her visit to the abortionist, she missed the "rubber thing" and returned for an explanation, thinking something might be wrong, but she was told that she had probably dropped it out without noticing it, and, thus reassured, dismissed the matter from her mind. In December she noticed a tender lump in her side, but

did not enter the Woman's Hospital for its removal until the following April. She had then carried this "rubber thing" in her abdomen for about six months.

Dr. Marion Sims, while in charge of this same hospital, many years ago, removed a female silver catheter from a woman's abdomen. The hospital report of the case does not state that the instrument had been used to produce an abortion, but that is a fair presumption. Dr. Chambers also reports as another of the traditions of this hospital that "about twenty years ago a woman came to Dr. T. Gaillard Thomas and told him that ten days before she had attempted to produce an abortion at her home, in Indiana, by passing the steel rib of an umbrella into the cavity of the uterus (as she had done before), but that after passing it far up, it had suddenly slipped from her fingers as though it had been grasped from above and pulled out of reach. Dr. Thomas could not feel the steel, but as she had repeatedly assured him of the truth of her statement, he consented to operate. The husband of the woman, however, protested, saying that he did not believe such a cock-and-bull story, and that if death resulted, he would hold the doctor responsible. Of course the operation was not performed. That night the patient began to show pneumonic symptoms, and two days later she was dead. At the post-mortem examination a steel umbrella rib thirteen inches long was found in the abdomen, one end having perforated the diaphragm and extended two inches into the lung tissue."

I have no doubt that experiences similar to those just narrated may have occurred in the practice of many of the fellows of this society. From the severe acute symptoms in my case, it is reasonable to believe that, if prompt relief had not been afforded by an operation, the patient would have died of the rapidly progressing peritonitis, which seems to have fortunately been nipped in the bud.

The second case to which your attention is very briefly invited was also new and quite exceptional in an experience of somewhat over a thousand abdominal operations. It was a case of ruptured umbilical hernia in which several feet of intestine had been out on the surface of the abdomen and covered with unsterilized cloths and bandages for at least seventeen hours. The patient was a strong Irish woman, who assisted her husband in the management of a beer saloon. She was the mother of several grown children and was fifty-seven years of age. She had had the hernia for fifteen years. A few days before the rupture, she had a severe pain in the "bunch," as she called it, and put a heated stove-lid wrapped in flannel over it. It turned out to be hotter than she thought and burned her slightly. The tissues, not being in a normal condition, did not heal readily and ulcerated over an area of about the size of a quarter of a dollar. She called

in her family physician, to whom she made so light of her trouble that he did not even examine it, but prescribed a little oxide of zinc ointment and told her to let him know if it did not heal or if it gave her any further trouble. Several days later, while straining at stool, she felt something give way at the site of the hernia and quite a mass came out. She covered it over with a dirty flannel petticoat and went up-stairs to her bed. This was about 7 p. m. She did not send for her physician until 11 o'clock. He came to my home about midnight in great alarm. We agreed that, with the depressing symptoms above stated, together with the fact that the woman was somewhat intoxicated, an operation at that hour, and in her very unsanitary environment, would not result in success for her or in any credit to surgery. I gave the doctor a package of sterilized gauze and towels and suggested their use with hot sterilized salt solution. He returned and did the best he could to keep the parts warm and clean and the woman quiet. I saw her the next morning, securely tightened up her bandages, and had her removed to a hospital, where an operation was performed at 12 o'clock, which was as soon as the necessary preparations could be made, just seventeen hours from the rupture. It required at least fifteen minutes to detach the cloths which we found over the protruding intestines. They seemed to have grown on to and into them. The intestines were very dark and very cold and very dirty. A thorough cleansing and warming with hot salt solution succeeded finally in getting them and the adjoining skin of the abdominal wall into a tolerably fair condition. About a pound of omentum was removed, which was bleeding in a number of places from which the adherent cloths had been detached. The tight rim encircling the protruding gut was incised above and below, and the two or three feet of intestine returned to the abdominal cavity, which was subsequently filled with the hot salt solution. A rather long and difficult operation was then performed for the radical cure of an old umbilical hernia in a very fat abdominal wall. The woman gave every promise of getting well for seven days; then she suddenly grew weak and collapsed, and died on the eighth day, apparently of general septic peritonitis. She had no pain and her mind was clear until she breathed her last. The trouble occurred about the same time as the sad tragedy in Buffalo, and the patient frequently remarked that she was running a race with the President, and from the cries of the newsboys in the streets, she kept fairly well informed as to his daily progress. The race was about even for a week, and they both reached the goal about the same time, and after giving promise of better things for several days.

These cases of ruptured umbilical hernia are very rare. Several of our modern text-books on surgery do not mention the subject at all. Marcy, in his large book on *Hernia*, mentions only one case, p. 191, which he quotes from Boyer in 1834, who in his *Treatise upon Surgical Diseases*, describes a case as follows: "A woman, aged sixty, had been afflicted with umbilical hernia for twenty years. In lifting a basket the skin was torn to the extent of six or eight lines and the intestine escaped. Five hours

after the accident I was called, and found that an intestinal loop, ten inches in length and distended with gas and almost violet red in color, had escaped through the rent. The pulse was weak and the countenance visibly changed. It was impossible to return the intestines without enlarging the opening. I had made only a small incision when so large a quantity of intestine escaped that it was with great difficulty returned, and I was obliged to suture the skin in order to retain it. The patient grew worse and died at the expiration of twenty hours." It does not appear that any attempt at a radical cure was made in this case, as only the opening in the skin was sutured in order to retain the intestines within the abdominal cavity.

The following cases have been reported:

CASE I.—Dr. M. H. Pilkington, Ormskirk, England. *Lancet*, 1890, page 1008. The patient, a woman, seventy-three years of age, had eight inches of intestine out for four hours. The operation consisted in enlarging the opening, reducing the gut, and stitching up the abdomen. Recovery.

CASE II.—Dr. Arnold, Seckenheim. *Aerztliche Mittheilungen aus Baden*, 1860, xiv, page 7. The patient was a child, four years old. The whole intestine (?) lay free on the abdominal wall. The child died two hours later. Operation was not allowed by the parents.

CASE III.—Dr. W. B. Barham, Newsoms, Virginia. *Medical News*, xli, 1882, page 288. The patient was a woman, forty-three years of age; weight, two hundred and fifty pounds; multipara. The rupture occurred early in the morning and for several hours twenty feet of small intestine had been lying by her side on the bed. She was operated upon at 4 p. m., and she died from exhaustion in about two hours.

CASE IV.—Dr. Agnew. *Principles and Practice of Surgery*, i, page 497. Quoted by Dr. Barham. The patient was an Irish woman.

CASE V.—Dr. R. B. Bontecou. *American Medical Monthly*, x, 1858, pages 341 to 344. The patient was a woman. A large mass of omentum and intestine, which had been out five hours, was found by her side on a coarse flannel skirt. The opening was enlarged and the hernia reduced. Opiates were given. Recovery. She has since given birth to a child. The hernia never reappeared.

CASE VI.—Dr. C. Fieber, Vienna. *Wiener medicinische Blätter*, iv, 1881, pages 1484 to 1486; also in *Medicinisch-chirurgisches Centralblatt*, xvii, 1882, page 398. The patient was a woman fifty years of age and well nourished. She stood for two hours and did not complain of pain. The tear in the abdominal wall was 12 centimetres long; there was a convolution of intestine on the abdomen. The opening was enlarged with a bistoury, and the gut reduced. She died in twenty-four hours.

CASE VII.—Dr. G. Lawson, Middlesex Hospital. *Lancet*, 1890, pages 560 to 562. The patient was a stout woman. The intestine had been out for ten hours. She was operated upon, but died in twelve hours.

CASE VIII.—Dr. J. P. McKone, Tacoma, Wash. *Medical News*, lviii, 1891, page 719. The patient was a woman forty-three years of age. Thirty-four inches of small intestine had been out for eighteen hours. The gut was punctured before reducing; the abdomen was irrigated, and the glass tube was left in. Recovery.

CASE IX.—The following cases are quoted by Dr. Lawson: 1. M. Mersiner, *Journal de médecine, chirurgie et pharmacie*, Paris, xxiii, 1765, page 557. The patient was a woman who died six weeks after the rupture. 2. Dr. C. Holmes, *Lancet*, 1894, page 271. The patient was a woman. The intestine protruded. Recovery took place after operation.

CASE X.—Dr. Wallace. *Indian Medical Gazette*, Calcutta, xvi, 1881, page 340. The patient was a man of middle age, sparely built. He was seen forty-eight hours after protrusion of the gut. There was a large coil of intestine coated with lymph. The incision was enlarged and the gut reduced. An aseptic operation was performed and recovery took place.

CASE XI.—Dr. Leonard Crosby. *British Medical Journal*, January 11, 1868, page 29. The patient was a woman thirty-two years of age. The omentum protruded for five inches and had been out for twenty-four hours. It was ligated and cut off. The old opening was sutured. Recovery.

CASE XII.—Dr. A. Boyes. *Handbuch der Chirurgie*, Würzburg, 1840, viii, Bd., page 297. The patient was a woman sixty years of age and very fat. Ten inches of gut remained out for fifteen hours. The opening was enlarged and the hernia reduced. She died in twenty hours.

CASE XIII.—Dr. C. O'Leary, Providence, R. I. *Boston Medical and Surgical Journal*, xciii, 1875, pages 182 to 184. The patient was a woman fifty-four years of age. Thirty inches of the large intestine and some of the small intestine protruded. She had fallen on the street and walked an eighth of a mile home with the gut held up in her underclothing. It had been out about eighteen hours. Ether was given, the opening enlarged, the hernia reduced, and the abdomen sewed up. She lived five days.

CASE XIV.—Dr. W. Peyre Porcher. *North Carolina Medical Journal*, Wilmington, xii, 1883, page 266. The patient was a negro girl thirteen years of age. The omentum had protruded for two hours. It was reduced and the skin sutured. Recovery.

CASE XV.—Schunbe. *Medizinische Zeitung*, Berlin, v, 1836, page 215. The patient was a woman forty years of age, small and slender. The abdomen was covered with intestine and omentum bound together by lymph bands, and had been out five days. The surgeon broke up the adhesions with his hands. The prolapsed part consisted of transverse colon, part of the descending colon, and omentum. The opening was enlarged with the bistoury, the hernia reduced, and the skin sutured. Complete recovery.

CASE XVI.—Dr. H. Hempsted. *British Medical Journal*, 1900, ii, page 1640. The patient was a man sixty years of age and well nourished. Three feet of the small intestine and most of the omentum protruded and had been out for four hours. He was given ether and operated upon, but death resulted in twenty-four hours.

The lesson to be learned from the cases of umbilical hernia above reported would seem to be: 1. That, no matter how many hours (even up to the end of five days) the omentum and several feet of the intestine had been outside of the body, recovery was possible through their replacement and retention by operation. 2. Recovery, in these cases at least, resulted most frequently when only the skin was sutured together and the operation for permanent cure postponed for future consideration.

TRAUMATIC RUPTURE OF THE GALL-BLADDER WITHOUT INJURY OF THE LIVER; SIXTY-FOUR OUNCES OF BILE IN THE ABDOMINAL CAVITY; RECOVERY.

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C., a boy five years old, was injured by a heavy express wagon, the wheels passing across his pelvis and abdomen, but whether he was upon his back or abdomen during the time of injury is unknown. The skin was not broken except in the left groin, but ecchymoses showed injury at the left hip and pelvis. No fractures of the pelvis or other bones were discovered. There was marked shock, but no collapse such as would have been expected from internal hæmorrhage if the liver substance had been torn. He passed no blood subsequently in the urine or from the rectum. During the following two weeks his temperature was reported to have run as high as 103° F. His stools, I afterward learned, were clay-colored, and he was obstinately and continuously constipated, but not jaundiced. There was marked tympanites, with tenderness in the right lower abdominal quadrant, but no tumor could be felt. He remained in bed for two months, at the end of which time his spine was found very tender and rigid.

He was brought to me three months after the injury. I first saw him after a journey of two thousand miles; there was extreme exhaustion, intense pain in the abdomen and back, marked bulging and extreme tenderness in the entire abdominal zone, front and back, and absolute rigidity in the lumbar and lower dorsal regions, with decided kyphosis, the spinous processes projecting, not angularly, but in a long curve; the respiration was grunting.

The abdomen was tensely distended by an elastic fluctuating mass, which occupied the entire lower segment as high as the umbilicus and the entire right side as high as the epigastrium; the left hypochondriac region was the only area which was resonant, the other three quarters of the abdominal cavity giving a perfectly flat note on percussion.

He was put at absolute rest with head extension to relieve the traumatic spondylitis.

Although his blood count did not show marked leucocytosis, and in spite of the fact that the fluctuations in temperature were not great, the fluid in the

abdomen was considered to be pus; its origin either from the spondylitis or from a traumatic purulent appendicitis.

An exploratory incision was made in the right iliac region. On opening the peritonæum a thin greenish-yellow fluid, almost pure bile, gushed forth and continued to flow until sixty-four ounces (two quarts) were drained off, with entire subsidence of the abdominal tumor. There was no pus or blood. As the boy was in an extremely low condition, the prolongation of the incision upward, or a second incision over the gall-bladder with the sewing of the rent in its wall, would undoubtedly have resulted in his death; the wound was therefore closed to await a favorable time for a second operation. The patient began immediately to improve; pain ceased; appetite returned, and sleep, which had been greatly interfered with, became normal. The fluid slowly reaccumulated, however, and during my absence from the city he was aspirated two weeks later, thirty-two ounces of bile being withdrawn. Following this, the reaccumulation of fluid was so slow, and the improvement in general condition so marked, that I decided to await developments rather than to operate, especially as the stools showed biliary secretions that were nearly normal and digestion and assimilation were excellent. Head extension and dorsal rest were enforced, to control the traumatic spondylitis. Four weeks later a protrusion appeared at the line of the wound; this was opened aseptically and about two ounces of bile flowed from the opening. A long rubber tube was then carried upward to the site of the gall-bladder, and withdrawn slowly at each dressing. The flow of bile diminished daily and ceased entirely two months and a half after the first operation. The sinus slowly closed with stimulation by curetting, mopping with tincture of iodine, etc., until the final closure was secured six months after the first incision. A spinal support was adjusted three months after the first operation, and the child ran and played throughout the remainder of the convalescence without pain or discomfort. The stools were perfectly normal, and nutrition was perfect. At the present writing he is apparently in perfect health.

Rupture of the gall-bladder alone is exceedingly rare. It is difficult to explain how it could occur from a wheel injury such as was sustained by this boy without a rupture of the substance of the liver or some other organ. It is hardly probable that he had any gall-stones in the bladder, as he had had no previous difficulty, and there was no probability of its having been tensely distended. Since he recovered, of course it is impossible to determine whether the tear was in the duct or in the gall-bladder; the former would seem more probable on account of the slow accumulation of bile, but the wide distribution of this fluid over three fourths the abdomen would, on the contrary, indicate that the escape had been sudden. The only clinical symptom that would point to this accident, aside from the general ones of vomiting, shock, etc., would be the presence of bile in the urine and the absence of bile in the stools, a condition that could

not be determined for several days after an accident. The treatment for a wound of the gall-passages alone, would, of course, be absolute rest. If a diagnosis could be made at once (which is very improbable), laparotomy, suture, and drainage would be the surest method. Such was the course expected to be undertaken in the case of the patient, but his rapid improvement after the withdrawal of the bile deterred me from the operation, and the ultimate result, though tardy, was eminently satisfactory.

Agnew states that few recoveries follow wound of the gall-bladder. Two such accidents are among the cases of liver wounds reported by Otis.¹ Ashhurst states that, if the gall-bladder itself gives way, death usually follows immediately. Stromeyer records only a single instance in which the patient got well after such a wound.

Rupture of the gall-bladder or of the biliary ducts is apt to be followed by speedy death from peritonitis.² Experiments on animals show that the fatal termination is brought about, not so much by the sudden escape of bile, as by the continual pouring out of fresh quantities.

Sir Benjamin Brodie's experiments by ligation of the ductus choledochus show that the inflammatory adhesions thrown about such a ligature not only shut off the peritoneal cavity, but within two or three weeks result in a new route for the bile being established into the bowel.

Winni³ has shown by experiments that normal bile has no septic action, but that small amounts are readily absorbed. Large effusion would be liable to give rise to fatal sero-fibrinous peritonitis, unless removed surgically. The indications for operation would be the extent of bile pigment in the urine, absorption of the bile occurring immediately after its effusion into the peritoneal cavity.

A few cases are on record which prove that, if the continued escape is prevented, recovery may take place.

Barlow⁴ reports a case of a man who lifted a heavy ladder. Collapse ensued; he passed no bile by the bowel. Diagnosis: rupture of the bile ducts. He was treated by tapping at intervals of ten days, withdrawal of four or six quarts of fluid at each operation. Three months after the operation bile was reported normal in the stools. Well at end of six months.

In Fryer's⁵ case there was a violent blow over the liver. Great shock. Three days later, white stools and jaundice. At the end of three weeks the pa-

¹*Medical and Surgical History of the War of the Rebellion*, Part 2, Surgical Volume, p. 148.

²Ashhurst, *International Encyclopedia of Surgery*, Vol. v, p. 883.

³Sixth Congress, Italian Surg. Soc., *Riforma medica*, Naples, 1893: *Annual of the Universal Medical Sciences*, Vol. iii, 1893, C. 28.

⁴*Medico-chirurgical Transactions*, 27, p. 378.

⁵*Ibid*, *Medico-chirurgical Transactions*, Vol. iv, p. 330.

tient was tapped; thirteen pints bile; twelve days later, fifteen pints; nine days later, thirteen pints; ten days later, six pints; bile in the stools at the end of six weeks. Recovery.

Roux⁶ reports a rupture of the liver and bile passages from which seven quarts of fluid containing biliary pigments were withdrawn, followed by recovery. The urine contained bile, and the stools were ash-gray. As bile is normally an aseptic fluid, it need not necessarily produce peritonitis.

Thomas⁷ reports a rupture of the gall-bladder from a blow on the abdomen. Laparotomy was performed three weeks later, and three quarts of bile and fluid removed. Recovery, though slow, was complete.

In a wheel injury,⁸ the gall-bladder was ruptured. Seventeen days later a laparotomy was performed and ten ounces of bile were removed from the peritoneal cavity. The gall-bladder could not be reached owing to distention, but drainage resulted in recovery, with closure of the fistula in three months.

The following fatal cases are recorded:

Skeete⁹ reports a case of a boy who had a fall. Sixteen pints of bile were withdrawn on the twenty-fourth day. The patient died six weeks after the accident. At the autopsy two gallons of bile were found in a walled-off cavity.

Fergus¹⁰ records the case of a boy who had a wheel injury. Amount of shock, trifling. Great pain in the abdomen. The patient died on the ninth day after the accident. Autopsy: The liver was found to have been lacerated to a depth of two inches and a half; the gall-bladder was ruptured above and near the junction of the hepatic with the cystic duct. There was a large quantity of bile in the abdominal cavity.

Battle¹¹ reports a case of a boy, six years old, run over by a wagon. Slight shock; few abdominal symptoms; but the patient died on the ninth day. The common bile duct was torn completely through, but the liver and gall-bladder were intact.

Leseure¹² mentions five cases, in four of which death occurred quickly. The fifth patient, a child, lived until the fourth day.

In Sutton's case, abdominal pain steadily increased from the time of injury. Jaundice and great abdominal distention supervened, and death occurred on the thirty-eighth day.

⁶*Bulletin médical*, December 8, 1895; *Marseille médical*, August 25, 1895.

⁷*Deutsche medicinische Wochenschrift*, July 14, 1892.

⁸*New York Medical Journal*, April 29, 1894.

⁹*London Medical Journal*, Vol. vi, p. 274, 1785.

¹⁰*Medico-chirurgical Transactions*, Vol. xxxi, p. 47.

¹¹*British Medical Journal*, April 7, 1894.

¹²*Sur les ruptures et les perforations de la vésicule biliaire*, Paris, 1824.

THE VALUE OF THE EOSINOPHILE COUNT IN THE DIFFERENTIAL DIAGNOSIS OF HUMAN BLOOD.*

By ORRIN S. WIGHTMAN, B. A., M. D.,

NEW YORK.

About one year ago my attention was called to a statement in one of the medical journals that "human blood could be differentiated from the blood of animals by the relatively high percentage of eosinophile cells present in human blood."

For the purpose of carrying out the test, Dr. Huddleston kindly secured a large number of blood smears obtained from animals apparently in a healthy condition, and, after fixing with heat, stained them with Ehrlich's triacid stain. These smears included specimens from the horse, goat, white rat, sheep, gray rabbit, calf, and pigeon, which latter, being a nucleated corpuscle, of course required no differentiation.

Before entering into the comparative results obtained it might be wise to turn briefly for a moment to the history of the eosinophile cell.

The eosinophile cell is a coarsely granular polynucleated cell, closely resembling the polymorphonuclear cell, but having coarser and more deeply stained basic granules, which are loosely grouped about the nuclei.

Ehrlich's triacid stain renders the granules very distinct and of a copper or burnt sienna color, while the nuclei are a pale blue and more evenly stained than the polymorphonuclear cell.

Gaillard has observed that eosinophiles are probably formed in bone marrow and that they may arise in the thymus or lymph glands. Ehrlich concurs in this, and Kanthack and Hardy add that they also originate in the connective tissue and serous spaces. Engel has found eosinophiles in the human thymus and lymph nodes before their appearance in bone marrow. He states that mitotic changes take place in the bone marrow and that eosinophiles are derived from the neutrophilic granules; Ewing justly adds that the demonstration of this last assertion is lacking.

From the foregoing facts we are led to believe that the home of the eosinophile cell is in the bone marrow and glands, and that its appearance in normal circulating blood is almost a coincidence, or, as Cabot says, "a mistake."

Cabot observes that the eosinophile cell is the most actively amœboid of all the corpuscles. Sherrington concurs in this, but adds that it is not phagocytic. This latter statement may explain why eosinophiles are generally increased in conditions of general inflammation or malnutrition, and not in

*Read before the New York Pathological Society, Wednesday, January 8, 1902.

acute trauma, where other members of the white cell group are markedly increased.

The normal percentage of eosinophile cells in healthy human blood varies from $\frac{1}{4}$ to 4 per cent. According to Cabot, among those conditions causing an increase in the number might be mentioned under general headings:

1. Diseases of the bone involving the medullary structures.
2. Diseases of the skin.
3. Diseases involving the genito-urinary system.
4. Certain parasitic conditions of the intestines.
5. Malignant tumors.
6. In post-febrile conditions after pneumonia, articular rheumatism, and malaria.
7. Asthma, of which they are a constant accompaniment.
8. The use of certain drugs, such as camphor, antipyrine, etc., in connection with which they are usually present.

The possible causes of an eosinophilia are so varied that its presence in human blood might very easily be explained in spite of the low percentage normally present; but even eliminating every ordinary causal factor, in a healthy adult we still have the normal percentage of from $\frac{1}{4}$ to 4 per cent.

Turning now to a comparative study of animal blood we find the same classification of white cells holds good, viz., large and small lymphocytes, polymorphonuclear cells, eosinophile cells, eosinophilic myelocytes, etc. With the same cell structure and an identical cell composition we are justified in believing that the physical status of animals would bear a distinct relation to the proportion of the kind of white cells present. In other words, it offers a parallelism to human blood as to cause and effect and would show a difference in eosinophile count according to the status of the animal at the time the specimen was taken.

In the following subjects the animals were presumably healthy, all eating and drinking as usual, and showed no evidence of disease. Five hundred cells were chosen as a basis for counting.

ANIMAL BLOOD.

TABLE OF BLOOD COUNT.*

Animal.	No. of smears counted.	Lymphocytes, large and small.	Polymorphonuclear cells.	Eosinophiles.
Horse	5	90 —94.8%	3.2—5.2%	2.8—4.8%
White Rat . . .	4	86 —90 %	2 —4 %	4 —5 %
Sheep	4	59 —73 %	30.4—33 %	7.8—8 %
Pigeon	4	72 —97.6%	1 —10 %	2 —0 %
Gray Rabbit . .	3	77.8—88.2%	11 —20 %	1.2—2.4%
Calf	3	68 —74.4%	22.6—27 %	3 —5 %
Goat	1	34 %	64 %	2 %

*This table is made on a basis of 500 cells to a count.

Five specimens of horse blood were examined, showing:

Large and small lymphocytes, from. . . 90 —94.8%
 Polymorphonuclear cells, from. 3.2—5.2%
 Eosinophile cells, from. 2.8—4.8%

Four specimens of white rat's blood showed:

Large and small lymphocytes. 86—90%
 Polymorphonuclear cells. 2—4%
 Eosinophile cells. 4—5%

Four specimens of sheep's blood showed:

Large and small lymphocytes. 59 —73%
 Polymorphonuclear cells. 30.4—33%
 Eosinophile cells. 7.8—8%

Four of pigeon's blood, which being nucleated required no differentiation, showed:

Large and small lymphocytes. 72—97.6%
 Polymorphonuclear cells. 1—10%
 Eosinophile cells. 2—9%

Three specimens of gray rabbit's blood showed:

Large and small lymphocytes. 77.8—88.2%
 Polymorphonuclear cells. 11 —20%
 Eosinophile cells. 1.2—2.4%

Three specimens of calf's blood showed:

Large and small lymphocytes. 68 —74.4%
 Polymorphonuclear cells. 22.6—27%
 Eosinophile cells. 3 —5%

One specimen of goat's blood showed:

Large and small lymphocytes. 34%
 Polymorphonuclear cells. 64%
 Eosinophile cells. 2%

In all of these animals we find a relatively high lymphocyte count, varying from 34 per cent., low, in the goat to 97.6 per cent., high, in the pigeon. From 20 to 30 per cent. is normal in human blood.

The polymorphonuclear cell count varied from 1 per cent., low, in the pigeon, to 64 per cent. in the goat. The normal human percentage for the same cell varies from 67 to 70 per cent.

The eosinophile cells, in which we are most interested, varied from 1.2 per cent., low, in the gray rabbit, to 8 per cent., high, in the sheep.

As a whole, then, the blood of the animals examined showed a high lymphocyte count, a small polymorphonuclear count, and an eosinophile count averaging 3.82 per cent. The eosinophiles fall nicely within the normal human count and could in no wise be distinguished from them.

From my examinations of a few specimens of human blood taken from patients suffering with well-marked symptoms of disease, a case of leprosy showed 6 per cent. eosinophiles, one of pityriasis rubra 1 per cent., one of psoriasis 3 per cent., one of dermatitis herpetiformis 5 per cent., one of lupus 3 per cent., one of dermatitis exfoliativa 4 per cent., one of chronic Bright's 1 per cent., one of phthisis (second stage) 2 per cent., one of syphilis 1.5 per

cent., and one of chronic asthma 3.5 per cent.

In conditions mentioned it is usual to obtain a much higher percentage. Summing up, then, I think we are justified in concluding:

(1) That in this series examined eosinophilia may occur in higher percentage in animal's blood than in human blood.

(2) That the physical condition of the animal whose blood is to be compared may play an important part in the increase or decrease of eosinophiles present.

(3) That in the specimens examined the polymorphonuclear counts were low and the lymphocytes high, exactly contrary to conditions present in normal human blood.

(4) That the eosinophile count is not a constant or trustworthy factor in diagnosis, but, on the other hand, is very unreliable and unsatisfactory; and, finally,

(5) As a comparative test the eosinophile count is a negative quantity.

Correspondence.

LETTER FROM MANILA.

Sanitary Progress in the Philippines.—Reduction of the Death Rate.—The Campaign against the Oriental Plague.

MANILA, P. I., January 15, 1902.

To those of the profession who are following the progress of medicine in the far East—particularly the recent graduate, unencumbered with family ties or a macroscopic practice, who expects, soon or later, to cross seas and grow up with Oriental America—a line from one long enough in the Philippines to become familiar with men and measures may be of some interest.

When the army of occupation entered the city of Manila, in August, 1898, its medical corps faced problems, professional and sanitary, that had never before presented in its history. With three centuries of grossest misrule and ages of ignorance for its heritage, it was not surprising that the capital should be found deficient in all those agencies that western cities have adopted for the protection of the public health.

There was no sewerage, no attempt at a disposal of garbage, no adequate unpolluted water supply. The streets were, for the most part, unpaved and the alleys littered with filth of every nature; the natives were huddled together in foul nipa shacks, in glad companionship with all their domestic animals, while the squalor and wretchedness among the Chinese beggared all description.

So soon as comprehensive plans could be formu-

lated, men were detailed, money was appropriated, and with characteristic zeal and the efficiency born of discipline conditions were altered so as to render Manila habitable for people with unblunted senses. While the troops were rounding up insurgents in their jungle and mountain fastnesses, warfare no less keen and unremitting was being waged on this more insidious foe within our gates, and it has been prosecuted splendidly, successfully.

The streets no more regale one with a myriad of Oriental stench; waste is disposed of; the bucket system for the removal of excreta is being instituted; vaccination is compulsory; neat public parks replace former muddy squares; the water supply is guarded; and, most satisfactory of all, the death rate has been decidedly reduced.

The attention of the entire health department is now being concentrated upon the extermination of bubonic plague, which secured a foothold in Manila in January, 1900. Aside from the serious menace of a great epidemic, there is the commercial element involved which makes this of first importance, and nothing is being left undone to uproot the pest which has caused such disaster in India and China. In 1900 several hundred cases occurred. In 1901 seven or eight hundred natives and Chinese died of the disease, and the third epidemic has just announced its advent in the death of seven persons, one an American. In all cases of its appearance in whites, relations with low-class native women have been in evidence.

The means employed in the prevention of its propagation are essentially those used by the authorities in Japan, where the plague has been confined to an occasional case. These embrace a vigorous crusade against rats throughout the entire city and among the shipping, the destruction or disinfection of infected houses, the erection of detention camps for "contacts," and a well-equipped hospital, laboratory, and experimental station. The Shiga serum is being used with most gratifying results.

In a future letter the steps taken for the care and segregation of lepers will be outlined.

The Distribution of Antitoxine in Massachusetts.—The annual report recently issued by the Massachusetts Board of Health shows that in the year ending on March 31, 1896, 1,724 bottles of diphtheria antitoxine were distributed, without charge, by that body. For the subsequent years antitoxine was distributed as follows: In 1897, 3,219 bottles; 1898, 4,668 bottles; 1899, 12,491 bottles; 1900, 31,997 bottles; 1901, 53,384 bottles. Moreover, the strength of the antitoxine distributed has increased from 1,000 units, as dispensed at first, to 1,500 units per bottle. In round numbers the total value of this antitoxine at the regular market prices would be about \$175,000.

Therapeutical Notes.

The Treatment of Pyorrhœa Alveolaris.—Baldwin Keyes, D. D. S. (*Dental Cosmos*, January) says that "all are agreed as to the first stage of treatment,—the removal of all deposits from the teeth, both above and below the edges of the gums. This must be done thoroughly, as the smallest little spicule of calculus left behind will keep up the irritation. * * * It is in the subsequent treatment of the pus-pockets that differences of treatment arise." The author describes the following method as having given him the best results.

First remove all the deposit which it is possible to get away with instruments, and then with a flattened, fine point of soft wood rub the necks and down on the roots with aromatic sulphuric acid, to be followed immediately with sodium bicarbonate. This process leaves the pockets absolutely clean and the roots smooth. The perfect removal of all irritating bodies is a *sine quâ non*.

For the treatment of the diseased conditions of the gums, he relies upon preparations of silver, which are without doubt the most efficient germicides for our purpose, and at the same time have a most happy effect in stimulating the gums to a healthy action and in hardening them by its powerful astringent properties.

He uses the nitrate in the form of a saturated solution carried on a bit of absorbent cotton, or the pure crystals melted on to the point of a platinum brooch, and also a solution of silver nitrate in ethylenediamine. It is a powerful antiseptic and germicide, and has the great advantages over silver nitrate that it is alkaline in reaction, does not precipitate chlorides or albuminoids, and penetrates deeply into the tissues. It is thus an ideal agent for the treatment of pus-pockets. It is best to begin with a weak solution, say ten per cent., and subsequently to double this strength. He applies it to the interior of the pockets with a tiny piece of absorbent cotton wrapped round a fine silver probe. The result of this treatment is often almost miraculous. In a very few days the whole appearance of the mouth is altered, and the discharge ceases; the gums become firm and contract tightly around the teeth, and an application at intervals for the next few months will in most cases practically cure this usually obstinate affection. As a subsequent mouth-wash or dentifrice, to be used with a brush, he has obtained the best results from preparations containing salicylic acid and rhatany, to be twice used daily. These two drugs seem to possess peculiar properties in maintaining the gums in a healthy condition and the mouth in an aseptic state.

The Iodine Treatment of Malarial Fever during the Access.—Dr. Regnault (*Revue de médecine*, September 10, 1901) says that quinine salts act only by prevention of evolution of the protozoon. They are useless, therefore, during the access. But the fever is often irregular and cannot be foreseen, so that it is not always possible to anticipate it by giving quinine in advance. During the access, the frequent occurrence of sweating, vomiting, bilious stools, and urine, suggest by analogy with what occurs in other febrile affections, the influence of a toxine. The occurrence of nervous troubles, espe-

cially polyneuritis, often following intense or repeated accesses, confirms this view.

Now, toxines are destroyed or attenuated *in vitro* by iodurated iodine solutions, which penetrate easily into the blood current. The author, acting on these views, treated soldiers in the Tonking suffering from a bilious gastric form of fever in this manner and obtained surprising results. Fifteen minutes after taking the remedy marked amelioration took place; rigors ceased, respiration improved, the dry skin became moist, bilious vomitings were lessened, etc. The same treatment has been applied with equally good results in Europe. The soldiers themselves soon learnt to ask for the "brown quinine" during an access. Dr. Regnault's formula is as follows:

R Tincture of iodine..... 60 minims;
Potassium iodide..... 60 grains;
Distilled water..... 3 ounces.

M.

A coffeespoonful in a little water at the beginning of the access; a second coffeespoonful fifteen or twenty minutes later if the amelioration is slow in appearance. In cases where there is vomiting, fifteen drops of ether may be added to the first dose. Shortly after taking it, the patient may drink weak tea with a little spirit in it. Quinine should not be given for at least an hour after the iodine on account of incompatibility.

Quinine still remains the great specific, probably aided by methylene blue; but these should be taken *before the access*. The iodurated solution is indicated at the beginning of the access or during its continuance.

Treatment of Vomiting in Pulmonary Tuberculosis.—Pegurier (*Journal des praticiens*, April 27, 1901) recommends (1) calming the excitability of the gastric mucous membrane by means of small pieces of ice swallowed after meals, or by the administration of certain anæsthetic substances. The following formulæ may be used:

R Chloroform water, }
Orange flower water, } of each... 8 ounces.

M. One or two dessertspoonfuls after meals.

Or

R Menthol..... 3 grains;
Julep..... 5 ounces.

M. Two to four dessertspoonfuls after meals

(2) The treatment of any local cause of the gastric irritability, such as complications involving the pharynx or epiglottis. The application of the following solutions is followed by temporary relief:

R Potassium bromide..... 45 grains;
Glycerin..... 1 ounce.

M. Apply to the pharynx before each meal.

Or

R Cocaine hydrochloride..... 30 grains;
Water..... 3 ounces.

M.

Apply to the pharynx before the time of vomiting.

Or

R Diiodoform..... 120 grains;
Cocaine hydrochloride..... 1 1/3 "
Morphine hydrochloride..... 3/4 grain.

M. For insufflation.

In rebellious cases lavage of the stomach is indicated.—*American Medicine*, February 8th.

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POPULAR INSTRUCTION AS TO TUBERCULOUS DISEASE.

It is generally conceded that high art is required in a writer who seeks to interest children in story or song. Quite as much, we are persuaded, is it called for in physicians who undertake to instruct the general public as to medical matters. Feeling this, we must accord great praise to the anonymous authors of two popular tracts lately published for gratuitous distribution by the Pennsylvania Society for the Prevention of Tuberculosis. Tract No. 1 is entitled *How to Avoid Contracting Tuberculosis (Consumption)*, and No. 2 bears the title *How Persons Suffering from Tuberculosis can Avoid Giving the Disease to Others*. How to avoid contracting so destructive a disease is a subject that necessarily interests everybody, more particularly those who have reason to suppose that they are the victims of inherited or acquired predisposition to infection. The author of Tract No. 1 emphasizes the infectious nature of the disease, and shows that no sort of predisposition is of itself sufficient to precipitate it, for it must arise from a preceding case. In addition, he points out the benefit that the predisposed may obtain in striving to avoid infection by suitable pulmonary gymnastics and hygienic living in general, going into very practical details as to the avoidance of contamination with sputum. At the same time he inculcates the wholesome lesson that the consumptive's breath is not injurious and that he himself is not to be shunned—indeed, that with very simple precautions he can safely have almost unrestricted companionship with the healthy. The main purpose of the tract is to show that the consumptive is a person to be managed, but not one to be excluded from society.

Tract No. 2, as its title plainly states, is intended to instruct the conscientious subject of tuberculous disease in the precautions that he should take to avoid imparting it to others. Of course, such tracts as these, each consisting of hardly four octavo pages, do not purport to tell the whole story, but we believe that by circulating them the society is paving the way for the accomplishment of a vast amount of good in limiting the prevalence of the disease that is now most destructive of human life. It is to be hoped that similar means of diffusing sanitary knowledge will be adopted elsewhere than in the State of Pennsylvania, for the public is greatly in need of instruction. It is our belief that practically every consumptive would conscientiously strive to the best of his ability to avoid spreading the infection, if only he were suitably guided in his efforts. It is chiefly by the diffusion of elementary (but not too vague) knowledge among the people, such as is taught in these two tracts, that we may hope to reduce the prevalence of tuberculous disease.

VACCINATION BEFORE THE ACADEMY OF MEDICINE.

Last week's general meeting of the New York Academy of Medicine was devoted to the subject of vaccination, with rather special reference to the relative advantages of glycerinated vaccine and dried lymph. The first paper presented was by Dr. Rosenau, of the Marine-Hospital Service, who dealt exclusively with the comparative numbers of micro-organisms found in numerous examinations of the two forms of virus. The specimens had all been obtained in open market, and in most instances the dried and the glycerinated vaccine of a given producer were compared, but not in all, for there are a few producers that do not furnish both varieties of vaccine. The general drift of Dr. Rosenau's observations went to show that glycerinated virus was usually freer from bacterial contamination than dried lymph, though our representative at the meeting got the impression that the largest number of bacteria found in any single specimen had been in a sample of the glycerinated. The most striking feature of Dr. Rosenau's report was that which showed the immense numbers of bacteria present in many specimens of glycerinated vaccine and the great range of those numbers. The author drew the inference from these findings that in many in-

stances the producers of glycerinated vaccine were putting too "green" an article on the market, an article that had not yet been sufficiently acted upon by the glycerin. Prolonged action was necessary, he said, after which for a comparatively short time the virus was of standard vaccinal potency without more than the minimum of toxic virulence, but after that it declined in efficiency.

The bacteriological consideration of the subject of the comparative merits of the two forms of virus was supplemented from the clinical point of view by Dr. Fielder, who read a very carefully prepared report of the results that he had observed in a large number of recent vaccinations of infants, giving the percentages of success and failure with each form, together with practical details as to the severity of the resulting lesion, etc. The report was decidedly favorable to the glycerinated virus, but it seems to us to be almost invalidated as to that point by the evident fact that the dried lymph used by the author was of remarkably poor quality; the results he obtained with it were only such as one would expect to meet with in secondary vaccinations, provided a good specimen of dried lymph was employed. In a considerable number of Dr. Fielder's comparative tests the dried lymph used was that obtained after the removal of the "pulp" from the pock, and it appeared that his object, in part, had been to test the efficiency of such lymph as compared with what may be called the "whole" lymph, namely, that which filters through the "pulp." This "pulp," be it explained, is a milk-white layer of pultaceous matter consisting of dead epidermis, together with the necrosed tips of such of the underlying papillæ of the derma as may have been severely enough affected by the vaccinal congestion. It is the material out of which glycerinated vaccine is manufactured. In its meshes are undoubtedly entangled most of the organisms or corpuscles—whatever they may be—which constitute the contagium. This "pulp" is very potent, but it swarms with bacteria. The object of the glycerinizing process is to render these bacteria harmless.

Dr. Huddleston, of the city board of health, related certain experiments which had been made in the board's laboratory on the question of the possibility of vaccine becoming contaminated with the tetanus germ in the ordinary processes of collection. He concluded that the possibility existed, but that

it was a mere possibility—practically, the thing had never occurred, and in all probability it never would occur. Thus was completed an evening's consideration of certain points connected with a subject of the greatest importance to every general practitioner of medicine, and one that, unfortunately, seldom meets with much attention save in the presence of a small-pox epidemic. All the papers of the evening bore testimony to their authors' paramount effort to get at the truth rather than to bolster up preconceived notions; it was a wholesome evening's work.

THE LEAGUE AGAINST SEASICKNESS.

Truly these are the days of organized campaigns against disease. One of the most recent of them is the work of a league against seasickness, an affection that often is really a serious matter. The first result of the league's endeavors that has come to our notice is in the shape of a little pamphlet issued under the direction of the secretary-general, Dr. Madeuf, entitled *Le Mal de mer; comment on s'en préserve, comment on en guérit, comment on le soigne*. The pamphlet asserts that seasickness is both avoidable and curable, and goes on to enumerate the predisposing causes of the trouble, together with various more or less well known means of correcting them and of combating the affection itself. The recumbent posture, on deck so far as possible, is recommended, and the author falls in with the general impression that the berths should run lengthwise of the vessel.

Particular emphasis is given to the importance of immobilizing the abdominal organs, either by the use of a compressive binder or by lying on the side with the knees so drawn up that they make strong pressure upon the abdominal wall, the upper portion of the body being bent forward so as to aid in securing firm pressure of the knees upon the abdomen. It is pointed out that many sufferers from seasickness instinctively assume the posture mentioned and strive to make pressure upon the abdomen, so that we cannot see that the author of the pamphlet, in thus dwelling upon the importance of abdominal compression, has added materially to our resources for overcoming this distressing and sometimes dangerous affection.

Among the drugs recommended, with an apparent *penchant* for the therapeutical fad known as

"dosimetry," are strychnine arsenate, sulphate, and hypophosphite, hyoscyamine, morphine hydriodide and hydrobromide, and podophyllin and salines in cases of constipation. Such preventive and palliative measures are advised as are to be found sanctioned in almost any systematic treatise on the subject, and no others, so far as we can perceive. This fact seems to us to justify the familiar German comment *Nichts neues*. Nevertheless, we feel that the league ought to be encouraged to go on in its humane undertaking, and we hope that its labors will finally give us the mastery of seasickness.

AN OUTRAGEOUS VERDICT AGAINST A PHYSICIAN.

We learn from the *Philadelphia Medical Journal* for February 22d that a physician of that city recently vaccinated a child with, as he alleged, all aseptic precautions, and that four weeks later, the vaccination lesion having healed in the mean time, the child was attacked with impetigo contagiosa, a trivial affection, and subsequently with diphtheria, of which it died. The physician was sued for damages, and the jury found against him. "If such a verdict is to stand," says our contemporary—and we quite agree with it—"it means that every physician is in jeopardy, and that such cases are not to be determined according to the known facts of medical science."

THE MANAGEMENT OF SNOW IN THE STREETS.

It was the privilege of the editor of the *New York Medical Journal* to know the late Colonel Waring rather intimately, and he repeatedly urged upon the Colonel during his incumbency of the street-cleaning commissionership the superiority of the system of piling up snow in the middle of a street over that of allowing it to accumulate in the gutters and by the side of them. It was not until toward the close of his term of office that Colonel Waring felt justified in making the trial, although it had several years before been shown to work well in Madison Avenue. Having at last resolved to try the experiment, he never again had the opportunity. The matter has a sanitary aspect, or we should not mention it. The piles of massed snow that now obstruct the sides of many of the streets can plainly be seen to be serving as receptacles for garbage and for rubbish of the most varied sorts, the former decomposing in the sunshine of a fair day and the latter gradually settling to the pavement to greatly hamper the street cleaners in the work they will have to undertake when the subsidence of the snow heaps admits of their doing so. Of course the plan we advocate cannot be carried out in those streets where there are surface railways, but in all the others it can, and we

feel warranted in calling Dr. Woodbury's attention to it. It is hardly likely that we shall have another heavy fall of snow in New York this season, but we feel that the mid-street plan of dealing with a mass of snow has advantages that ought to commend themselves to the present commissioner, and we are glad to know that it has recently been advocated by one of the more influential of the newspapers.

A NEW JOCULAR PUBLICATION.

We have been much amused with a copy of the *Medical Gewalt*, dated February 14th (St. Valentine's day, be it noted). It seems to be the work of some alumnus or some of the alumni of Mt. Sinai Hospital. It is as entertaining as an old-time negro minstrel show. Instead of the usual copyright entry we find this: "Copy writ by the editor and admitted to be first-class stuff." The editor has done us the honor of asking us to exchange with the *Gewalt*. We should be very ready to do so, and we hope that he is not joking when he says that the number sent to us is "the first and last issue." We are encouraged in this hope by his declaration that "just as this issue is better than any previous one, we promise that the next issue of the *Gewalt* will be better yet." The *Gewalt* is described as "owned, controlled, and published for the amusement of the editor." We fear, however, that by spelling the word controlled in the ordinary way the editor has debarred his journal from ranking with those that are fond of similar announcements.

TRACHEOTOMY IN PARTURITION.

It is well understood that in many instances of breech presentation in which delay in the extraction of the head is unavoidable the prompt substitution of pulmonary for placental respiration is a necessary procedure. It is often possible to accomplish it *per vias naturales*, but Stowe (*Semaine médicale*, 1901, No. 46) lately resorted to tracheotomy performed above the isthmus of the thyroid gland, the perinæum being retracted and the child's body pulled forcibly up over the mother's abdomen. After the incision had been made, air was blown into the trachea with an insufflator alternately with compression of the thorax. When spontaneous respiration had been established, the head was extracted with the forceps. At first, the breathing was exclusively through the incision, but in five hours the wound had closed. An abstract of Stowe's article appears in the *Berliner klinische Wochenschrift* for January 27th, and the author of it commends Stowe's operation, but thinks that one executed below the thyroid isthmus would be easier on account of the field's being more accessible.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 3d.—New York Academy of Medicine (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association (annual); Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, March 4th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, March 5th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, March 6th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canadagua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 7th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical.

SATURDAY, March 8th.—Obstetrical Society of Boston (private).

Dr. Herman Jarecky has been appointed visiting otologist to the Harlem Hospital.

Dr. W. O. Green has resigned his chair as clinical lecturer on diseases of the rectum in the Kentucky School of Medicine, at Louisville, after eight years' connection with that institution.

The Battle Creek (Mich.) Sanitarium, conducted by Dr. Kellogg, was burned recently, entailing a loss estimated at \$400,000, of which \$150,000 was covered by insurance. The institution is to be rebuilt immediately.

A Bacteriological Laboratory for the Study of the Plague is to be established at Silvi-Bouron, on the Bosphorus near Beicos. Huts for the accommodation of patients suffering from the plague have recently been erected there. Dr. Chevki Bey and Dr. Nihad Bey have been sent by the Turkish government to India to make a study of the plague.

The Congress of German Naturalists and Physicians will be held this year at Carlsbad, from September 21st to 28th. All classes of the population, particularly the municipality and the medical profession, whose number amounted to 130 during the last season, are already engaged in making arrangements for a worthy reception of the members of the congress.

The American Laryngological, Rhinological, and Otological Society.—The eighth annual meeting of the American Laryngological, Rhinological, and Otological Society will be held in the city of Washington, D. C., June 2d, 3d, and 4th. A preliminary programme will be issued later by the secretary, Dr. Wendell C. Phillips, of this city.

To Inspect Sanatoria for Consumptives.—Dr. H. Longstreet Taylor, of St. Paul; Dr. J. L. Camp, Brainerd, and Dr. G. S. Wattam, Warren, composing the Minnesota State Consumptive Sanitarium Commission, are now making an Eastern trip to inspect the consumptive sanitariums in Canada, New York, Pennsylvania, and Ohio. They will investigate State and municipal methods for the care of consumptives now in vogue.

Massachusetts May Engage in the Manufacture of Vaccine.—On February 20th a hearing was given on the bill to authorize the State Board of Health to manufacture pure vaccine lymph and dispose of the same to physicians. This was favored by Dr. Durgin, who pointed out that this would do away with much of the present complaint arising from the use of impure vaccine. The measure was opposed by Messrs. Charles B. Parker, Charles A. Bassett, John K. Hasting, and Charles E. Kirke.

A City Bacteriologist for St. Louis.—A bill providing for the establishment of the department of bacteriology and pathology and for the appointment by the mayor of its head received its first reading in the city council. The bill was framed by Dr. Merrell and was introduced in the council at the request of the board of health by President Hornsby. The salary of the bacteriologist and pathologist, whose office is to be in the new city hospital, will be \$2,400 per annum.

Another Medical Victoria Cross.—The Victoria Cross, "For valor," has been conferred upon Surgeon-Captain T. J. Crean, of the First Imperial Light Horse. The following is the official statement of the cause: During the action with De Wet at Tygerskloof, on December 18, 1901, this officer continued to attend to the wounded in the firing line, under a heavy fire at only 150 yards range, after he had himself been wounded, and only desisted when he was hit a second time, and, as it was at first thought, mortally wounded.

Mt. Sinai Alumni Dine.—The regular annual dinner and reunion of the Association of the Alumni of Mt. Sinai Hospital was held at the "Arena," 39 West Thirty-first Street, February 14th, Dr. E. J. Ware presiding. Among those who delivered addresses were Mr. Isaac Wallach, president of Mt. Sinai Hospital; Dr. A. Jacobi, Dr. A. G. Gerster, Dr. E. Gruening, Dr. A. Meyer, Dr. B. Sachs, and Mr. L. Wiley. The following officers were unanimously elected for the ensuing year: President, Dr. Samuel M. Brickner; vice-president, Dr. Albert A. Berg; secretary, Dr. Charles Goodman; treasurer, Dr. Martin W. Ware.

A Climatological Congress in Italy.—A congress of hydrology and climatology will be held at Milan on March 22d under the presidency of Dr. De Christoforis. The organization of the congress has been carried out under the auspices of the Italian National Society of Hydrology. Among the members of the organization committee are Professor Mangiagalli and Dr. Bordoni-Uffreduzzi.

The New York Academy of Medicine.—A stated meeting will be held on Thursday evening, March 6th, at 8 o'clock, under the auspices of the Section in Surgery.

Dr. Francis H. Williams, of Boston, will present a paper on The Use of the X Ray in the Treatment of some Forms of Cancer. The discussion will be opened by Dr. William J. Morton. Dr. A. B. Johnson, Dr. John A. Fordyce, Dr. William B. Coley, Dr. Charles W. Allen, Dr. Percy Turnure, and Dr. George G. Hopkins have also been invited to take part in the discussion.

Sir William Hingston, of Montreal, recently celebrated the fiftieth anniversary of his graduation in medicine, which occurred at McGill University in 1851. He organized the first board of health in the Dominion of Canada. He is a past president of the Canadian Medical Association, an honorary D. C. L. of Bishop's College University, an honorary LL. D. of Victoria University, Toronto, and a vice-president of the Montreal Branch of the St. John Ambulance Association.

New York State Civil Service Examinations for positions in New York State and county departments and institutions will be held about March 15th in all the larger towns of the State. The following are among the positions for which applicants will be examined, the salary attached being mentioned: Associate in chemistry, \$1,800; associate in clinical psychiatry, \$1,200; chief associate in neuropathology, Pathological Institute, \$1,800; dentist, State institutions, \$480. For further particulars and application blank address Chief Examiner, State Civil Service Commission, Albany, N. Y.

A Surgeon Wins a Suit.—Judgment has been rendered in the Supreme Court in favor of Dr. Thomas H. Manley, the surgeon, in the action brought against him by Mrs. Selina Schneider for \$3,000 damages for the loss of her right thumb, which she contended had been needlessly amputated without her knowledge or consent. The action was tried before Justice MacLean and a jury, when a verdict in favor of Dr. Manley was returned. John M. Gardner, his counsel, called witnesses to show that all that had been detached from the plaintiff's hand was a diseased nail root. This, it was proved, was done with Mrs. Schneider's full knowledge and consent.

Additional Hospitals for Contagious Diseases.—Dr. Ernst J. Lederle, commissioner of health for the city of New York, has been devoting much of his time since he has been at the head of

the health department perfecting a plan to build five new hospitals in the greater city for the treatment of contagious and infectious diseases. He proposes to have a separate hospital for contagious diseases in each of the five boroughs. The health and comfort of the people, he declares, are of more importance than new bridges, new roads or new parks, and as soon as he has completed his plans he will ask the board of estimate for funds to carry them out. And he is confident that he will get the appropriation he will ask for.

A French Historical Medical Society.—A society for the study of the historical aspects of medicine was formed in Paris on January 29th. Following is a list of the officers: President, Professor Raphael Blanchard, member of the Academy of Medicine; vice-presidents, Dr. Motet, member of the academy; Dr. G. Ballet, professeur agrégé in the Medical Faculty of Paris; Dr. Dureau, librarian to the academy, and Dr. Triaire, of Tours; secretary-general, Dr. Albert Prieur, editor of *La France Médicale*; secretaries, Dr. MacAuliffe and M. Victor Nicaise; archivist, Dr. Beluze; treasurer, M. A. Prévost, of the secretarial office of the Faculty.

Proposed Changes in the Management of the State Charities.—The bill which has been prepared providing for a change in the methods of administering the charitable institutions of the State of New York keeps intact the State Board of Charities and the local boards of managers of the State charitable institutions. It, however, strips the local boards of all their powers, which mainly were the appointing of the superintendent and steward of their respective institutions. The proposed bill provides for the appointment by the governor of a general superintendent of the fourteen State charitable institutions, who in turn is empowered to appoint or remove the superintendents and stewards of these institutions. Thus it will be seen that, while the local boards of managers are allowed to remain in office, their powers will amount to no more than those allowed to the visiting committees for State insane hospitals.

The Movement to Unite the Medical Profession of the State.—At a recent meeting of the council of the New York State Medical Association the following resolution was adopted:

Whereas, the Medical Society of the State of New York, having appointed a committee to confer with a similar committee from the New York State Medical Association, with the view to a union of the two organizations and notice of such creation of a committee having been officially given to our president, together with a request that a corresponding committee be appointed by us; there, be it

Resolved, that this council (the executive board of the association) appoint for the purpose of the conference in question a committee of five, consisting of Dr. E. Eliot Harris as chairman, and Dr. William H. Biggam, Dr. Emil Mayer, Dr. Parker Syms, and Dr. Frederick Holme Wiggin, to which committee the president is added as a member ex-officio.

In Memory of Dr. Mundé.—The Association of the Alumni of Mount Sinai Hospital, at its last regular meeting, adopted the following resolution:

Death has taken our beloved teacher, friend, and helper, Dr. Paul F. Mundé, in the fulness of his fame and power. His universal kindness, his never-failing courtesy, his generosity, and, above all, his loyalty, rendered him dear to every member of the Mount Sinai Alumni Association. We shall never forget the lessons learned at his hand, and enforced by his precept. We are better physicians and better men for having lived in close contact with him. In the sorrow that we personally feel we extend to the family our sympathy most heartfelt and sincere, realizing, however, that it is impossible "to gild a grief with words."

DR. SAMUEL M. BRICKNER,
DR. ALBERT A. BERG,
DR. CHARLES GOODMAN,
DR. MARTIN M. WARE,
Committee.

The Annual Report of the Commissioner of Health of the State of New York has been submitted to the legislature. The commissioner recommends that \$2,500 a year be provided for the chemical examination of food and drugs, malt and other liquors. A fixed tenure of office for health officers connected with local boards is suggested, and it is held that the State Commissioner of Health should be empowered by law to require vaccination in any locality where perfect protection against small-pox requires it. Records of births, marriages, and deaths during the year show: Births, 139,389; marriages, 64,680; deaths, 131,788. The death rate was 18 per 1,000 population. The mortality was 7,500 in excess of the average of the last five years, but the rate was the same as that of 1900. The infant mortality was unusually low, being 3,500 less than in 1900 and 2,500 less than the average of the last five years. There were 110 places in the State in which one or many cases of small-pox occurred, there having been during the year 1,100 cases, with 19 deaths, outside of New York city, and 1,982 cases, with 426 deaths, in New York city and the maritime district.

New Medical Laboratories for the University of Pennsylvania are to be erected at a cost of \$600,000. The building will be fireproof. Its front, on Hamilton Walk, will be 340 feet, and the depth of its western wing 190 feet. Unequaled provision in respect of north light and of quiet and of freedom from dust has been made for original work in all three of the laboratories included in the building. Exceptional opportunities for individual laboratory work by the undergraduate students have been provided. The contract has been awarded in advance of the raising of the entire amount of money required, and has only been made possible by a gift received recently from friends of the university in the sum of \$75,000. This contribution was made to the provost without limitations as to its use and with permission to apply it to the new medical laboratories. The amount immediately available was increased by this contribution to \$300,000, so that the trustees have yet to raise \$300,000. It was felt that rather than longer delay the needed addition to the medical department the contract

should be awarded now and the remainder of the funds required be raised while the building was under construction.

The Skull of Sir Thomas Browne, author of the *Religio Medici*, has been placed in a casket and presented by Dr. William Osler to the Norfolk and Norwich (England) Hospital. The casket is of oblong shape, about 13 inches in length by 11 inches in width, and 11 inches in height. The four sides and top consist of crystal glass, with silver gilt mountings, and set on a stand of ebony. It was manufactured by the Goldsmiths' and Silversmiths' Company of London, and is an exceedingly choice work of art. On the stand are placed four gilt plates, on one of which is engraved the name of the donor, etc., and on the other three quotations selected by Professor Osler from the *Religio Medici*:

This casket was presented to the Norfolk and Norwich Hospital by William Osler, M. D., F. R. S., Professor of Medicine, Johns Hopkins University, Baltimore, 1901.

I believe that our estranged and divided ashes shall unite again; that our separated dust, after so many pilgrimages and transformations into the parts of minerals, plants, animals, elements, shall at the voice of God return into their primitive shapes and join again to make up their primary and predestinate forms.

At my death I mean to take a total adieu of the world, not caring for a monument, history, or epitaph, not so much as the bare memory of my name to be found anywhere but in the Universal Register of God.

In these moral acceptations the way to be immortal is to dye daily. Nor can I think I have the true theory of death when I contemplate a skull, or behold a skeleton, with those vulgar imaginations it casts upon us.

The Medical Society of the Missouri Valley.—The fourteenth semi-annual meeting of this society will take place at Lincoln, Neb., on Thursday, March 20th. The preliminary programme of the meeting contains the following list of papers which are to be presented: The Lingual Tonsil, by Dr. Henry B. Lemere, Omaha; The Suppurating Ear, by Dr. J. Homer Coulter, Chicago; The Postpartum Uterus Considered from a Surgical Standpoint, by Dr. William Jepson, Sioux City; Uterine Displacements, by Dr. W. O. Henry, Omaha; Identification of Criminals by the Fundus Oculi, by Dr. M. F. Weymann, St. Joseph; A Study of the Pathological Substratum of Epilepsy, by Dr. S. Grover Burnett, Kansas City; Recent Advances in the Treatment of Epilepsy, by Dr. Harold Moyer, Chicago; Exhibition of Specimens Illustrating the Cause of Sterility in Women, by Dr. Palmer Findley, Chicago; Diagnosis and Prognosis of Endocardial Murmurs, by Dr. W. F. Milroy, Omaha; Further Experiences with Gall-bladder Surgery, by Dr. B. B. Davis, Omaha; Diseases of the Stomach and their Dietetic Treatment, by Dr. J. C. Waterman, Council Bluffs; Observations on Tabes Dorsalis, by Dr. F. E. Coulter, Omaha; Puerperal Sepsis, by Dr. R. E. Conniff, Sioux City; The Vermiform Appendix as a Cause of Intestinal Obstruction, by Dr. J. E. Summers, Jr., Omaha; An Unusual Case of Acute Glaucoma, by Dr. W. L. Kenney, St. Joseph; A Case in which a Large Bone Cavity was Healed by Means of Thiersch Grafts, by Dr. J. P. Lord, Omaha. A clinic will also be held by Dr. Bertram W. Sippy, of Chicago.

The Medical and Chirurgical Society of Richmond (Va.) and Vicinity was organized by the colored regular practitioners of medicine, dentistry, and pharmacy at a meeting held at the residence of Dr. S. G. Jones on Wednesday, February 19th. The following are the officers for the ensuing year: President, Dr. R. F. Tancil; vice-president, Dr. H. L. Harris; treasurer, Dr. John Merriweather; secretary, Dr. O. B. H. Bowser; executive committee, Dr. J. M. Benson (chairman), Dr. D. A. Ferguson, Dr. S. G. Jones, Dr. J. M. Vaughan, and Dr. M. B. Jones.

Xiphopagous Twins Divided.—On February 9th the xiphopagous twins, which have been exhibited during the winter in England and Europe in Barnum's show, were surgically divided in Dr. Doyen's clinic. The immediate results of the operation were satisfactory, but one of the twins has since died. The operation and the circumstances attending it are described by the Paris correspondent of the London *Lancet* as follows: The health of the two children, who were known as Radica and Doodica respectively, has been in an unsatisfactory state for some time past and owing to climatic conditions to which they were not adapted they have lost flesh. Radica, indeed, is obviously suffering from tuberculous peritonitis. Mrs. Coolman, who looked after the children, took them to the Trousseau Hospital, where they were tended with great care in order to get them into a proper state of health for the operation of separation. Professor Kirrmisson, who has recently been elected to the chair of infantile surgery, had been chosen to perform the operation by Dr. Guinon, under whose care the children were. All of a sudden, however, Mrs. Coolman took the children out of the hospital and transferred them to Dr. Doyen's clinic. This course of action gave rise to many attacks upon Dr. Doyen in the political journals which are friendly to Professor Kirrmisson. It must be remembered, however, that Mrs. Coolman had every right to choose the surgeon whom she preferred and that there is no proof that undue influence was brought to bear upon her by the friends of Dr. Doyen. Kinematograph films of the operation were taken. It lasted scarcely twenty minutes and was completely successful. The fleshy band uniting the two sisters was 10 centimetres wide by 4 centimetres thick. Beneath the skin was some cartilage. The peritonæum lined the interior of the band, which also contained, as was expected, some liver tissue. Vascular communication between the two children had been previously ascertained by giving some methylene blue to one of them which appeared in ten minutes' time in the urine of the other, when it was drawn off by a catheter. In all similar operations previously performed on this class of monster the difficulty has been to arrest the hæmorrhage from the divided liver tissue. In the present instance, however, this difficulty was effectually met by the application of Dr. Doyen's angiotribe, by which the tissues were compressed until they were no thicker than a sheet of paper and were completely bloodless. They were then ligatured with two catgut ligatures. The peritoneal cavity of Radica, which

was tuberculous, was freely washed out and a drain was left in the abdominal wound. The same course was followed in the case of Doodica.

Hospital Buildings and Endowments.—Mrs. Hannah N. L. Sherman, of Lawrence, L. I., has given \$25,000 to the Post-graduate Hospital and College, Second Avenue and Twentieth Street, for the support of a nervous disease ward there. This money is to help support a new ward for women and children afflicted with nervous diseases. The ward will contain fourteen beds, five of which will be supported in perpetuity by Mrs. Sherman's gift. It will be the only ward in the city devoted to these particular diseases. Five of the beds will be called the Lawrence beds, and Mrs. Sherman has not yet decided upon a name for the entire ward.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 22, 1902:

DISEASES.	Week end'g Feb. 15		Week end'g Feb. 22	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	20	9	21	3
Scarlet fever.....	321	13	204	23
Cerebro-spinal meningitis..	0	8	0	2
Measles.....	962	33	989	35
Diphtheria and croup.....	281	48	300	54
Small-pox.....	58	14	55	13
Tuberculosis.....	238	100	270	109

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending February 20, 1902:

- DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence for fifteen days on account of sickness.
- HARRIS, B. Y., Acting Assistant Surgeon. Granted leave of absence for fifteen days, from February 15th.
- HODGSON, S. H., Acting Assistant Surgeon. Granted leave of absence for thirty days from March 1st.
- HUNTER, W. R., Acting Assistant Surgeon. Granted leave of absence for fifteen days, from February 1st.
- KINYOUN, J. J., Surgeon. Resigned, to take effect April 19, 1902. Granted leave of absence for two months and two days, to take effect from February 16th.
- MONCURE, J. A., Acting Assistant Surgeon. Granted leave of absence for thirty days, to take effect from February 15th.
- PECK, F. H., Senior Pharmacist. Relieved from duty at St. Louis, and directed to proceed to Evansville, Indiana, and report to the medical officer in command, for duty and assignment to quarters.
- ROSENAU, M. J., Passed Assistant Surgeon. Detailed to represent the service at the meeting of the New York Academy of Medicine, to be held in New York on February 20th.
- SPRAGUE, E. K., Passed Assistant Surgeon. To proceed to Port Huron, Michigan, for special temporary duty.
- STEPHENSON, C. W., Junior Pharmacist. Upon being relieved from duty at Evansville, he will proceed to St. Louis and report to the medical officer in command for duty and assignment to quarters.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 21, 1902:

Smallpox—United States.

California....	Eureka.....	Jan. 27.....	1 case imported.
"	Humboldt Co.....	Jan. 27.....	5 cases in lumber camps.
"	Los Angeles.....	Feb. 1-8.....	3 cases.
"	Sacramento.....	Feb. 1-8.....	1 case.
"	San Diego.....	Feb. 1-8.....	1 case.
"	San Francisco.....	Feb. 1-8.....	4 cases.
Colorado.....	Denver.....	Dec. 28-Feb. 8.....	12 cases.
Illinois.....	Belleville.....	Feb. 8-15.....	2 cases.
Indiana.....	Evansville.....	Feb. 8-15.....	5 cases.
Iowa.....	Clinton.....	Feb. 8-15.....	1 case.
Kentucky.....	Covington.....	Feb. 8-15.....	11 cases.
"	Lexington.....	Feb. 8-15.....	2 cases.
Louisiana.....	New Orleans.....	Feb. 8-15.....	1 case.
Maine.....	Portland.....	Feb. 1-15.....	1 case.
Maryland.....	Baltimore.....	Feb. 8-15.....	1 case.
Massachusetts.....	Boston.....	Feb. 8-15.....	38 cases.
"	Cambridge.....	Feb. 8-15.....	5 cases.
"	Everett.....	Feb. 8-15.....	3 cases.
"	Malden.....	Feb. 8-15.....	1 death.
"	Medford.....	Feb. 8-15.....	1 case.
"	N. Bedford.....	Feb. 8-15.....	1 case.
"	Somerville.....	Feb. 8-15.....	1 case.
"	Taunton.....	Feb. 8-15.....	3 cases.
"	Weymouth.....	Feb. 1-8.....	1 case.
Michigan.....	Bay City.....	Feb. 8-15.....	3 cases.
"	Detroit.....	Feb. 8-15.....	5 cases.
"	Grand Rapids.....	Jan. 29-Feb. 15.....	3 cases.
"	Ludington.....	Feb. 8-16.....	2 cases.
"	Winona.....	Feb. 1-8.....	1 case.
Nebraska.....	Omaha.....	Feb. 8-15.....	46 cases.
"	South Omaha.....	Feb. 1-17.....	61 cases.
N. Hampshire.....	Nashua.....	Feb. 8-15.....	2 cases.
New Jersey.....	Camden.....	Feb. 1-15.....	3 cases.
"	Jersey City.....	Feb. 8-16.....	22 cases.
"	Newark.....	Feb. 8-15.....	20 cases.
New York.....	Binghamton.....	Feb. 8-15.....	9 cases.
"	Mt. Vernon City.....	Feb. 18.....	1 case.
"	New York.....	Feb. 8-15.....	58 cases.
Ohio.....	Cincinnati.....	Feb. 7-14.....	13 cases.
"	Cleveland.....	Feb. 8-15.....	1 case.
"	Hamilton.....	Feb. 8-15.....	5 cases.
"	Youngstown.....	Feb. 1-8.....	3 deaths.
Pennsylvania.....	Allentown.....	Feb. 1-8.....	1 case.
"	Norristown.....	Feb. 8-15.....	2 cases.
"	Philadelphia.....	Feb. 8-15.....	74 cases.
"	Pittsburgh.....	Feb. 12.....	1 case.
"	Reading.....	Feb. 10-17.....	2 cases.
"	Seranton.....	Feb. 1-15.....	2 cases.
"	Williamsport.....	Feb. 8-16.....	5 cases.
Rhode Island.....	Providence.....	Feb. 8-15.....	1 case.
So. Carolina.....	Charleston.....	Feb. 8-15.....	3 cases.
Tennessee.....	Memphis.....	Feb. 8-15.....	12 cases.
"	Nashville.....	Feb. 8-15.....	1 case.
Texas.....	Houston.....	Feb. 8-15.....	24 cases.
Washington.....	Spokane.....	Feb. 1-8.....	20 cases.
"	Tacoma.....	Feb. 1-8.....	4 cases.
Wisconsin.....	Fond du Lac.....	Feb. 8-16.....	2 cases.
"	Green Bay.....	Feb. 9-16.....	16 cases.

Smallpox—Foreign.

Austria.....	Prague.....	Jan. 18-25.....	15 cases.
Belgium.....	Ghent.....	Jan. 25-Feb. 1.....	2 deaths.
Canada.....	Ghent.....	Feb. 8-15.....	1 case.
"	Winnipeg.....	Feb. 1-8.....	4 cases.
Colombia.....	Cartagena.....	Jan. 27-Feb. 2.....	3 deaths.
"	Panama.....	Feb. 1-10.....	50 cases.
France.....	Paris.....	Jan. 18-Feb. 1.....	11 deaths.
Gt. Britain.....	Dundee.....	Jan. 25-Feb. 1.....	1 case.
"	Glasgow.....	Jan. 31-Feb. 7.....	13 cases.
"	Liverpool.....	Jan. 25-Feb. 1.....	3 cases.
"	London.....	Jan. 18-25.....	870 cases.
"	London.....	Jan. 25-Feb. 1.....	1136 cases.
India.....	Bombay.....	Jan. 7-14.....	1 case.
"	Calcutta.....	Jan. 4-11.....	3 deaths.
"	Karachi.....	Jan. 5-12.....	13 cases.
"	Madras.....	Dec. 28-Feb. 3.....	2 deaths.
Italy.....	Naples.....	Jan. 25-Feb. 1.....	5 cases.
Mexico.....	City of Mexico.....	Jan. 26-Feb. 2.....	1 case.

Yellow Fever.

Mexico.....	Vera Cruz.....	Feb. 1-8.....	4 cases.
India.....	Bombay.....	Jan. 7-14.....	1 death.
"	Calcutta.....	Jan. 4-11.....	31 deaths.
"	Madras.....	Dec. 28-Jan. 3.....	4 deaths.

Plague.

China.....	Hongkong.....	Dec. 28-Jan. 11.....	1 case.
India.....	Bombay.....	Jan. 7-14.....	250 deaths.
"	Calcutta.....	Jan. 4-11.....	36 deaths.
"	Karachi.....	Jan. 5-12.....	24 cases.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending February 22, 1902:

BEATTY, WALTER K., Contract Surgeon, will proceed from Fort Huachuca, Arizona, to Fort Grant, Arizona, for duty, relieving MAX F. CLAUDIUS, Contract Surgeon, who is assigned to duty at Fort Huachuca.

CHAFFEE, JEROME S., First Lieutenant and Assistant Surgeon, will report at the General Hospital, Fort Bayard, N. M., for duty, to relieve LOUIS T. HESS, First Lieutenant and Assistant Surgeon, who will proceed to San Francisco for transportation to the Philippine Islands.

CLOUD, MARSHALL M., First Lieutenant and Assistant Surgeon, is directed to report in person to Lieutenant Colonel JACOB A. AUGUR, Fourth Cavalry, president of the Army retiring board, at Fort Leavenworth, Kansas.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended four days.

FREEMAN, CHARLES E., Contract Surgeon, will report to the commanding general, Department of California, for transportation to the Philippine Islands.

HENRY, JOSEPH N., Major and Surgeon, will proceed to Fort Slocum, N. Y., for duty, to accompany the next detachment of recruits to be sent via San Francisco to the Division of the Philippines.

HEXAMER, CARL R., Captain and Assistant Surgeon, is honorably discharged from the service, to take effect February 28th.

HUTTON, PAUL C., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

MCLEAN, ALLEN D., Captain and Assistant Surgeon, having tendered his resignation is honorably discharged from the service.

ROBERTS, ERNEST E., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

WILLIAMSON, LLEWELLYN P., First Lieutenant and Assistant Surgeon, is relieved from duty in the Philippine Islands and will proceed to Columbus Barracks, Ohio, to relieve SANFORD H. WADHAMS, First Lieutenant and Assistant Surgeon, who will proceed to San Francisco for transportation to the Philippine Islands.

WYETH, MARLBOROUGH C., Major and Surgeon, is granted leave of absence for one month, to take effect upon his arrival in the United States.

Births, Marriages, and Deaths.

Born.

BAKER.—In Boston, on Saturday, February 1st, to Dr. John W. Baker, United States Navy, and Mrs. Baker, a daughter.

SMALL.—In Waxahachie, Texas, on Saturday, January 25th, to Dr. and Mrs. Andrew B. Small, a daughter.

Married.

HARGENS—HUNT.—In South Bend, Indiana, on Tuesday, February 18th, Dr. Charles W. Hargens, of Hot Springs, South Dakota, and Mrs. Pearl Carley Hunt.

POND—PAINTER.—In San Francisco, on Tuesday, February 11th, Dr. Gardner Perry Pond and Miss Phoebe Painter.

WILKINS—HESTER.—In Albany, on Wednesday, February 19th, Dr. John Grant Wilkins, of Atlanta, and Miss Daisy Hester.

Died.

CORSON.—In Forest City, Pennsylvania, on Sunday, February 9th, Dr. Henry Corson, in the one hundred and eighth year of his age.

HOLLY.—In Ann Arbor, Michigan, on Thursday, February 13th, Dr. Dexter Clark Holly, in the seventy-sixth year of his age.

HUNTER.—In Glen Ellen, California, on Sunday, February 16th, Dr. George Zazriskie Hunter, in the fifty-fourth year of his age.

LEWIS.—In New York, on Wednesday, February 19th, Dr. Louis Lewis, in the sixty-fourth year of his age.

MYER.—In Kingston, N. Y., on Sunday, February 16th, Dr. Jesse Myer, in the eightieth year of his age.

REIMAN.—In Baltimore, on Sunday, February 9th, Dr. Gotthelf Reiman, in the eighty-fourth year of his age.

Pith of Current Literature.

*Journal of the American Medical Association,
February 22, 1902.*

An Experimental and Clinical Research into Cocaine and Eucaine. By Dr. George W. Crile. —In the clinical use of cocaine and eucaine, particular attention is called to a most important feature, viz., that shock is almost wholly avoided, because all afferent impulses are blocked. The impulses are but slightly modified by general anæsthesia. The afferent impulse constituting pain is abolished by general anæsthesia, but those affecting the vasomotor, the respiratory, and the cardiac mechanisms, are not controlled; but cocaine or eucaine absolutely blocks their passage, causing a physiological amputation of the part. These anæsthetics wholly prevent reflex inhibition, the principal cause of collapse in certain operations and injuries, *e. g.*, operations on the larynx and pharynx. Given hypodermically, the experimental evidence shows that they diminish shock in operations on the splanchnic area and absolutely alter this area in the processes of operation or exposure.

Cancer of the Penis. By Dr. Henry H. Morton. —The most important predisposing cause is phimosis. Every warty or papillomatous growth or persistent erosion occurring on the glans penis or inner surface of the prepuce, in an elderly person, should always be regarded with great suspicion. The prognosis is fatal without operation and death occurs in from one to two years. Complete removal of all deposits at the earliest possible moment offers the patient the only opportunity of saving his life, and the application of caustics only excites greater activity in the growth and is a waste of valuable time. Three cases are given.

Median Perineal Prostatectomy: Total Removal of the Prostate Gland. Six Cases. By Dr. Alexander Hugh Ferguson.

Fracture of the Metacarpal Bones and Oblique Fracture, Simple or Compound, of the Forearm. By Dr. W. W. Grant. —The author suggests the application of the principle of Buck's extension in the treatment of fractures of the femur to fractures of the forearm and hand.

The Question of Spinal Braces in Lateral Curvature. By Dr. A. B. Judson.

The Report of a Typhoid Epidemic at the Iowa State Agricultural College. By Dr. W. E. Harman.

The Identification of Criminals through the Fundus of the Eye. By Dr. M. F. Weymann. —The author asserts that absolute identification can be obtained by a drawing of the papilla and a surrounding retinal circle distant from the scleral ring by two papillary diameters. So great is the multiplicity of the anatomical relations of the vascular twigs that the author has never found even two fellow organs alike.

Medical News, February 22, 1902.

Some Notes on the British Congress on Tuberculosis. By Dr. E. G. Janeway. —The resolu-

tions adopted by the congress are to the effect that: (1) Human expectoration is the chief source of danger, or cause of production of phthisis. (2) Measures should be adopted to secure the destruction of the sputum. (3) Notification is, under certain conditions, necessary. (4) The construction of sanatoria, especially for the poor, should be favored. (5) All measures hitherto in force against tuberculosis in cattle should be adhered to. (6) Koch's experiments should be repeated and established by others. (7) An international committee should be formed. (8) Due consideration should be given to the contributing causes, such as alcoholism. (9) Participation in unions or associations is favored. (10) The theme for the next congress is The Individual Disposition to Tuberculosis.

The Relation between Bovine and Human Tuberculosis. By Dr. Theobald Smith. —According to the author, there is no evidence to show that bovine tubercle bacilli may indiscriminately infect the human subject. There is some evidence that bovine bacilli have been isolated from human beings, that the successful transfer is uncommon, and that it depends upon certain conditions which need careful clinical and pathological study. The evidence that such transmission takes place, must be based on the isolation of tubercle bacilli having the characters of the bovine variety.

A Plea for an Accepted Nomenclature with Reference to the Classification of Pulmonary Tuberculosis. By Dr. J. Edward Stubbett. —Special work has so grown during the past few years, sanatoria and hospitals for the care of these patients are multiplying so rapidly, that the author believes it to be, not only wise, but imperative, from a scientific standpoint, that, now, before the machine becomes too unwieldy and greater confusion has been created by lack of harmonious work, a more or less fixed definition of the various stages of pulmonary tuberculosis be determined upon. These statistics from all recognized sources can be worked together harmoniously and deductions of scientific value may be realized.

Some Notes on the Prophylactic Screen in the Treatment of Tuberculous Conditions of the Larynx and Pharynx. By Dr. Stephen W. Wells.

The Pathology and the Ætiology of Prostatic Hypertrophy: Suprapubic Drainage and Myomectomy Considered as Methods of Treatment and Cure. By Dr. Augustus Charles Bernays. —In old cases of hypertrophied prostate, palliative measures are sometimes preferable to radical measures. Drainage of the bladder by the suprapubic route is preferable to perineal drainage in cases of cystitis, because the suprapubic method gives the sphincter apparatus more complete rest than the perineal buttonhole or fistula. In recent cases of hypertrophy, in which the patient's health has not been injured by chronic cystitis or nephropylitis, the dangers of myomectomy or perineal prostatectomy are minimal, and, in these cases, a radical and satisfactory functional result can be achieved by myomectomy. Myomectomy done through a median perineal incision is the operation which promises the best results. It is applicable to the greatest number of cases in which permanent cure may be

expected. The perineal fistula will always close spontaneously after the perineal drainage is discontinued, and, with enough mucosa left, there will be no stricture.

American Medicine, February 22, 1902.

The Ætiology of Yellow Fever. By Dr. Walter Reed and Dr. James Carroll.—In the experience of the authors, and in that of Dr. Guit  ras, of twenty-two cases of experimental yellow fever following the bite of the mosquito, in which the period of incubation was definitely and accurately ascertained, the longest period was six days and one hour, and the shortest period two days and thirteen hours. In the cases produced by the injection of blood, seven in number, the longest period was five days and two hours and the shortest forty-one hours. The production of yellow fever by the injection of blood-serum that had previously been passed through a filter capable of removing all test bacteria, is a matter of extreme interest. The occurrence of the disease under such circumstances, and within that the serum filtrate contains a toxine of considerable potency; or, secondly, that the specific agent of yellow fever is of such minute size as to pass readily through the pores of a Berkefeld filter. The latter explanation is the one most favored by the authors.

Observations Concerning the Possible Infectiousness of Meat and Milk from Tuberculous Animals. By Ernest N. Hutchinson, D. V. S.—The author's experience demonstrates that milk from tuberculous cows contains great numbers of bacilli, in a high degree pathogenic to swine, calves, and colts; that the muscle juice of tuberculous swine has been found to possess virulent properties; and that, while the muscles of the bovine may only occasionally contain the tubercle organism in great numbers, their corresponding lymph glands are often found in an advanced state of tuberculous alteration, and these lymph glands are integral parts of many of the choicest cuts of beef. Considering that the bacillus contained in meat and milk is admittedly the most virulent for all experimental animals, it would appear poor sanitary policy to assume that they are utterly non-virulent to the experimentally inaccessible human animal.

An Outline of the Care of the Acutely Insane. By Dr. Arthur McGugan.

The Indications for Perineal Section in Stricture. By Dr. G. Frank Lydston.—The author believes that, with a thorough operation involving the division of all fibroid tissue both on the floor and the roof of the canal, and, when necessary, the excision of encircling rings and nodules of fibroid tissue, the operation is a perfect success as regards permanent cure in a large proportion of cases, granting that the after-treatment is conducted intelligently. As a general proposition, the author believes it wise in every case of indubitable traumatic stricture, in which complete relief from symptoms cannot be obtained by the sound, to perform a thorough operation by perineal section, and if the adventitious tissue is at all extensive, to excise it. Strictures complicated by fistul  e or severe cystitis demand perineal section.

Report of a Case of Pernicious An  mia. By Dr. G. E. Tyler and Dr. C. E. Cooper.

Measurements of Chattanooga School Children. By Arthur Macdonald.

Medical Record, February 22, 1902.

Gonorrh  al Infection of the Prostate. By Dr. John Van der Poel.—In order that an abortive treatment may be successful, certain conditions are necessary: First, the disease must be limited to the anterior urethra, and, if possible, treatment should be instituted within the first twenty-four or forty-eight hours, as every hour after the onset lessens the chances of success. Secondly, there should be no infection of the para-urethral glands. The author disapproves of instrumental massage as being not only unnecessary, but dangerous, and because the work can be much better and more intelligently accomplished with the finger. Gentleness should be remembered in all cases, but the massage must always be complete.

An Eight Years' Experience in the Radical Cure of Movable Retroversions of the Uterus by Alexander's Operation. By Dr. Le Roy Brown.

Intermittent Claudication (Intermittent Limping), Due to Obliterating Arteritis. By Dr. Charles L. Dana.—The author asserts that there is a group of symptoms characterized by intermittent or temporary attacks of paralysis, usually of one leg, accompanied with pain, par  sthesia, stiffness, and vasomotor disturbances, with absence of pulsation of one or both foot arteries. It is chronic in course and may lead to gangrene, symptoms resembling erythromelalgia, or Raymond's disease. It oftenest affects one leg, but may attack both, and may affect the arm. It occurs in middle-aged people of neurotic temperament, is due to, or associated with, exposure, alcoholism, gout, diabetes, excessive use of tobacco, and syphilis. It is due to arterial sclerosis causing obliteration of the smaller arteries, also to disease, such as aneurysm of the large trunks.

Unilateral, Right-sided Venous Thrombosis, Associated with Cardiac Disease; Autopsy. By Dr. John Winters Brannan.—The situation of the thrombus in this case is of interest, being on the right side alone, whereas in twenty-two of the twenty-four cases collected by Welch, the thrombosis affected the veins of the left side. Pressure from the large accumulation of fluid in the right pleural cavity may have been a factor in the unusual localization of the thrombus.

The Management of Critical Cases of Ruptured Extra-uterine Pregnancy, with the Report of a Case of Combined Intra- and Extra-uterine Pregnancy. By Dr. J. W. Elliot.—One rarely hears, according to the author, of a person dying of extra-uterine pregnancy without the assistance of a surgeon, but we constantly hear of persons who have not rallied from the operation. The author finds by experience that it is better to wait for a rally in these critical cases.

A Preliminary Note on the Prevention of Nausea and Vomiting Following Ether An  sthesia. By Dr. Ralph J. Hess.—The author's conclusions are as follows: (1) Post-an  sthetic vomiting is a source of danger and great discomfort to the patient, and is preventable; (2) it is due to the

excretion of ether into the stomach, with a resulting acute gastritis; (3) drugs are of no avail; (4) the present technics of preparation of patients for etherization is faulty, in that fluids are usually entirely prohibited or limited, whereas they should be pushed to aid in excretion of ether; (5) the dose of ether should be as small as possible, and the strength of ether vapor should not cause bronchial irritation with excess of mucus; (6) the combined use of nitrous oxide and ether gives the best results; (7) in anticipation of gastric irritation it is best to give from one to two glasses of water just before giving the anæsthetic.

Philadelphia Medical Journal, February 22, 1902.

On the Relationship between Human and Bovine Tuberculosis. By Dr. J. G. Adami.—The author believes that it was Koch's duty to point out that his conclusions did not affect in the slightest the legislative and other measures adopted to reduce the danger to cattle, and to the agricultural community, resulting from the spread of tuberculosis among cattle and the domestic animals. Not doing this, he left it to be inferred that legislation against bovine tuberculosis was in excess of what was necessary. The author protests that this was little less than criminal on his part.

Some Points Relating to Renal Calculus. A Clinical Lecture Delivered at St. George's Hospital, London, December 3, 1901. By Sir William Bennett, K. C. V. O., F. R. C. S., Lond.—An important practical point, as well as one very useful for examination purposes, to bear in mind that whether the stone is in the bladder or in the kidney, the trouble and pain are very greatly in proportion to the amount of phosphatic deposit upon it. Another point is that, in a large percentage of cases of renal trouble in which precise symptoms of stone have been present and in which at the operation no stone has been found, recovery takes place after the operation. The author believes that the explanation of this is that the cicatricial contraction which follows subsequently in the kidney leads to some alteration which brings about a cure. In the event of symptoms recurring, the opposite kidney should be explored, and no further operation done upon the one which has already been dealt with.

The Progress of Knowledge Concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen Years. By Dr. Joseph McFarland.

Orthopædic Cases. By Dr. James K. Young.—*Recovery from Potts's Disease without Deformity.* Three cases are given to illustrate the advantage of early and persistent treatment in the prevention of deformity. *The Treatment of Lateral Curvature.* Experience has confirmed the author in his opinion that any form of lateral curvature which may be benefited at all by treatment is best treated by light gymnastic exercises.

The Surgery of the Spine. By Dr. Samuel Lloyd.

Boston Medical and Surgical Journal, February 20, 1902.

The Significance, Pathological and Clinical, of Abdominal Pain. By Dr. Maurice H. Richardson.—The author notes that when, after simple

ovariotomy, the pedicle slips out of the ligature and the patient bleeds to death, there is, as a rule, no pain. When an extra-uterine sac bursts there is pain of the most excruciating kind. In both cases there is simple abdominal hæmorrhage without sepsis, and the author believes it not unreasonable to assert that, in some cases at least, pain is simply the expression of the peritonæum when blood is suddenly poured into it. In post-operative hæmorrhages the peritonæum has already been exposed to the shock of the operation itself, and fails to respond to the additional shock of a secondary hæmorrhage. In stabs and gunshot wounds, pain is the natural sequence. The pain, when the alimentary canal is perforated, however, can be distinguished from the pain when no perforation has taken place; for, in the latter case, there is only the simple pain of the stab or gunshot wound, which is usually transitory and trivial, whereas the pain of perforation is severe and is accompanied by other signs of extravasation.

The Treatment of Eclampsia by the Method of Professor W. Stroganoff. By Dr. F. S. Newell.—The author records a few cases, and concludes that: (1) In post-partum eclampsia the use of morphine and chloral in combination seems to have a distinctly beneficial action in controlling the convulsions; (2) in ante-partum eclampsia the treatment is less efficient than in the post-partum form, but the course of the disease seems to be altered for the better in the majority of the cases. The method of treatment which has proved so efficient in the hands of its originator should not be abandoned until it has had a more thorough trial.

Surgery of the Gall-bladder and Ducts. By Dr. John W. Keefe.—A careful history and examination is necessary to determine the presence of gall-stones. Riedal states that there is an hereditary tendency to the formation of gall-stones. Previous illness should be carefully discussed, as patients frequently come with histories of appendicular inflammation, floating kidney, or ulcer of the stomach, when the true condition of affairs is caused by gall-stones. The pain is not always cramp-like, and does not always show itself with extraordinary violence. The pain may be severe, although the diet is unirritating; the reverse being true in ulcer of the stomach. The biliary colics are more apt to occur at night, rather than shortly after eating as is the case in ulcer of the stomach. The pain is localized in the region of the gall-bladder. It may be boring, burning, or nagging in character. Early operations will more frequently be resorted to when medical practitioners become more familiar with an accurate diagnosis of diseases of the biliary passages and with the remarkable results obtained in gall-bladder surgery. In no other field of capital surgery may a careful operator obtain such brilliant results.

On the Value of Modern Methods of Diagnosis and Treatment in Gastro-intestinal Diseases. By Dr. Richard F. Chase.

British Medical Journal, February 15, 1902.

Felt-hat Making: Its Processes and Hygiene. By Dr. C. Porter.

Typhoid Fever in South Africa: Its Cause and Prevention. By G. Turner, M. B.—The author holds that the causation of epidemics of typhoid fever in South Africa is the same as in England, namely, a polluted water supply. The growing tendency to attribute typhoid fever to wind, dust, and flies, is becoming a source of danger, in that it leads to neglect of the necessary use of filters and other precautions. If dust infection were the predominating cause of typhoid, one would expect to find typhoid fever most prevalent during the period when dust storms prevailed; as a matter of fact, the opposite obtains. Typhoid is most prevalent during the rainy season, when there is least dust. Flies begin to be troublesome long before typhoid prevails, and continue to do so long after it has subsided. While the possibility of infection from the above sources is admitted, yet polluted water is the cause in the great majority of the cases. It is easy, and often acceptable, to attribute an epidemic to atmospheric influences. It is the lazy man's excuse, the delight of the do-nothing sanitary authority; for who can as yet control the atmosphere?

Air-borne Typhoid. By Colonel R. H. Quill, R. A. M. C.—The author reports an epidemic of typhoid fever which took place among the military guard at the Boer prison camp in Ceylon. Typhoid had been epidemic among the prisoners, having been imported from South Africa, and the first case among the guard occurred one month after the beginning of the outbreak among the prisoners. The water supply for the guard camp was brought from a distance of three miles through underground iron pipes, and was filtered through Berkefeld filters; no fresh milk, uncooked food, or uncooked vegetables were allowed in the camp; all aerated waters used were strictly pure; and all men leaving the camp took with them bottles of filtered water. For these reasons the author considers it impossible for the cause of the epidemic to have been water-borne, and concludes that the infection was air-borne, being derived from the adjoining prisoners-of-war camp where an epidemic of typhoid was raging. The latrines and urinals of the prisoners were close to the guard line, where the guards were posted, and dust and flies were very prevalent; both probably played a part in carrying infection from the prisoners to the guards.

So-called "Remittent" or "Pretoria" Fever. By W. Tyndale, M. R. C. S.—The author has seen hundreds of cases of so-called "Pretoria" or "remittent" fever, and believes them to be almost invariably abortive attacks of typhoid fever. He bases this conclusion on the following grounds: 1. These short fever attacks more often occur in men who have been in South Africa over six months; *i. e.*, such men offer greater resistance to typhoid infection and the attack aborts. 2. Short attacks of "remittent" fever occur frequently in men who have had true attacks of typhoid fever within twelve months. 3. The symptoms and signs point to intestinal mischief. 4. The absence of plasmodia in the blood and the uselessness of quinine, excludes malaria. 5. In a large percentage of cases relapses take place after the temperature has been normal for from three days to three weeks. In most cases, the relapses are typically typhoid and run a typical course of twenty-one days or more. 6. "Remittent"

fever is most prevalent when and where typhoid fever exists. 7. It occurs during times of the year when malaria in malarial districts is not prevalent. 8. Out of eleven successive cases of "remittent" fever, of duration from five to ten days, seen during one month, Widal's reaction was obtained in all. As regards the pathology of these cases, it seems probable that, in these short attacks, the disease never reaches an ulcerative stage. The great factor in preventing relapse is absolute rest; the patient should be kept in bed twelve days after the temperature is normal.

The Prevention of Enteric Fever in Armies. By G. D. N. Leake, M. R. C. S.—In 1895, there occurred among the Bermuda military force (1,447 men) 107 cases of typhoid fever with 20 deaths. The author concluded that the dry-earth latrines were responsible for nearly all the cases that occurred in barracks—by the inhalation or deglutition of the germs when using the latrines. He therefore advocated and carried out the total abolition of dry-earth latrines, and the introduction of the water-carriage system. The water supply of the barracks being rainwater from tanks, all filters were abolished in 1897. During 1900 there were only 8 cases of typhoid and no deaths in a force of 1,444 soldiers.

The Disinfection of New Clothes. By Sir C. A. Cameron, C. B., M. D.—The author has been able in several instances to satisfy himself that new clothes were the vehicle of the infective matter of scarlet fever. It would be desirable to have sterilized all clothes made by tailors and dressmakers, and certificates given that they had been subjected to that process before the articles were sent home.

On Diphtheria Antitoxine Eruptions. By Dr. A. Stanley.—The author has studied a series of five hundred cases of diphtheria, with reference to the occurrence of antitoxine rashes. All the patients were treated with antitoxine, the total number of deaths being 80, a death rate of 16 per cent. Antitoxine eruptions occurred in 112 cases, about one fourth. They were classified as follows: Erythematous, 58; erythemato-urticarial, 15; urticarial, 30; scarlatiniform, 6; morbilliform, 3; and transient early erythema and urticaria (usually at seat of injection), 17.

Average day of onset of eruption: Erythemata, 12.2; urticaria, 9.2.

The typical diphtheria-antitoxine eruption is a marginate erythema on the psoriasitic regions tending to run into arcs of a circle, lasting about three days, and accompanied by a slight rise of temperature with malaise. The occurrence of an antitoxine eruption during the course of a case of diphtheria does not appear to influence the prognosis seriously, though it cannot but be held that any febrile disturbance of the heart would tend to have a harmful effect: No case, however, was observed where fatal heart failure was precipitated by the occurrence of an antitoxine eruption.

Treatment of Chronic Eczema. By Dr. A. Eddowes.

Lancet, February 15, 1902.

The General Pathology of Tumors. By Dr. C. P. White.—(The Erasmus Wilson lectures.) The author takes up first the question of classification of

tumors, and prefers the following, founded on a histological basis:

A. Organomata or Organ Tumors.

Teratoma (dermoid cyst).

B. Histiomata or Tissue Tumors.

(a) *Connective tissue tumors (desmوماتا).*—Fibrous tissue, fibroma; fat, lipoma; mucous tissue, myxoma; notochordal tissue, chordoma (of Ribbert); cartilage, chondroma; bone, osteoma; and neuroglia, glioma.

(b) *Lymphoid tissue tumors (lymphوماتا).*—Lymphadenoid tissue, lymphadenoma (lymphoma); and bone marrow, myeloma.

(c) *Muscle tumors.*—Smooth muscle, leiomyoma; and striated muscle, rhabdomyoma.

(d) *Nerve tissue tumors.*—Medullated nerve tissue, myelinic neuroma; and non-medullated nerve tissue, amyelinic neuroma.

(e) *Epithelial tissue tumors (epitheliوماتا).*—Squamous epithelium, squamous adenoma and squamous papilloma; columnar epithelium, columnar adenoma and columnar papilloma; spheroidal epithelium, spheroidal adenoma; and endothelium, angioma and endothelial papilloma.

C. Cytomata, or Cell Tumors.

(a) *Tumors of indifferent cells (blastوماتا).*

(b) *Tumors of connective tissue cells, also of lymphoid tissue cells and muscle cells (sarcomاتا).*—(1) Pure sarcomata: round cells, round-celled sarcoma; spindle cells, spindle-celled sarcoma; and giant cells, giant-celled sarcoma. (2) Compound sarcomata: fibrous tissue cells, fibrosarcoma; cartilage cells, chondrosarcoma, etc.

(c) *Tumors of epithelial cells (carcinوماتا).*—Squamous cells, squamous carcinoma; columnar cells, columnar carcinoma; spheroidal cells, spheroidal carcinoma; and endothelial cells, endothelial carcinoma.

From this scheme of classification we arrive at a definition of a tumor: A tumor is a mass of cells, tissues, or organs, resembling those normally present in the body, but arranged atypically, and growing at the expense of the body, without at the same time subserving any useful purpose. The distinguishing peculiarity of tumors is that they are atypical in the arrangement of their component parts. From the foregoing scheme of classification the following conclusions may be drawn:

1. Every kind of tissue in the body has its representative tissue tumor. 2. Every kind of cell, with the exception of nerve cells, has its representative cell tumor. 3. Tumor formation is not an isolated process, but must be considered in its relation in other closely allied processes.

Although tumors do not in all cases arise from embryonic rudiments there can be no doubt that they do so in some cases.

1. The rudiment may consist (a) of a sequestered collection of embryonic cells, as described by Cohnheim; (b) of the tissues normally present at the point of origin; and (c), of tissues of new formation, either of inflammation, or the result of previous tumor growth. 2. It is not always necessary to presuppose a rudiment consisting of the same kind of tissue as that of which the tumor is com-

posed. It is a mistake to say that a tumor always continues to grow without limit; it may, under certain conditions which are imperfectly understood, become stationary, or even diminish in size or disappear completely. The most remarkable physiological characteristic of tumor cells is the property they possess of storing enormous quantities of glycogen. The wasting and cachexia by which malignant tumors are often accompanied may probably be explained by this drain of carbohydrate from the system. (In the second and concluding lecture the author describes the nature of cell structure and the process of cell division. In conclusion he discusses the various theories as to the causation of malignant growths—parasitic, Ribbert's, Adami's, etc.)

On Cleft Palate. By W. A. Lane, M. B.

A Note on the Methods of Conducting Hæmolytic Experiments. By G. F. Petrie.

Primary Sarcoma of the Vagina. By Dr. H. Macnaughton-Jones.—The author reports a case of this rare affection occurring in a woman aged forty-four years. The tumor mass filled the lower part of the vaginal canal; it did not involve either the cervix or the external genitalia. The inguinal glands were quite free. The tumor was removed by means of a snare and the actual cautery, and the wound healed well by primary union. Microscopical examination showed the growth to be a spindle-celled sarcoma.

On Hæmolysins Produced by Certain Bacteria. By Dr. A. Castellani.—The author has investigated the hæmolysin-producing properties of the typhoid, dysenteric and colon bacilli, with the following results: The typhoid bacillus is capable of forming a hæmolysin which produces a complete solution of the erythrocytes of the dog's blood. The maximum amount of the hæmolysin is found in cultures of about two weeks old. Filtrates from fourteen days' cultures produced complete hæmolysis in much smaller amounts than 0.5 c. c. The bacillus of dysentery gave equally positive results, and thus presented a new point of resemblance, in addition to the many others, to the typhoid bacillus. The colon bacilli did not exhibit any marked hæmolytic properties, as regards either the erythrocytes of the dog or those of other animals. An anti-hæmolysin for the typhoid bacillus was obtained by injecting a rabbit with increasing doses of a filtered typhoid culture which contained active hæmolysins.

A Case of Perforated Gastric Ulcer Simulating Appendicitis. By C. A. B. Horsford, M. B., B. Ch.

The Medicinal Use of the Pressor Substance of the Pituitary Body. By F. Golla.

Presse médicale, January 22, 1902.

Hæmolytic Substances in Their Clinical Application.—M. P. E. Launois, M. J. Camus, and M. P. Pagniez conclude that there is a possibility of the destruction of the normal red cells of the blood by the introduction of fluids from diseased persons—serum, ascitic fluid, and pleural transudate. There is, however, a resistance of the red cells of the individual furnishing the fluid to this destructive influence.

Four Cures of Œsophageal Cancer by Cancroïne.—Professor Adam Kiewicz records four cures of Œsophageal cancer by the subcutaneous use of cancroïne, a toxine which he has found in carcinomatous tissues. The author says that these cases prove scientifically the protozoic origin of cancer, and that it is not an epithelial disease, while, clinically, they demonstrate the possibility of cure by this method.

Centralblatt für Gynäkologie, January 18, 1902.

Median Section of the Uterus in Vaginal and Abdominal Extirpation.—Professor Krönig has had good results from dividing the uterus when removing it on account of inflammatory diseases of the appendages, as well as in cases in which a vaginal hysterectomy was performed, with removal of part of the vagina, for total prolapse. He advocates semi-section of the uterus in the removal of that organ for myomata, and to facilitate the operation of hysterectomy of the not enlarged uterus on account of climacteric hæmorrhages.

Topography of the Uterus and Bladder after the Alexander-Adams Operation. By Professor Gustav Bulius.

Dysmenorrhœa. By Dr. A. Theilhaber.

February 1, 1902.

Polypoid Mucous Cysts of the Labium Minus. By Dr. Agnes Bluhm.—A pathological paper.

Three Cases of Cæsarean Section in Eclampsia.—Dr. Hans Læwenstein reports three fatal cases. The section was undertaken in each instance after repeated eclamptic attacks and in the presence of deep coma. In two of the cases, living children were obtained.

Cæsarean Section by Fritsch's Method.—Dr. D. Jurowski records three cases operated on by Fritsch's method (a cross-section of the uterus at its fundus), and recommends it highly as more quickly and more easily performed than the sagittal section, and as giving a better subsequent result.

Münchener medicinische Wochenschrift, January 21, 1902.

Serum Diagnosis of Tuberculosis.—Professor E. Romberg says that the results published by Koch show that the serum reaction is no aid for the recognition of existing tuberculosis. The diagnostic significance of tuberculin and agglutination must be rigidly controlled by anatomical findings, so far as human tuberculosis, in its various stages of development is concerned. It is probable that the reaction following the use of tuberculin in adults is entirely trustworthy from the diagnostic standpoint, but many more trials must be made, especially in children.

Scientific Hydrotherapy and "Water Cures." By Dr. von Vogl.

Treatment of Severe Anæmia of Intestinal Origin. By Dr. F. Perutz.—A clinical report.

"Emulsion Albumin" Found in Eclampsia and Uræmia. By Dr. H. Cramer.

Connection between Diabetes Insipidus and Diabetes Mellitus. By Dr. P. Kuhn.

Septicæmia and Amputation. By Dr. H. Brauser.

Septicæmia and Amputation. By Dr. H. Dœrfler.

January 28, 1902.

One Hundred Medullary Tropococaine Analgesias.—Dr. Karl Schwarz has performed all manner of minor and major surgical operations in all parts of the body with tropococaine anæsthesia administered in the subarachnoid space. In from fifteen to twenty minutes after the injection of cocaine, pallor is observed, the patient perspires, nausea appears, followed by vomiting in about half the cases. None of these symptoms appear when tropococaine is employed. In two cases only was nausea noted, in two instances was vomiting seen, and in one case was cyanosis observed. Headache was never noticed or complained of by the patients, nor were chills or rise of temperature noted. Tuffier's method of injection was followed by the author in all cases. He prefers the intra-arachnoid use of tropococaine to any form of anæsthesia by inhalation.

Auscultation of the Lungs in Tuberculosis. By Dr. O. Rosenbach.

Thymus Gland and Rickets. By Dr. F. Mendel.

Addison's Disease. By Dr. J. Bruno.

Relation of Angeioma to Carcinoma.—Dr. Gebele says, as a result of the examination of 21 patients with cancer in various parts of the body, that 10 had angeiomata while 11 had not. Among 226 other patients, 86 were found to have angeiomata, 114 had not. The author believes that angeiomata are but incidental and have no direct bearing on the ætiology of cancer.

Scientific Hydrotherapy and "Water Cures" (concluded). By Dr. von Vogl.

Centralblatt für innere Medicin, February 1, 1902.

New Methods in the Early Diagnosis of Typhoid Fever.—Dr. Romolo Polacco and Dr. Eduard Gemelli contend that the presence of the Eberth bacillus in the roseolar spots of typhoid fever is constant. A small amount of tissue, including the spot, is removed and is brought into a fluid medium, as the bacilli are so scarce that they will not grow in solid media. In from twelve to sixteen hours a bacillus appears in the medium, in every way identical with the typhoid bacillus. Fifty patients in all were examined in this manner, and always with positive results.

Wiener klinische Wochenschrift, January 16, 1902.

Ætiology of Acute Hæmorrhagic Encephalitis.—Dr. Ernest Sträussler regards intestinal self-intoxication as an important factor in the development of acute hæmorrhagic encephalitis, and cites two cases in support of this view. Obstinate constipation may also lead to hæmorrhages on account of the great pressure exerted, and in nine cases, stubborn constipation was observed with hyperæmia of the cerebral meninges. Gastro-intestinal disturbances, such as vomiting, anorexia, constipation, and

sensitiveness in the gastric region, are common in encephalitis. The practical significance of the observation lies in the necessity of regulating the bowels in cases of encephalitis and of administering intestinal antiseptics to limit the disease as much as possible.

Experiments with Jez's Anti-typhoid Serum. By Dr. Gottlieb Markl.

New Instrument for Perforating the Skull. By Dr. Oscar Frankl.

January 23, 1902.

Pathogenesis of Tetanus.—Dr. L. Zupnik presents a theory of the action of the tetanus poison, as follows: 1. The toxine attacks the muscles from the peripheral wound, and only the spinal motor ganglion cells from the central nervous system. The former causes the tetanic contractions, the latter the opisthotonos and the increased reflex irritability. 2. The poison reaches both these tissues through the blood. 3. The local manifestations of tetanus are due to direct extension of the poison; the gradual ascent of the contractures may be explained by the slow passage of the toxine through the muscle substance proper. 4. The period of incubation is due to the time necessary for the development of the toxine and its entrance into the sensitive tissues.

Aneurysm of the Pulmonary Artery (Branch) Due to Persistence of Botalli's Duct. By Dr. Josef Krzyszkowski.

Experimental Contribution to Effects of Fractures upon the Circulation and Temperature. By Dr. Richard Fibich.

Perforating Gunshot Wound of the Skull, with Destruction of Brain Tissue; Recovery. By Dr. Karl Diwald.

Riforma medica, November 26, 1901.

The Biological Importance of the Phenomenon of Agglutination in Bacteria. By Dr. Nicola Pane.—The author reviews briefly the various questions connected with the interpretation of Gruber's phenomenon, and gives the results of a series of researches directed toward the solution of some of these questions. He has found that the typhoid bacillus of ordinary bacterial collections, whatever may be its origin, may be agglutinated to an equal degree by the specific serum obtained from an animal after the injection of bacilli belonging to a single source. The typhoid bacillus may also be agglutinated, though in a less marked and less constant degree, by serums specific for other species of bacteria. The degree of this agglutination may approach that which at present is regarded as diagnostic of typhoid fever (1:50) and exceptionally it may even be 1:100. With certain exceptions, there is a greater tendency to agglutination between the typhoid bacillus and other species of bacteria, e. g., the *Bacterium coli*, than between bacteria of various origins belonging to the same species (*Bacterium coli*, pneumococcus). When a serum of very high agglutinating powers is used with the typhoid bacillus, the above rule is reversed. The absence or deficiency of agglutinating power on the part of one germ toward another which has

the same characteristics, is not, therefore, sufficient to exclude their identity. On the other hand, if two germs of different origins but apparently identical, agglutinate in the same degree on the addition of the specific agglutinating serum of one of them, their identity is proved.

November 27 and 28, 1901.

The Absorption of the Active Principles of the Serum by Bacteria. By Dr. Ettore Tedeschi.—The author has experimented with cultures of the typhoid bacillus, of anthrax bacillus, and of the *Staphylococcus pyogenes aureus*, the age of the cultures being in most instances twenty-four hours. He cultivated these germs upon the normal serum of man and of several species of lower animals, on a solution of ricin, on the serum of rabbits that had been inoculated with serum from a human foetus, from an ox, and from a woman respectively, as well as with that of rabbits inoculated with typhoid cultures. He studied the behavior of agglutinins and precipitins belonging to the various serums employed in the experiments before and after the addition of cultures of the germs mentioned. He found that no alteration was produced by the germs in the serums and in ricin as regarded the agglutinins and precipitins. On the other hand, the lysins were less perfectly respected by the germs. In several experiments he found that the lysins had been more or less completely absorbed by the bacteria.

November 29, 1901.

Experimental Transplantation of Peritoneal Flaps. By Dr. L. Baldassari and R. Finotti.—The method of "peritoneization" recently described by Quénu and Judet is of advantage in securing the proper healing of intestinal wounds, without unnecessary adhesions, hæmorrhage, and other inconvenient complications. The author performed a series of experiments upon animals, in order to test the possibilities of peritoneal transplantation. In a series of these animals he transplanted flaps of peritoneal tissue, which replaced losses of similar size produced by denuding portions of intestine. In a second series he attempted to close a perforation of the intestine, which was purposely made of considerable size by means of a muscular peritoneal flap. He used dogs without chloroform narcosis, in order to avoid the disturbances which follow the use of this anæsthetic. After exposing a loop of intestine and incising it, its serous covering was dissected away for a distance of about two centimetres. A flap of peritonæum of suitable size was now dissected from the abdominal wall near the intestinal incision and immediately applied to the latter, where it was sutured into place with round needles carrying fine silk, Lembert sutures being made all around the wound, taking care to distend the flap well. The loop of intestine was then replaced and the abdomen closed, care being taken to stretch the peritonæum somewhat where the flap was taken, so as to obtain an exact union of the peritoneal incision. In the second series a round opening one or two centimetres in diameter was made in the loop of the intestine, and a flap of peritonæum with a thin layer of muscle adhering to it was sutured carefully into place, the flap being made about half a centimetre larger than the perforation. The results of these transplantations were very good.

On the So-called Toxicity of the Secretions of Intestinal Worms. By Dr. Giuseppe Cao.—The author criticises the experimental work of Messineo and Calamida, who stated that the effect of intestinal worms upon the organism was due to a powerful toxic substance which these parasites developed. The author calls attention to the fact that, in the experiments of Messineo and Calamida, the extract prepared from the worms was kept for over fifteen hours in an incubator, whereas it should have been used in the fresh state. He also questions the sterility of the material injected into animals and says that it is very likely that the animals were infected by extraneous sources. The author's own observations have convinced him that the secretions of intestinal worms are perfectly innocuous.

Chirurgia, October, 1901.

Two Cases of Epilepsy Treated by Trephining with the Formation of a Flap by Kocher's Method. By Dr. I. Ch. Dzirne.—In the first case there was a severe type of epilepsy, from two to four attacks occurring every week from the patient's earliest childhood. The patient was a cripple in the full sense of the term. After trephining on the right side, the extremities on the left resumed their normal functions, and the patient had very slight attacks occurring once a month, lasting but a few seconds, without loss of consciousness. The result of Kocher's operation in this case cannot be called brilliant, but it was at least satisfactory, for the patient was able to work eight hours a day in a factory. In the second case there had been three or four epileptic seizures daily for four years before the operation, and, in addition, the patient stuttered markedly and his capacity for work was entirely lost. After the operation, the attacks disappeared completely; the stammering disappeared, and the patient was capable of doing his work. The author therefore repeats what he had said in connection with a similar case published in 1900; namely, that the formation of a valve by Kocher's method had given a brilliant result, but that time would show whether the patient would always be free from the attacks.

What Method of Gastro-enterostomy is to be Preferred? By Dr. G. M. Zytkoff.—Every method of anastomosis between the stomach and the small intestine must fulfil the following requirements: (1) The intestinal loops which are employed for the anastomosis should not be displaced in front of the omentum, but should lie as they do normally, under the latter. (2) The formation of all unnatural openings and fissures should be avoided. (3) The intestines should be joined so that the kinks and so-called spurs cannot form. (4) All openings should be available for the passage of food immediately after the operation. (5) The ends of intestine anastomosed should not be too long, and should be displaced as little as possible, in order to avoid their twisting upon their axis. (6) They should be so disposed that food or secretions cannot be retained therein. The first and the second conditions cannot be fulfilled, except by so-called posterior gastro-enterostomy. The third and fourth conditions can only be fulfilled if the transverse diameter of a divided intestine is sutured into the lumen of the stomach. The last two conditions are fully satisfied by the method long ago described by Socin and Courvoisier, but better known as the method of

Roux, which consists of suturing the proximal end of a severed intestine into the distal end. This method satisfies all the conditions enumerated and may therefore be considered as the best method of forming a communication between the stomach and the small intestine.

A Case of Traumatic Incontinence of Urine Treated by Operation. By Dr. G. G. Voskresenski.—A boy aged thirteen years, who had undergone median lithotomy ten years previously, entered with a history of incontinence of urine, which had come on a year after the wound of the operation had healed. For the past two years he had been wearing a urinal. There was complete incontinence, due to injury to the vesical neck during the operation, the injury in question probably having been considerable, as a stone of the size of a hen's egg had been removed. Various methods of operation have been used to remedy this condition, but the following was used in this case: A perineal incision, similar to that used by Nélaton, (Γ-shaped) was made, and the scar tissue of the old operation exposed and removed, inasmuch as it was found to surround the posterior and lateral aspects of the membranous urethra and the neck of the bladder. The scar tissue was dissected out with the aid of a urethral guide until the urethral wall was exposed. A weak perinæum and a prolapsed rectum were found as effects of the old operation. The wound was cleaned and the perinæum was carefully restored. The result of this operation was the complete relief of the incontinence, as well as of the prolapse of the gut.

Cases of Foreign Bodies in the Bladder Entering in an Unusual Manner. By Dr. N. N. Michaeloff.—Three cases are reported in which the foreign bodies entered the bladder, not through the urethra as usual, but directly through the wall of the organ. In the first case a woman was run over by a horse drawing a plough, and the plough made several penetrating wounds in her abdomen. A year later, she presented herself for operation, and a stone was found in her bladder which was crushed with stone forceps. The nucleus of this stone was found to be a piece of bone, evidently a fragment of the symphysis, which had been fractured at the time of the injury. On inspecting the bladder during a subsequent operation for an abdominal hernia in the same patient, it was found that there was a scar in the wall of the bladder at a spot which was adherent to the pubes. The second patient was a boy, aged fifteen years, and was admitted suffering from stone in the bladder. On suprapubic incision the bladder was found filled with stones. Six were easily removed and three were found imbedded in a deep pocket. A year before the operation he had fallen from a tree upon a thin dried stump, which caused a wound in the soft parts on the left side of the anus. The wound slowly healed. The nuclei of the stones were fragments of the brittle and quickly decaying wood in the stump. In the third case, a woman aged twenty-eight years, was found to have a large perfectly cylindrical stone in the bladder which proved to be nothing else but a large cotton spool, which had penetrated through a vesico-vaginal fistula. It is probable that the spool had been used as a pessary and that it had produced the fistula through which it had ultimately entered the bladder.

Letters to the Editor.

RUBBER GLOVES IN OBSTETRICAL PRACTICE.

PLAINS, MONTANA, February 6, 1902.

To the Editor of the *New York Medical Journal*:

SIR: Since the advent of rubber gloves it has been my practice to use them in all my obstetrical cases, and recently, while effecting an instrumental delivery, with my patient lying across the bed with buttock well over the edge of the bed, the child slipped from my grasp and fell to the floor, rupturing the cord. The child being dead, no damage was done, but, nevertheless, the occurrence was decidedly embarrassing. This was due to the slippiness of the gloves, and could have been avoided by the use of a piece of sterile gauze between the gloves and the baby.

In publishing this, it is my desire to call the attention of others to the danger and also the means of avoiding it.

C. B. POWELL, M. D.

A CORONER.

805 MADISON AVENUE, NEW YORK, February 13, 1902.

To the Editor of the *New York Medical Journal*:

SIR: In the discussion now before the public concerning the value of a coroner to a community, and more especially to the municipality of New York, it may not be amiss to recall to the profession that during the last century there lived a man whose just claim to fame rests as much upon his work as the coroner for Middlesex as in being the founder and editor of the greatest foreign medical journal.

Thomas Wakley, the most active reformer of his age, swept England clean of many abuses and instituted reforms in the face of every force which man or government could devise to oppose. In the words of a contemporary editor, his was "a character quite unique, utterly fearless, and according to his lights honest as he was fearless and determined."

Beginning his public career as founder and editor of the *Lancet* in 1823, he strove for nearly forty years to better his profession and public conditions.

By the dissolution of the now famous Abernethian injunction in the early part of 1826, he set free forever the medical press.

He formulated a system which we in the United States are tending toward adopting, namely, national supervision of medical practice.

By the passage of the Medical Witness Act, he secured to his profession recognition in the courts of law and gave the medical examiner for life insurance his fee.

Perhaps his greatest act in behalf of the public good was the organization of a commission of inquiry into food and drink adulteration. The good he did to England's poor in securing purity of food products by his vitriolous pen in the columns of the *Lancet* and by his honest Saxon speech can hardly be estimated.

Making issue in the early years that the ancient office of coroner should be held only by one educated to inquire intelligently into the cause of death,

namely, a practitioner of medicine, fought first in the *Lancet*, later at the polls, the editor was himself elected coroner by the freeholders of Middlesex.

By one of his first inquests he made his name a household word and forced his government to abolish the death penalty by whipping in the army.

Sent to Parliament, he was given greater powers for the correction of public evils, but he never relinquished his coronership until his death, in 1862.

FREDERIC GRIFFITH, M. D.

***The memory of the illustrious founder of the *Lancet* is nowhere held in greater veneration than in this office, but we cannot concede that his great achievements should serve as an excuse for continuing an antiquated and wholly unnecessary office. By the way, to use the words of Artemus Ward, Mr. Wakley's mantle has not, to our knowledge, fallen upon any other man "hard enough to hurt him very much."

THE CITY BOARD OF HEALTH'S HORSES.

NEW YORK, February 18, 1902.

To the Editor of the *New York Medical Journal*:

SIR: I confess that I am somewhat confused by the letter from Dr. W. R. Inge Dalton, on the subject of the manufacture of antitoxine and vaccine virus, published in your last issue. While he gives a clean bill of health, as it were, to the establishments of the various private manufacturers, and also to those of certain boards of health, which he visited, he says nothing whatever on the subject which is of most interest to the physicians of New York city, namely, the state of the so-called cellar, or hospital, in which the horses used for the production of antitoxine by the board of health are kept. Dr. Dalton performed a useful public service by calling attention to the fact that the facilities of the health department for making aseptic antitoxine were not of the best, and, personally, I had hoped that his address would result in marked improvement of its methods. Will Dr. Dalton now say that *all* his charges were groundless? His opportunities for comparison between the different establishments visited have been exceptional. Let him now tell us, not of the facilities for producing aseptic antitoxine, but of the relative sanitary surroundings and care of the animals employed in the manufacture of this useful agent.

X.

Book Notices.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. TH. PUSCHMANN, Weiland Professor an der Universität in Wien. Erste Lieferung. Jena: Gustav Fischer, 1901. Pp. 176.

The first instalment of what promises to be a monumental work on the history of medicine carries us through the mythological period of Greece. A philosophical introduction by Professor Puschmann is followed by a chapter on the medical lore of primitive peoples by Dr. Bartels (the editor of Ploss's famous book on *Woman*) and by a chapter on medicine among the peoples of Eastern Asia by Professor Scheuhe. The ancient Mediterranean peoples are next considered by Dr. von Efele, and Dr. Preuss writes on medicine among the ancient Jews. Indian medicine is discussed by Dr. Iwan Bloch, and Dr. Fuchs takes up the practices of the

ancient and prehistoric Greeks. An extensive bibliography is appended to each chapter. No student of the history of medicine can afford to be without this latest work, for it not only abounds in new material, but bears the imprint of authoritative statement.

Der Ursprung der Syphilis. Eine medizinische und kulturgeschichtliche Untersuchung. Von Dr. med. IWAN BLOCH, in Berlin. Erste Abtheilung. Jena: Gustav Fischer, 1901. Pp. xiv-313.

In this very elaborate and highly interesting monographic contribution to medical history, the author concludes as a result of his studies that syphilis is a new disease for continental Europe, and that the present view that lues is of recent origin there is the only correct one. He believes that the view that syphilis is a disease of ancient origin in Europe is absolutely without foundation. From documentary and historical evidence, the author proves satisfactorily that America was the original home of the disease, and that it was brought to Spain by the sailors of Amerigo Vespucci and of Columbus. By them the disease was carried to Spain and soon spread over continental Europe with the great commercial activity of the sixteenth century. The book is a monument of Teutonic industry and research, and is valuable to the student of syphilography and of historical medicine.

Lessons on Massage. By MARGARET D. PALMER, Manager of the Massage Department of the London Hospital, etc. New York: William Wood & Company, 1901. Pp. xiv-234.

While there is little that is strikingly new or original in this little book, what is included within its covers is sound teaching. It is a book the exact parallel of which has been missing in our language, and for this reason, if for no other, it is a welcome addition to medical literature. There is much in it which physicians and nurses will gain by learning on general massage, and the Weir Mitchell rest cure is very accurately and thoroughly described. If from this book nurses and physicians learn the one lesson of avoiding essential mistakes in carrying out this valuable therapeutic measure, it will not have been written in vain. The directions for massage of the various organs and parts of the body are tersely and accurately given, but we fail to find any mention, beyond anatomical description, of pelvic massage of the genital diseases of women.

The Cost of Food: A Study in Diets. By ELLEN H. RICHARDS, Instructor in Sanitary Chemistry, Massachusetts Institute of Technology. First Edition. First Thousand. New York: John Wiley & Sons, 1901. Pp. 161.

The author states that the aim of this study is to determine "the relative cost of the right amount of the food stuffs when derived from the various food materials," and the same want of clearness in meaning in the statement of the purpose of the work is met with elsewhere in its pages. One is quite at a loss for the meaning of the first paragraph in chapter XII, where the author says: "In spite of all preaching, few really believe that plain living goes

with high thinking." Quite true, for Wordsworth's dictum has never carried with it more than the force of a clever phrase which has not been believed generally, because it is not true. The world has been as much enriched by those accustomed to the luxuries of their time and environment as by those hampered by their necessities; and Oliver Wendell Holmes was not alone in reechoing the prayer of Augur "to give him the luxuries of life, and he would dispense with the necessities." The author would undoubtedly concede that it is not the food that one eats, but the food that one assimilates, that is of value; and, however wholesome many foods may be, their use may be associated with so much mental prejudice or even physical discomforts that they are not adapted to the dietary.

One agrees heartily with the author that it would be vastly to the advantage of most eleemosynary institutions if the culinary arrangements were in the hands of more competent, better-paid cooks and stewards. Usually the food supplied is cheap and nasty, and there is no attention to the manner in which it is served. While the author is in possession of much information on the subject, it seems that it might have been presented in a manner that would carry more conviction than is apt to result from reading this volume.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M. D., Fellow of the Royal Society; Professor of Medicine in the Johns Hopkins University, etc. Fourth Edition. New York: D. Appleton & Company, 1901. Pp. xvii-1182.

It is difficult to say much more in commendation of Dr. Osler's classical work than has previously been said in these columns. The fourth edition still finds it the best of the text-books on medicine in the English language by a single author. Dr. Osler's ripe experience, his well-balanced judgment, his profound knowledge of his subject, and his charming, at times witty, literary style, are written into every page. The fact that the book is thoroughly modern is apparent in every chapter. The chapter on typhoid fever, for instance, embraces an elaborate review of the disease as it appeared in the late Spanish and the South African wars. Many of the chapters have been entirely rewritten, and the book stands to-day as the highest type of what a model text-book should be. Every physician and every student should be familiar with it. It is a treat to read it.

Handbook on Sanitation. A Manual of Theoretical and Practical Sanitation. For Students and Physicians; for Health, Sanitary, Tenement-house, Plumbing, Factory, Food, and other Inspectors; as well as for Candidates for all Municipal Sanitary Positions. By GEORGE M. PRICE, M. D., Medical Sanitary Inspector, Department of Health, New York City, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1901. Pp. xii-317.

The author states that he has endeavored to present his subject in a condensed and practical form,

so as to enable a student and candidate for examination to make a creditable showing in the civil service competitive examinations, as well as subsequently to fill one of the sanitary positions. So the first part of the work is a *résumé* of other text-books on the subject of sanitary science. The second part is devoted to sanitary practice, the third to sanitary inspection, and the fourth to sanitary law, that, is, that part of it enacted for New York State and city.

It would seem that the author had attempted to compress too much, possibly in order to keep the volume within a certain number of pages. The chapters on offensive trades, on food, on meat, on milk, on infectious disease, and on disinfection and disinfectants are notably meagre, and we do not see how a candidate could get from them information to enable him to pass even an elementary examination.

A Civilian War Hospital. Being an Account of the Work of the Portland Hospital, and of Experience of Wounds and Sickness in South Africa, 1900. With a Description of the Equipment, Cost, and Management of a Civilian Base Hospital in Time of War. By the Professional Staff. With Numerous Illustrations. New York: Longmans, Green, & Company, 1901. Pp. xii-343.

The authors state that the Portland Hospital was the first of the civilian hospitals to be equipped and sent to South Africa after the declaration of war, in October, 1899, and that it was probably the first voluntary hospital attached to a British army at the front. The personnel, equipment, and interior economy of the hospital are described, and these give evidence of excellent judgment and forethought on the part of the staff.

Like our own troops in the Spanish-American war, the British troops in South Africa suffered greatly from typhoid fever, and the military experience with that disease, simple continued fever, diarrhoea, dysentery, and sunstroke is narrated with clear detail. The surgical experience is very interesting, and is an addition to the literature of gunshot wounds from modern projectiles.

In one hundred and eighty-three working days the hospital treated 1,009 patients, and must have materially relieved the army hospitals.

The volume is well illustrated and should be welcomed by the large number of surgeons who are interested in military work.

Mount Sinai Hospital Reports. Volume II. For 1899 and 1900.

The second volume of reports from the Mount Sinai Hospital contains illustrated articles on the work of the past two years in all the hospital's departments. The book shows the great advantage accruing to the profession from a systematic report of the clinical work done in the hospitals of the country. It is becoming more and more the custom to print these scientific reports, and their didactic value is no small one. The present volume is well edited and contains articles by all the attending physicians and surgeons of the hospital, including an elaborate report of the pathological department.

Manual of Diseases of the Eye. For Students and General Practitioners. With 275 Original Illustrations, including 36 Colored Figures. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University. Second Edition, Revised. New York: William Wood & Company, 1901. Pp. xiii-408.

The author and publishers of this book are to be congratulated upon the fact that a second edition was in demand within eight months of the first appearance of the work.

Many of these brief epitomes are now published, all for the same purpose, to lighten the work of the student, and all with the same principal fault, a lack of the detail which is necessary for a working knowledge of the subject. The author says: "The greatest difficulty in preparing a book of this kind is to say enough but not too much." But enough on this subject to be of real value to a student cannot be said in so small a compass. The author does not intend it as a substitute for larger works, but to supply a foundation to which further knowledge may be added. How many of the students in the great school in which the author is teaching have this statement impressed upon them and buy the "larger works" from which to obtain the "further knowledge"? If an authoritative answer could be made to this question, it would determine whether the students accept this book in the spirit of the author's preface or as the substitute he declares it not intended to be.

Several colored plates have been added in this edition, which materially enhance its value.

Essentials of Refraction and of Diseases of the Eye. With a Consideration of Ocular Injuries and the Ocular Symptoms of General Diseases. By EDWARD JACKSON, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc. Third Edition, Revised and Enlarged. With 82 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 261.

This is No. 14 of Saunders's *Question-Compends*, devoted in this edition solely to one organ, the eye. In the second edition, comprising only a few more pages, nearly one half of the book was devoted to diseases of the nose and throat, a fact which indicates how greatly the subject matter has been revised and increased.

It is difficult for a practitioner whose examinations are in the long past to estimate the actual value of question-compends because they occupy a very different field from that of other works on medicine. This one furnishes considerable information in the form of terse answers to questions, and would seem to the reviewer admirably adapted to the needs of a student who was cramming for a fairly severe examination in ophthalmology. But it would also seem to him that such a student should be well grounded in the subject beforehand, and use this book rather to refresh his memory than as his main source of information, because the very terseness of the text might occasion its misapprehension. The

book is uniform with the other numbers of the question-compends and treats of refraction, diseases of the eye, injuries of the eye and orbit, eye symptoms of general disease, and tests and requirements of vision for schools, railroads, and public services.

The American Illustrated Medical Dictionary. A New and Complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the Kindred Branches, with their Pronunciation, Derivation, and Definition, including much Collateral Information of an Encyclopædic Character. By W. A. NEWMAN DORLAND, A. M., M. D., Assistant Obstetrician to the University of Pennsylvania Hospital, etc. Second Edition, Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 770. [Price, \$4.50.]

The second edition of Dr. Dorland's dictionary is considerably enlarged and thoroughly revised. The correlation of facts and names under tables or groups is a useful feature of the work. Among the less elaborate of the medical dictionaries, this is certainly one of the best. A rather careful search shows that the newer terms are almost all included. The limp cover in which it is now bound adds to its appearance and ease of handling.

BOOKS, ETC., RECEIVED.

Principles and Practice of Operative Dentistry. By John Sayre Marshall, M. D. (Syr. Univ.), Dental Surgeon, United States Army, etc. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. xxi-635. (Price, \$5.)

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D. Volume IV. Eleventh Series, 1902. Philadelphia: J. B. Lippincott Company. Pp. x-302. (Price, \$2.)

Mental Growth and Control. By Nathan Oppenheim, M. D. New York and London: The Macmillan Company, 1902. Pp. ix-296. (Price, \$1.)

The Elements of Physical Chemistry. By Harry C. Jones, Associate Professor of Physical Chemistry in the Johns Hopkins University. New York and London: The Macmillan Company, 1902. Pp. xi-565. (Price, \$4.)

The Perverts. By William Lee Howard. New York: G. W. Dillingham, 1902. Pp. 5 to 338.

Transactions of the American Orthopædic Association. Fifteenth Session, held at Niagara Falls, June 11, 12, and 13, 1901. Volume XIV.

The Eighth Annual Report of the Board of Managers of the Craig Colony for Epileptics, at Sonyea, N. Y., to the State Board of Charities. For the Year ending September 30, 1901.

Recherches cliniques et thérapeutiques sur l'épilepsie, l'hystérie et l'idiotie. Compte-rendu du service des enfants idiots, épileptiques et arriérés de Bicêtre pendant l'année 1900. Par Bourneville. Volume XXI. Avec 19 figures dans le texte et XI. planches. Paris: Félix Alcan, 1901. Pp. cvii-236.

Miscellany.

Franciscus Arceus (A. D. 1588) on Specialism Run Rampant in the Sixteenth Century.—We are indebted to Dr. Frederic Griffith for the following interesting relic bearing on medical economics in the sixteenth century:

A Complaint of the abuse
of the noble Arte Chirurgie.
written by that
famous man Franciscus
Arceus, Doctor in Phisicke & Chirurgie: and
translated into English
by Iohn Read,
Chirurgion.
1588.

A Midst the waves of ocean seas,
to memorie I gan to call,
The famous arte of medicine,
that dailie doth to ruine fall,
For to record the present state,
it makes me grevously to mone,
For now there are so many that
this famous arte doe dailie haunt,
And such as for the most part are,
both blind and verie ignoraunt.

How can then Surgery I say,
from Phisicke well detracted be,
Sith that in every action,
accordingly they doe agree.
But as it was without advice,
disorderlie distincte in twaine,
So now the same divided is,
by wicked impes in parts againe.

Some for the rheume forsooth will deale,
and some to heale th' affected eyes,
Some for the deafenesse of the eares,
and some to cure the stone likewise,
Some to cure a fever skilful are,
and some to beautify the face,
Some for an ulcer some a wound,
and some the Fistulae alone,
Some for the pockes,* some for a wenne,
and some to cure a broken bone.

Some for the dropsy, others eke
that for the gout alone doe deale,
Some for the tooth ach expert be,
and some the rupture for to heale.
Thus everie one doth catch a peece,
and gadding goes from place to place,
Which dailie doe the arte disgrace.
now no man heere I doe accuse,
To be the private cause of this,
but everie one I doe exhort,
To mend the thing that is amisse.

And whilst I heere on earth remayne,
to pray to God I will not cease,
Till I return to dust agayne,
your knowledge daylie to encrease.

*Small-pox (?).

A Handy Aid to Diagnosis is afforded by a chart of diseases of the heart, blood vessels, lymphatics, blood, and ductless glands, which has recently been published by the M. J. Breitenbach Company, of New York. After the name of the diseases enumerated, which are printed in the left-hand column of the chart, follow columns headed respectively: Principal Causes, General Symptoms, Inspection, Palpation, Percussion, Auscultation and Blood Changes, Pulse, Complications—Sequelæ. So far as we have seen, the information presented is accurate and so well arranged as to be easy of reference. It can, we understand, be obtained by physicians on application to the M. J. Breitenbach Company, of New York.

A Simple Method of Detecting Fat in the Blood.—According to the *Medical Age* for November 25, 1901, Zaudy (*Deutsche Archiv für klinische Medizin*, Bd. lxx, Heft 3 u. 4) says that lipæmia may occur through an increase of fat partaken of as food; by an underoxidation of the fat in normal foods; by an increased destruction of the body fat; or by an abnormal fatty degeneration of the body cells. The presence of lipæmia can be established by an exact quantitative chemical analysis of the blood, which in private practice is impossible owing to the quantity of blood necessary to be taken from time to time. The author has therefore devised a method, with which he has obtained good results. He sterilizes the finger-tip with alcohol and ether, and then catches a drop on a cover-glass which is ringed with vaselin and placed on a culture slide. With normal blood the disk is soon surrounded by a clear fluid, while with fatty contents it becomes turbid in a few minutes and appears of a bluish or milky white hue.

Rheumatism and Amygdalitis.—Dr. Cheatham (*Medical Record*, December 14, 1901) cites St. Clair Thomson as saying that the present state of our knowledge on the relation of tonsillar affections to rheumatism might be summarized as follows: (1) It is undoubted that a certain number of cases of acute rheumatism are preceded by an angina in a proportion varying from 30 to 80 per cent. (2) Both rheumatism and angina have many ætiological points in common—season of year, cold, wet, fatigue, depression, vitiated air, etc. (3) The connection of angina and rheumatism, though undoubted in a number of cases, is not yet clearly established. (4) The tonsil may be the port of entry of the rheumatic virus, although the naked-eye appearance of the throat gives no indication of its being affected. (5) The particular affection of the throat which is associated with rheumatism is not yet established. Apparently it is not circumtonsillar abscess (quinsy). (6) Circumtonsillar inflammation does not appear to be arrested by the administration of antirheumatic remedies. Many cases of parenchymatous and lacunar amygdalitis, on the contrary, are considerably benefited by the administration of salicine or sodium salicylate. That this action proves the rheumatic nature of the disease cannot yet be accepted. (7) The question requires further research in two directions: One in differentiating the various forms of angina, and settling the one which is associated with rheumatism; the other in further research to discover the true nature of rheumatism.

Rupture of the Uterus.—H. Schmit (*Monatschrift für Geburtshilfe und Gynäkologie*, September, 1900; *Albany Medical Annals*, August, 1901) considers the cases of uterine rupture observed in Schauta's clinic from October, 1891, to March, 1900. While observers are generally agreed with reference to the method of delivery, there is considerable difference of opinion as to the after-treatment of cases where delivery has occurred *per vaginam*. As to delivery, the general rule is to deliver by the quickest method, and that which is least injurious to the maternal structures, *i. e.*, if the foetus is still in utero, to deliver *per vaginam*, embryotomy being necessary in some cases; but if it has completely escaped into the abdominal cavity, to deliver by laparotomy. As to the after-treatment of cases delivered *per vaginam*, the question of operative versus conservative treatment is of primary importance. In examining the recent literature of the subject, one is almost forced to the conclusion that the operative treatment is gaining ground in spite of the fact that experienced authorities favor a conservative course. This is probably due to the well-known fact that the cases successful under operative treatment are more frequently reported than unsuccessful ones. Schmit reports nineteen cases. Seven of the nine cases of incomplete rupture were treated by drainage. One received no special treatment, since the rupture was not clinically recognizable, and in one case death took place from effects of hæmorrhage before laparotomy could be undertaken. Of the seven cases treated by drainage, two patients died, a mortality of 28.57 per cent. There were ten cases of complete rupture, four treated by operation, six by drainage; mortality fifty per cent. in both operative and non-operative cases. Altogether the mortality of cases treated by operation was fifty per cent.; in those treated by drainage, 38.40 per cent. By the study of the results obtained in a continuous series of cases, in various clinics (179 cases in all), it was obvious that drainage gave far better results than operative treatment. Of the patients treated by drainage, 51.8 per cent. recovered; of those operated upon, only 25 per cent. The reasons for this greater mortality in cases operated on are that it was in the severe cases that operative treatment was practised, cases in which the child had escaped into the abdominal cavity being especially dangerous. Another reason is to be found in the greater liability to infection. It was formerly supposed that the principal sources of danger in uterine rupture were hæmorrhage and shock, but it is now generally recognized that sepsis constitutes the greater source of danger. In conclusion, Schmit states that, except in those cases in which severe hæmorrhage or extensive lacerations make operative treatment imperative, better results will be obtained by conservative treatment—drainage in particular.

Ablatio Placentæ.—Dr. R. W. Holmes (*American Journal of Obstetrics*, etc., December, 1901,) ends an exhaustive study of two hundred cases in the literature with the following conclusions:

1. The ætiology of ablatio placentæ is generally dependent upon pathologic conditions, and exceptionally on traumatism. 2. As a pathologic entity, ablatio occurs once in about 200 pregnancies, and is of clinical importance once in 500. The difference between the occult and open types is largely

dependent upon the manifestation of external bleeding in the latter; the complete blood retention in the former generally produces an exaggeration of the uterine distention, and accessory tumor, and more evident shock. 3. To put it in paradox, ablatio is an abortion in the latter months of pregnancy. The ætiology is nearly identical; the mechanism has certain elements of similarity. Those cases of pathological interest, and the mild instances, offer a parallel to threatened abortion: the patient may, and often does, tide over the difficulty and goes on to term with a living baby; the severe may be likened to an inevitable abortion, relief coming only with the evacuation of the uterus.

The treatment demands these considerations: 4. The *mild cases* must be most carefully watched. Quiet is a *sine qua non*; it may be induced by morphine. An ice bag will be of use on the uterus. Hydrastinine, which, according to Pick, has a selective action on contractions of unstriated muscle, and therefore possesses hæmostatic action, may be given instead of ergot. From my remarks under the caption of Frequency it is evident that probably in nearly two thirds of the cases pregnancy will go on to term, or labor will be completed, without untoward results. 5. *Severe cases*: Treatment must be modified by the condition of the os. If the os is prepared for delivery, use forceps, craniotomy, and version, choosing the operation in the order named; version should only be selected when unimpeded breech extraction is possible. 6. *Severe cases not in labor*: As rapidly as possible labor should be induced; this may be done by means of friction, electricity, ergot, quinine, and sugar; hydrastinine, salt solution, gelatin solution, general stimulation will be indicated *pro re nata*. While these measures are being carried out, possibly by assistants, preparations should be made to introduce a Barnes bag. This measure, while dilating the os, is a most excellent means of stimulating uterine action; traction on the tube stem of the bag should be continuous, which accelerates dilatation and augments the cervical irritation. Later, dilatation may be completed by the larger bags, manual dilatation, or, when effacement is complete, by Dührssen's incision; Dührssen's incisions have no consideration if dilatation is present without effacement, and the author suggests that the oblique cuts offer less danger than those suggested by the originator. Complete as under 5. 7. *Severe cases in labor*: Hasten labor as much as possible; use plan outlined in 5 and 6, as may meet indications. 8. The tampon should have no place in the treatment of ablatio. The membranes should be preserved intact until delivery may be expedited. 9. Cæsarean section will be of value in selected cases, but never will be popular, for the conditions and surroundings favoring celiotomy will seldom be at hand. 10. If the placenta does not follow the child at once, remove it immediately. Have all necessary equipment at hand to treat postpartum hæmorrhage, which is a frequent sequence of the condition. Tampon the uterus early. 11. To quote Goodell's closing remark, "præstantissimum remedium est fœtus extractio." Apply this precept too early rather than too late.

Fracture of the Pelvis Occurring during Labor.

—Dr. U. S. Bird (*American Journal of Obstetrics*, January) records a case in which fracture of the

pelvis occurred during labor. The patient was under Dr. Bird's observation for some time before delivery, which was several days overdue. Her history was negative, and her pregnancy was free from serious complication.

Dr. Bird was called about 10 p. m. Labor proceeded slowly. Pains were good, but she made little progress during the second stage. Between pains she rested, but during pains it was impossible to restrain her. The head came down on the perinæum, and for some time the scalp was visible without manipulation. Dr. Bird gave her ample time, but the pains were not effective. Toward the end of the time allowed her the accident under discussion happened. During a hard pain accompanied by violent movements, while the nurse and the doctor held the right thigh and leg, he heard a distinct, sudden snapping sound on the right side, but noticed no marked relaxation or mobility. At first he feared a parting of the symphysis, then a fracture of the femoral neck, but saw that neither had happened. Shortly afterward he applied forceps, and with some difficulty advanced the head sufficiently to allow the second stage to be completed naturally about 4.30 a. m. A retained placenta required manual delivery. By this time Dr. Bird had forgotten the sound mentioned. On seeing her a few hours later, after changing, she felt well, but could not move because of a pain in her right groin. At once everything came back to him. An examination easily discovered a slight displacement of the fragments of a diagonal fracture, with mobility and crepitus, in the right horizontal ramus of the pubes. Dr. J. S. Helms saw her and agreed in this. In their opinion it was a simple fracture, with no complication other than her puerperium. A seven-inch rubber adhesive plaster was passed snugly around the pelvis, so as to make necessary pressure and avoid soiling. A canvas cot with a hole under the buttocks was used, but was the same day replaced by a rubber-covered mattress cot. As the hole was not well guarded, the mattress became soiled and offensive. A second cot was procured, and both were more carefully prepared, being covered with rubber sheeting and the holes well bound with the same. Two pieces of cotton cloth were spread over the head and foot parts, respectively, and two extra pieces of rubber sheeting were so placed as to protect everything else about the hole. The soiled articles could thus be removed as necessary, with a minimum of disturbance. About once weekly she was changed to the extra cot, which had meantime been cleaned and aired.

As regards the fracture her convalescence was uneventful, but her puerperium was an anxious one.

Toward the end of the fourth week passive motion of the legs and thighs was used, especially to prepare her for the bedpan and for using a bed in place of the cot. About the middle of the fifth week the plaster bandage was removed without inconvenience, and she was placed in bed, greatly to her relief. Massage and passive motion, with cautious active motion, were continued. Her knees were quite painful. During the sixth week she sat up in a chair, and by the seventh week she was walking. On first sitting up there was coccygeal pain. On December 20th the patient was well, presenting no symptom of her injury; she walked naturally.

Original Communications.

NÆVUS VERRUCOSUS ASSOCIATED WITH CERTAIN ANOMALIES OF PIGMENT.

By H. TAYLOR, M. A., CANTAB., M. A., M. D., DUBLIN.
COLCHESTER, ENGLAND.

The marked manner in which the lesions are rigorously limited to the right side of the patient, their distribution in the track of certain cutaneous nerves, the alternation of deeply pigmented papillomata with merely the presence of pigment in the skin, and finally the merging of this pigmented condition into decolorized patches, make—I have ventured to think—this case worth recording.

CASE.—The subject is a lad of some nineteen years of age, well nourished and in good health, with no history of syphilis or tubercle, who displays on his right breast a fairly extensive "nævus verrucosus." Over the right pectoral region there is a dense crop of pigmented, non-hairy warts, extending into the axilla, and—though somewhat thinning out—half way down the inner aspect of the right arm.

At about the level of the nipples the warts reach

From the umbilicus to the pubes another faint brown line can be traced, unaccompanied by any warts, but on the right side of the scrotum and penis some can be found, and with them a few reddish scars, the site of previous ones which, the pa-



FIG. 2. Nævus verrucosus associated with certain anomalies of pigment.

tient states, have "dropped off." Similar scars can be seen on the right side of the forehead, nose, and chin, the result of treatment by the actual cautery.

Down the inner side of the right leg from the groin to the inner malleolus, is another faint line of pigment which, becoming more marked behind the ankle, is apparently merged into five or six oval-shaped, raised, colorless patches of a leathery consistence, placed along the inner edge of the right foot ("white moles" of Hutchinson?). (Fig. 2.)

There are no skin lesions of any description on the left side of the patient; all are confined absolutely to the right side.

He asserts that he sweats more freely over the affected side, and that the principal inconvenience he labors under arises from this hyperidrosis, with—in a not too cleanly person—the inevitable decomposition of the sweat and the consequent chafing of contiguous parts.

The condition is congenital and the various patches have grown only proportionately with the individual. There is no history of any of his relatives having been similarly affected.

The warty growths over the pectoral region are well illustrated in Plate 35 of Mracek's *Hand Atlas of Skin Diseases*.



FIG. 1. Nævus verrucosus associated with certain anomalies of pigment.

the median line of the body, then, gradually disappearing, are replaced by a line of reddish brown pigment which is continued down to the umbilicus, where again a few growths appear. (Fig. 1.)

AGAIN THE RECTAL VALVE AND OBSTIPATION.

By THOMAS CHARLES MARTIN, M. D.,

CLEVELAND,

PRESIDENT OF THE AMERICAN PROCTOLOGICAL SOCIETY.

On December 28, 1901, there appeared in the *New York Medical Journal* an article by Dr. William Bodenhamer entitled A Retrospective Survey of some of the Essential and Vital Principles Pertaining to Ano-rectal Anatomy, Physiology, Pathology, and Nomenclature; In an Effort against the Present Attempts to Radically Change and Subvert them.

This article, which occupies many pages, not only attacks certain views on the anatomy of the rectum and on obstipation, for which I am quite willing to be held responsible, but also accuses me of having an avaricious purpose in promulgating them. The growth of knowledge since I first advanced the views in question, in 1896, renders it unnecessary to attempt specific controversion of Dr. Bodenhamer's recent polemic, which is as remarkable for its archaic fragrance as it is for the absence of new data. There is, however, in Dr. Bodenhamer's recent paper, one conspicuous example of misquotation which should be mentioned. On page 1184, Dr. Bodenhamer writes as follows:

"The writer here declares that all the anatomists previous to Dr. Martin who assert that they have found the rectal valves, made their discovery soon after death; while Dr. Martin, on the contrary, declares that rectal valves cannot be discovered *post mortem* (*Medical Record*, June 17, 1899, p. 885), but can only be demonstrated on the living subject."

On December 17, 1899, Dr. Bodenhamer, in a personal letter to me, referred to this abstract of my paper, read before the American Medical Association, which he found in the *Medical Record*.

On February 2, 1900, I wrote to Dr. Bodenhamer and told him that I was misquoted in that abstract.

On June 30, 1900, Dr. Bodenhamer published a criticism based on this *Medical Record* abstract after being assured of my non-responsibility for it.

In September, 1900, in a published letter, I again disclaimed any responsibility for that abstract.

On December 28, 1901, as shown above, Dr. Bodenhamer insisted upon holding me responsible for the statement quoted!

On page 69 of my monograph on *Obstipation*, published in 1899, Dr. Bodenhamer may find the following statement:

"The studies of the topography of the human rectum made in this research employed more than fifty autopsies, on subjects of all ages, and physical examinations of many hundred living persons."

On the same page Dr. Bodenhamer must have seen the photographic reproduction of the interior

of a rectum removed from a cadaver, which shows distinctly the presence of the rectal valve. In my book, which Dr. Bodenhamer so contumaciously misquotes, may be found, not only the descriptions of macroscopic, but the microscopic, appearance of the rectal valves and a record of the experiments made to determine their function, and also clinical records of cases of obstipation due to disease and malformation of this structure.

After a redundancy of hypercritical exceptions to my writings on this subject, Dr. Bodenhamer, with charming naïveté, concludes:

"Now, if any one wishes to see a scientific analysis of the three natural divisions of the rectum, showing the exact relation of each organ of the pelvis to that of each of the three divisions of the rectum, he will find it in the writer's" (Bodenhamer's) "work on *The Physical Exploration of the Rectum*, p. 7, *et seq.*"

And to prove that he is correct, Dr. Bodenhamer makes elaborate quotation from the literature of the first half of the last century!

Demands upon the space of a modern scientific journal are such that one must offer something more than "dogmatic negation" to deserve the attention of the reader. I therefore submit the following paper, read at the Put-in-Bay meeting of the Mississippi Valley Medical Association, September 12, 1901, and not hitherto published:

CONGENITAL VALVULAR OBSTIPATION.

The specimen which I exhibit (p. 401) consists of a rectum taken *post mortem* from a subject previously unknown to me. The history of the case cannot be related. The subject was a female, apparently between fifty and sixty years of age. On opening the abdomen it was discovered that there had been a general peritonitis. Search revealed two perforations in the middle part of the lower loop of the sigmoid flexure. In various places in this portion were found areas superficially necrosed. The sigmoid flexure was dilated and its walls hypertrophied. The bowel was washed out and ligated at the sigmoidorectal juncture. The cadaver was inverted, the anus opened, and the rectum poured full of melted paraffin. When this was sufficiently hardened the paraffin-cast-filled rectum was dissected out. After two weeks' immersion in alcohol it was varnished and dried. Over its convex posterior surface it measures 7½ inches. Its greatest transverse diameter is three inches. Its upper half is more contracted than is usual for this portion of the gut. As you see, it is divided longitudinally into halves. By virtue of the method of preparation the walls are fixed at the greatest expansion of the organ. Examination of its interior discloses that this rectum is occupied by four considerably developed valves. The second and third valves are ab-

normally deep. The second, the one which is on the right side, measures $1\frac{1}{2}$ inch from its free to its attached border; the third is $1\frac{1}{4}$ inch in depth; the sum of the depth of these two valves is $2\frac{3}{4}$ inches, while the transverse diameter of the rectum itself at a point occupied by these two valves is scarcely $2\frac{1}{2}$ inches. These two valves are situated vertically, within half an inch of one another. It is apparent that, because of the extreme depth of these valves and their proximity to one another, their free edges overlapped and established a temporary diaphragm which must have obstructed the descent of fæces through this portion of rectum. By inspection of the specimen it may be discovered that the second valve so far trespasses upon the left half of the rectum that, on longitudinal division of the rectum into equilateral halves, a portion of this valve remains as a bridge suspended across the half opposite its base. Save for the congenital malformations, namely, the overgrowth and the propinquity of the valves, and the noticeably contracted upper portion of the rectum, this organ itself does not appear to be otherwise abnormal. In cases of valvular obstruction not unusually it is observed that there is dilatation of that portion of the rectum immediately above the obstruction. Such dilatation was probably prevented in this case by the arrangement of the peritonæum, which did not form a mesentery, but on the contrary bound the rectum securely to the sacrum. That portion of the bowel above this bone was provided with a mesentery and was dilated. The sequence which led to catastrophe in this case, obviously, was the usual one: Obstruction, dilatation, inflammation, ulceration, perforation, general peritonitis, and death.

CASE I is that of a woman, seventy-three years of age, whom I was requested to see with Dr. W. H. M. From infancy she had experienced difficult defecation, which gradually developed into a chronic struggle with obstipation, and which for many years was only occasionally interrupted by diarrhœa. Cathartics and enemata had been employed throughout her long life with more or less irregularity. The patient stated that she would regularly have used such means if she had not been taught to believe that Nature would take care of herself. She was confined to her bed, was much prostrated, having been subject to a constant diarrhœa for the preceding five or six months. During this period she constantly had a temperature varying from 99° to 101° F. She complained of pain in the region of the splenic flexure of the colon. Examination of the abdomen revealed masses of fæces in the sigmoid flexure and descending colon. The tenderness was greater in the region of the splenic flexure. A mass was discernible here, which was, however, not so large as the others, and was not movable. Nothing significant was discovered in the dejecta. The diagnosis at this time was held to be conjectural, the surmise tending toward tuberculous or malignant disease of the intestine. A ni-

trogenous diet and colonic flushings were administered, and after a few weeks the patient's general condition was somewhat improved; there were no masses to be found in the abdomen, but the diarrhœa continued. She was proctoscoped, and a rectum similar to the one exhibited was disclosed. Without the use of any anæsthetic, with the infliction of but slight discomfort and some slight degree of fatigue, the most obstructing rectal valve was divided. The valvotomy was done in September of 1900. Subsequently the patient's diarrhœa gradually was arrested, obstipation did not recur, the temperature became normal, and during the past sixteen months the patient's condition has grown relatively robust. Defecation has been normal for the first time in her seventy-three years.

CASE II.—June 3, 1898, a woman, thirty-two years of age, the daughter of the subject of the previous report, consulted me for the relief of obstipation. She reported that, ever since she could remember, defecation was possible and easy, only when the fæces were rendered fluid by means of cathartics or enemata, that when the fæces were formed their evacuation was accomplished only with the greatest straining and by manual assistance. The young woman was profoundly neurasthenic and suffered from repeated attacks of intestinal self-intoxication. Proctoscopy disclosed a general hypertrophic proctitis and such a degree of hypertrophy of the rectal valves and contraction of the valve-strait as is equivalent to multiple annular stricture. The valves were situated in such propinquity as to overlap. Without the employment of general anæsthesia the valves were divided. The operation was painless. Normal defecation was restored and continued.

CASE III.—In October, 1898, Mrs. C., thirty-four years of age, the mother of two children, consulted me for the relief of persistent obstipation and annoying borborygmus. She was emaciated, neurotic, and irascible to the last degree. She reported that since childhood she had been the subject of difficult defecation. The rectum was evacuated only occasionally, and within the last few years she had suffered recurrent attacks of diarrhœa. Proctoscopy revealed the two lowermost rectal valves slightly hypertrophied and the presence of two much hypertrophied rectal valves at the juncture of the sigmoid flexure. These two higher valves overlapped. The sigmoid was observed to be much dilated. All the valves were divided. Normal defecation was established.

CASE IV.—In June, 1898, Mrs. R. B., aged thirty-six years, the mother of three children, came to me for relief of obstipation and continued pain in the iliac fossæ. She reported that from childhood she had never had an evacuation of the bowels except when the fæces were fluid and had been rendered so by cathartics. She was addicted to the physic habit, was neurasthenic, suffered repeated attacks of intestinal self-intoxication and recurrent attacks of proctosigmoiditis. Proctoscopy disclosed four hypertrophied rectal valves, two of which overlapped. An operation for the division of the valves was performed. Without the aid of enemata or cathartics, normal defecation was almost immediately established, and firmly formed fæces were evacuated, with little or no straining, once in two or three days, and, finally, daily with only an occa-

sional intermission. However, the patient was many months recovering from the intestinal self-intoxication incident to the dilated sigmoid.

CASE V.—Miss G. H., aged nineteen years, was referred by Dr. C. F. H. From infancy she had suffered more or less chronic irregularity in defecation. This difficulty had increased to such a degree during the last two years that cathartics and enemata were indispensable. She reported the classic symptoms of intestinal self-intoxication. An examination by means of the proctoscope revealed the presence of four rectal valves and the fact that the first two were anatomically coarcted. On April 29, 1900, valvotomy of the two first valves was done. She was immediately relieved of the obstipation, the function of defecation has since been perfectly normal, and her neurasthenic symptoms have entirely subsided.

CASE VI.—A girl, ten years of age, suffering from congenital valvular obstipation, was referred to me by Dr. J. and Dr. R. The history in brief is as follows: Defecation unaided never has been possible except during certain short periods following rectal divulsion. When she was two years old the rectum was subjected to forcible dilatation by means of a two-blade speculum and for a few weeks the function was practically normal, but the difficulty soon recurred. Within a year or so the operation was repeated with like result. Two or three years later a repetition of the operation proved ineffectual. Defecation, with the exception of the two periods referred to, was never possible unless the fæces were reduced to a liquid consistence. This was accomplished by the use of enemata and purgations. These means were losing their efficacy. I was consulted in September of 1900. The patient ere this had developed marked evidences of intestinal self-intoxication. Proctoscopy revealed the presence of four rectal valves. The two lower (right and left) ones were situated within half an inch of one another and each projected more than half across the rectum, which, when inflated, was about $2\frac{1}{2}$ inches in diameter. This organ had a vertical diameter of $4\frac{1}{2}$ inches. These two valves were not much hypertrophied, but were obstructive by reason of the temporary diaphragm which they formed by overlapping. This child was extremely nervous and emotional and should have been anesthetized for this reason, but, on account of hay-fever, from which she was suffering, anesthesia was deemed inadvisable. One who has had experience with the use of the proctoscope must have observed the rise and fall of the anterior wall of the ballooned rectum with each respiration in some subjects, and will understand the difficulties encountered in the operation on a crying child. On the second day after the operation the child swallowed a checker piece; on the next day it was passed with ease. Normal defecation was established and continued for a little more than two months. Symptoms of rectal obstruction then again gradually developed. When the hay-fever had subsided the little patient was anesthetized and a thorough division of both overlapping valves was made. This operation was followed by daily normal defecation. A few weeks later the child swallowed a tin whistle. It was never heard from. It is now more than sixteen

months since this little patient was operated on; the function of defecation is perfectly normal.

Congenital valvular obstipation is by no means uncommon. In one hundred and seventy-two cases of obstipation I have encountered but twenty-two typical cases in adults. However, the majority of my cases not so recorded have in their history and proctoscopic appearance that which signifies the previous existence of this condition, and it is this element which has predisposed to an acquired hypertrophy of the valves. For instance, let us recognize that the condition is an overlapping of two rectal valves. These valves are attached on opposite sides and are, in a vertical direction, but an eighth of an inch apart at their bases. Their free edges, being movable, are thrown in contact and thus form a barrier to the descent of the fæces. This illustration, be it understood, is the case of a child four years old whose rectum is four inches in length and two inches in transverse diameter. When adolescence is attained the rectum has been about doubled in length and breadth, and at this period in such a case the valves' bases may be separated by one half an inch in the vertical direction and their free edges separated by an inch or two. Thus may a subject outgrow congenital valvular obstipation; yet, by reason of their propinquity he may more readily acquire an obstructive degree of valve hypertrophy than another. This fact has been so frequently observed that one experienced in proctoscopy can, without any hint whatever, tell a patient after an examination of his rectum whether or not he, as a child, suffered from difficult defecation.

729 CASE AVENUE.

Surgery at Johns Hopkins.—Dr. F. R. Burnham (*Southern California Practitioner*, January) in some interesting Observations in Johns Hopkins, speaking of surgery there, says that Dr. Halsted and his assistants are very deliberate operators. A herniotomy that, in New York, would be performed in twenty minutes, Dr. Halsted would take sixty or more for, one reason being the great care to prevent loss of blood. He thinks that the average time of etherization in Dr. Halsted's clinic is over two hours for each operation. It is not unusual to see a patient kept under ether four hours, and they do not hesitate to continue it for six hours. Dr. Halsted's theory is that it is the loss of blood that causes shock, not ether. After the first half hour the amount of ether given is small, and they allow the patients lots of air. He thinks the operations at Johns Hopkins came nearer to being bloodless than those at any hospital he visited. He also remarks on Dr. Halsted's simple operating room. Dr. Halsted says keep the field of your operation aseptic and it matters but little what the surroundings are. He proves this to be true by the absolute absence of pus in uninfected wounds in his clinic. The technique of his operations is perfect.

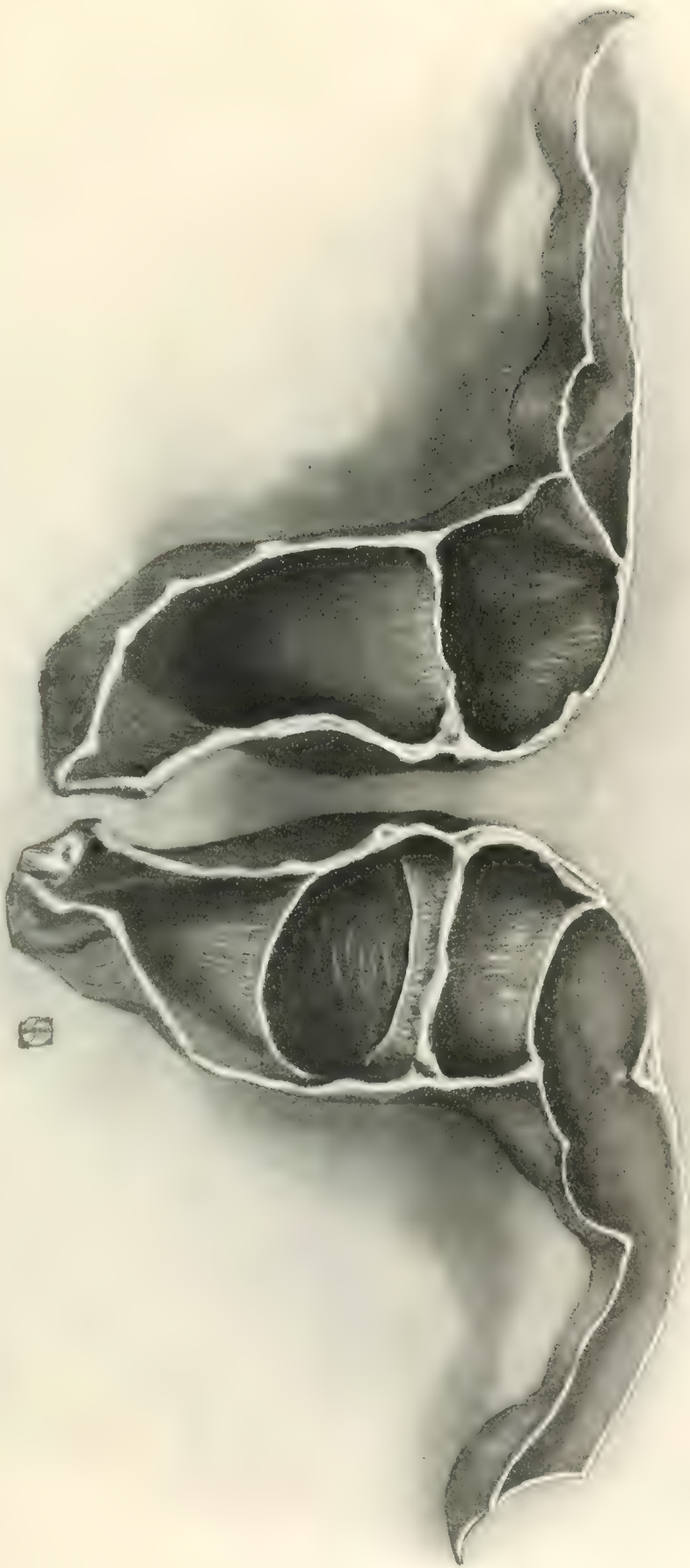


Figure illustrating an article entitled, Again the Rectal Valve, by Thomas Charles Martin. The rectum, after being filled with melted paraffin and hardened, was varnished and cut longitudinally into halves, the wax removed, and the drawing made. The description may be found in the text. This specimen has been exhibited to the Mississippi Valley Medical Association, the Cleveland Medical Society, the Eastern Ohio Medical Association, and the Detroit Medical Society.

THE CARE OF INCURABLE CASES OF CHRONIC PULMONARY TUBERCULOSIS.

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The demonstration in recent years of the curability, with proper environment and treatment, of most cases of consumption in an incipient stage, has done much to make an end of the pessimism which in the past has been one of the greatest obstacles to the successful management of these cases. It should be a cause of satisfaction for the profession, and equally of rejoicing for the tuberculous patient, that the day has now long gone by when a physician could feel that he had done his whole duty to the consumptive after he had prescribed cod-liver oil and told him to go to Florida or California for a change of climate. With greater care in the important matter of early diagnosis by the family physician, to whom these cases come at the period most hopeful for treatment, and with a wider appreciation on the part of the public of the nature and significance of the early symptoms, a time may reasonably be looked forward to when cases of phthisis will have practically ceased to reach the incurable stage, and when the reproach to civilization and science of the present great mortality from tuberculosis will in large measure have disappeared. Now, however, there are great numbers of incurables in every community constituting an oppressive burden to their families or a charge upon the public, a menace to the well, and, to accentuate their unfortunate condition, objects often of personal aversion and of fear. The problem of properly caring for this numerous class whose need is to-day probably the greatest and most neglected field for humanness and medical charity, is almost rendered hopeless by the very number of those affected. It is feared that the day is yet far distant when government aid can or will make adequate provision in suitable sanatoria for the hordes of tuberculous poor who throng our great cities, and to this class individual benevolence has been accused of indifference. One cause of the failure of rich men to respond more generously to appeals for tuberculosis sanatoria for the poor may perhaps be found in the fact that they shrewdly recognize that institutional care does not, after all, touch the root of the evil, and that a disease which has its origin in bad hygiene, squalid homes, insufficient food, foul air, want of sunlight, overcrowding, unwholesome trades, defective inheritance, alcoholism and dissipation, with a specific infection as exciting cause, is not to be treated most intelligently by providing a temporary retreat for the sufferer from conditions which continue and to which he must return. Philanthropic methods

wisely tend more and more to measures of prevention; there is not so much energy and money being expended as heretofore in impossible efforts to rescue the hopeless victims known as "the submerged tenth," and in charitable work it is fast becoming admitted as an axiom that, for permanent results, we must look to the removal of the conditions which foster an evil, rather than to sentimental provision for the unfortunates who are its necessary vicious consequence. The special problem presented in dealing with tuberculosis is further complicated by the nature of the disease which, in its chronicity, usually requires many months, or even years, of care. This consideration alone makes it somewhat doubtful whether the enthusiastic advocates of sanatorium treatment do not over-estimate the practicability of institution methods as a solution of the question. Even if the financial difficulties attending the sequestration and care of great numbers of tuberculous patients for a sufficient period of time were successfully overcome, many of the poorer and more ignorant would not voluntarily endure the prolonged absence from home and friends, and the necessary discipline and perfunctory care of attendants amid the more or less depressing associations of institution life. At present, sanatorium treatment seems more suitable for the well to do and middle classes, who upon their return to their homes can put in practice and continue the right mode of hygienic living found in well-conducted sanatoria, which is impossible under present conditions for the poor in large cities. If the vast sums necessary for a sufficient foundation of sanatoria were spent in the construction of improved tenement dwellings, and there were enforced more stringent laws regulating unwholesome occupations and child labor, it is probable, with the continuance of educational propaganda against tuberculosis, that in a few decades there would be much less need for sanatoria for either rich or poor. It is a sad commentary upon modern city life that it should be necessary to remove from their homes large numbers of our population in order to obtain for them such elementary requirements of healthful living as fresh air, nourishing food, sunlight, and baths. Better than sending the patient to a sanatorium, the ideal method would be to bring the sanatorium to the patient, and in a decent, hygienic environment permit him permanently to enjoy its benefits.

Granting the superiority of sanatorium methods when they can be properly carried out, a much greater field for useful effort will, I believe, always exist in the education and treatment of the consumptive at home. Whatever differences of opinion there may be regarding the merits of home treatment, however, for the incurable case there is no other course to pursue. He, even more rigidly than

the incipient case, is excluded from general hospitals, and is distinctly *persona non grata*, even in most sanatoria for tuberculosis, where the authorities in charge naturally desire to accumulate favorable statistics of "cures" for presentation to lay managers and the public; and this object, unfortunately, is not promoted by the admission of the advanced case. In the existing system of hospital relief in New York there is a melancholy gap in the provision made for the consumptive poor. So long as the tuberculous patient is able to apply for treatment he can be cared for in the numerous outdoor departments for ambulatory patients. Unlike other patients, however, he is not received in the wards, and when overcome in the unequal struggle with his formidable disease, he becomes too weak to drag himself to the dispensary door, his treatment stops and he often perishes miserably in his wretched tenement, neglected and unattended. What is urgently required, a measure at once practicable and attainable at slight expense, is the appointment of one or more physicians to be attached to every large city hospital who can visit and treat the tuberculous poor at their homes. This medical attendance could be further supplemented with great advantage by the establishment of diet kitchens for the supply of well-prepared, simple, and nourishing food, where it could not otherwise be had.

In childhood and old age, tuberculosis of the lungs appears to run a more favorable course than in young adult life, and it is in persons of from twenty to thirty-five years of age that the hopeless case is most frequently seen. Physical signs alone afford insufficient data for deciding that a patient is incurable. The continuance of a fair degree of health for many years is compatible with the presence of extensive consolidation and large cavities in both lungs. So generous a provision of lung tissue has Nature made that a patient not infrequently is fairly comfortable, even after so much as half of his entire pulmonary substance is functionally destroyed. His condition as regards nutrition and his symptoms afford a more certain prognostic guide. Extreme emaciation and pallor, progressive loss of weight, and failure to respond to nutritive treatment, wide excursions of temperature or a continued sub-normal temperature, profuse sweats and rapid heart-action, and ascites or œdema of the extremities in the absence of organic disease of the heart, liver, or kidneys, are grave symptoms which indicate a fatal issue. If the sputum examination shows a streptococcus infection in addition to the presence of tubercle bacilli, the prognosis is much worse than where the bacilli only are present.

As a rule, the patient far advanced in tuberculosis should not be permitted to know his real condition when it can be mercifully concealed. The patient in an incipient case should be frankly informed of

the possible gravity of his disease, in order to secure his intelligent cooperation in treatment. In an incurable case this is of but little avail and the patient's hopeful attitude, so often maintained to the last, should be encouraged by keeping him in blissful ignorance unless principles of religion or important business affairs make it imperative that he should know his fate. In advanced cases the patient should not be sent away to distant health resorts. There is nothing more saddening than the shadowy figures with their waxy, translucent noses and pedunculate ears which haunt the streets of many Southern and Western cities, when they should be dying comfortably in their beds at home. The hopeless invalid sent away, often at a financial sacrifice, by loving friends, or upon the mistaken advice of his physician, fails more rapidly in an uncomfortable hotel or desolate boarding-house and has the pangs of nostalgia added to the suffering incident to his fatal disease. The incurable case is often treated too energetically. Experimental serum treatment and drugs which disturb the stomach should be sedulously avoided. A patient who needs new lungs will not be benefited by the newest antitoxine or the latest commercial derivative of the creosote group. The limitations of therapeutic art should be recognized and, within those limits, the patient should be made as comfortable as his condition will permit. Foremost in effecting this object is the administration of opium, which may be regularly given to every very advanced case of pulmonary tuberculosis. Many of the most distressing symptoms are at once relieved. The dyspnœa, chest pains, cough, weak heart's action, neuralgias, and diarrhœas, when present, are all favorably influenced by this drug, which should be pushed to a moderate degree of euphoria when the end is not far off. The disturbing effects on the stomach may, in a measure, be avoided, by administering in suppository. For a time codeine or heroine in increasing doses may suffice, but in the last stages, morphine should be freely given hypodermically. When intestinal tuberculosis is present, there is no advantage in the use of astringent or medicated injections, or in trying to make topical applications of any kind, as the ulceration is invariably too high up to be reached by this line of treatment.

Cold abscesses should not be opened, as thereby a relatively harmless, encapsulated collection of pus is converted into an open sinus, which is almost sure to become the seat of a mixed infection with protracted suppuration and an exhausting discharge. There is also danger of entrance into the lymphatics and blood-vessels divided in the operative incision, of infectious material, which may cause a widespread infection, terminating possibly in acute military tuberculosis or a meningitis. If the abscess is undisturbed and should open later of itself, there

will be erected a barrier of granulation tissue, which will render remote infection improbable. The old rule *ubi pus ibi evacua* does not apply in these cases. Long-standing fistulæ in ano should not be operated on, as the processes of repair are too feeble in advanced tuberculous subjects. They will never heal under such conditions, and the patient's last state is worse than before operation. The fistula should be kept clean with injections of hydrogen peroxide and be dressed with a light packing of gauze. When there is extreme emaciation and poor nutrition, bed sores may easily develop, and should be guarded against by careful attention to cleanliness and change of position. The trochanters, sacral region, and buttocks should be protected by rubber rings and inflated cushions, and all parts exposed to pressure should receive daily alcohol baths, after which a dusting power may be applied. The stearate of zinc is useful for this purpose. Gentle massage is of benefit in keeping up the nutrition of wasted muscles and in relieving neuralgic pains and œdema of the limbs. When the latter is considerable, bandaging the extremities from the toes up may be necessary.

There is no use in administering iron to combat the anæmia of an active tuberculous process, which indeed is not anæmia at all in the ordinary meaning of the word, as it is well known that the pallor of tuberculosis does not depend upon reduction in the number of red cells, leucocytosis, or diminution in the percentage of hæmoglobin. Cabot on this point has the following: "It is undoubtedly the fact that in most cases of tuberculosis, even in advanced cases, the count of red cells is approximately normal. Often the hæmoglobin is also high."¹ Also, referring to the leucocytes, "here, as with the red cells, the striking fact is the absence of changes in pure tuberculosis."² Clinical experience of its futility should alone have long since been sufficient to cause the abandonment of iron in tuberculosis. Its commendation, even in recent text-books, can only be explained as a careless survival of a time when any paleness of the skin and mucous membranes was deemed a sufficient indication for the exhibition of iron. As a therapeutic aid in early diagnosis, its administration may be of value in distinguishing between simple anæmia and incipient tuberculosis; for it may be confidently asserted that anæmia which yields rapidly to chalybeate treatment is not of a tuberculous origin.

Inhalation of oxygen may be used for the relief of urgent dyspnœa, and its employment in advanced cases of tuberculosis where shortness of breath is largely due to actual poverty of lung tissue, would appear more rational than its use in acute lobar

pneumonia, where there is usually preserved an abundance of healthy lung. Simple expectorants and syrupy mixtures are of no avail in the cough of the advanced consumptive. The morning cough, which empties cavities or dilated bronchioles of large accumulations of purulent sputa is an eliminative process, which should not be hindered. Sometimes when the expectoration is thick and tenacious it can be rendered thinner and more readily coughed up by administering small doses of ammonium iodide. Occasionally a mechanical cause for harrassing cough may be found in an elongated uvula, which should then receive appropriate surgical treatment. For nagging cough without sputa, much may be done by voluntarily resisting the impulse to cough. If this is not successful, heroine or morphine may be required.

A moderate amount of alcohol is probably always useful in incurable cases in which there is no contra-indicating kidney lesion. Besides its value as a stimulant it exercises a favorable influence in diminishing oxidation and retarding tissue waste. It may be given in the form of a milk punch, hot grog, or better as ale, beer, or stout, when these are well borne. Champagne is excellent when the stomach is irritable or nausea present. When gastric digestion is weak, forced feeding is inadvisable. Peptonized foods may be tried or rectal alimentation may be necessary for a time. In cases not too far advanced lavage with the gastric siphon is frequently of marked benefit. When laryngeal tuberculosis develops, the fatal issue is usually not far removed; and here again a warning should be sounded against too active treatment. Occasional good results are reported from curetting or local applications of lactic acid or other powerful caustics, but these measures are not admissible for even the moderately advanced consumptive. The throat should be sprayed with weak solutions of cocaine and when these fail to give sufficient relief the last resort is again morphine. For profuse sweating agaricin or atropine are indicated, but are less useful than when employed in the earlier stages of the disease.

Of all forms of quackery the most heartless is the exploitation of these advanced cases of tuberculosis by advertising consumption cures. The patient should be cautioned against the mercenary shark who seeks to delude his victim by extravagant promises and a thaumaturgic display of paraphernalia—elaborate cabinets, complicated inhalers, nebulizers, and the like. A dispensary patient recently paid twenty-five dollars, money much needed by his indigent wife and children, for a so-called electrical examination, which consisted in standing him on an insulated stool and giving him a few shocks of static electricity.

¹*Clinical Examination of the Blood*, p. 217.

²*Ibid.* p. 219.

Sexual excesses may exert an unfavorable influence upon the moderately advanced consumptive, for augmentation of desire and reckless indulgence, even in persons of hitherto staid and chaste lives, is a not unusual phenomenon. This may be accounted for on the dubious principle of a short life and a merry one. Also the febrile movement accompanying phthisis appears at times to stimulate this function in a manner not unlike the effects of slight intoxication. In the consumptive harlot, Marguerite Gautier, who is the heroine of *La Dame aux Camélias*, Dumas fils has made a minute study of the morbid eroticism of tuberculosis. If certain tales which have got abroad are to be credited, this is a matter of some practical concern in the administration of sanatoria, which, if neglected, may be prejudicial to both the health and morals of the patients.

The extraordinary tenacity with which the advanced consumptive often clings to life, recalls the jesting apology of Charles II for the unconscionable length of time he took in dying. This wearisome delay of the inevitable makes the task of caring for the patient a dispiriting and exhausting one, a sore trial for the devotion, resourcefulness, and patience of nurse, family, and physician, who owe to the last a cheerful and sympathetic discharge of duty to the patient. Too often, however, the faithful wife or sister, unremitting in her care, is worn out in her ceaseless vigils and anxiety at the bedside, her own health is undermined, and the foundation perhaps laid for another case of tuberculosis. Incidentally, the attending physician, then, owes also a duty to the well, and should see that the nurse in charge has time for a daily outing, exercise, and regular meals. The patient's last tribute of confidence in his physician is his willingness to die in his care. The physician's last merciful duty to his consumptive patient is contained in the word euthanasia, and he should see that the moribund sufferer is as little conscious of his impending dissolution as is the unborn child of its approaching birth.

"When Time, or soon or late, shall bring
The dreamless sleep that lulls the dead.
Oblivion! may thy languid wing
Wave gently o'er his dying bed."

303 AMSTERDAM AVENUE.

Sued for Loss through Small-pox Quarantine.
—Seven men who were quarantined in a boarding house in Fond du Lac, Wis., on account of small-pox, have brought suit against the city authorities for damages. The grounds for the action are that the plaintiffs were kept in quarantine for a longer time than actually necessary. As a result, they not only lost valuable time, and a few of them have not been able to regain their positions. If the case comes to trial the lack of an isolation hospital in the city may be brought up by the plaintiffs as a point of negligence on the part of the city.

THE CIVILIZED INDIAN, HIS PHYSICAL CHARACTERISTICS AND SOME OF HIS DISEASES.*

By A. D. LAKE, M. D.,

PHYSICIAN TO THE NEW YORK INDIAN AGENCY.

Mr. President and Gentlemen: It is the aim of the writer to describe briefly, the present physical condition of the descendants of the once powerful Iroquois Confederacy, a government of which it is said that when Europeans first became acquainted with the people of whom it was composed, they were filled with admiration because of its wisdom and strength, and called them the "Romans of the New World." It is stated that their form of government was a model upon which our own was very largely formed. In originating and maintaining, through many decades, this first known republic in America, they gave notable evidence of large prowess and intelligence.

Individually, they were splendid examples of nearly perfect physique, which condition was maintained by thorough athletic training when not engaged in war or hunting.

Every member of a tribe was a soldier, always thoroughly drilled for combat. The cultivation of the soil, as well as the preparation of the food, was left to the women, who were, from the necessary muscular exertion, also kept in good physical condition.

During the summer they wore scarcely any clothing, and in the winter time they were clothed with the skins of animals. The food was of the most simple character, composed of game and cereals.

They lived during a portion of the year in the open air. The tepee which afforded them shelter during the cold season was constructed simply of poles covered with skins, with many openings allowing ingress of air and escape of smoke. They were inured to vicissitudes and hardship and taught that to complain of pain was evidence of cowardice, which to them was a crime.

They put in practice a system of personal hygiene, which was a part of their religion. They lived close to Nature, and thus became splendid examples of the natural man and woman. They were honest and truthful; and, though savage and fond of warfare, the first instance of treachery and deception known in their history was shown by them only after repeated lessons in this respect, given them by the white settlers.

So far as any history can be obtained, the diseases now so common among their descendants, were largely unknown to them. Parturition was accompanied with little pain and there was no confinement

*Read before the Medical Society of the State of New York at its ninety-sixth annual meeting, at Albany, January 28-30, 1902.

from the woman's duties. Menstruation was also painless and its first occurrence was at a later age than at present.

This briefly, may be said to represent their physical condition on the first encroachments of civilization. Since that time they have become degenerate and feeble, both as a race and as individuals. Their power of resistance against disease is at low ebb and they furnish an excellent illustration of what must ever be the course of a decaying race. All of this, it is apparent, has been brought about by the change which the occupancy of this country by the white man has forced upon them. It is easily understood that this change must have involved most vital conditions to them.

Dispossessed of the land upon which they hunted and fished, and thus deprived of this occupation, they were forced into idleness, and soon suffered from the effects of the loss of their accustomed exercise, with surely resulting physical impairment, which condition became confirmed and established as the habit of indolence grew upon them. Their habitations were speedily changed from the well-ventilated tepee to something approaching in appearance the house of their white neighbors. It was, however, in most instances, only a small hut built of logs and bark, very largely excluding the light and air.

Their food rapidly changed from its primitive form, both from the disappearance of game, and also from their desire to apply the culinary arts of the white man to themselves. Through conquest they were deprived of their national power and spirit of independence, which, without question, had something to do in lowering racial vitality and, secondarily, that of the individual. But, above all things, the most prominent cause of their degeneracy is to be found in the importation of diseases of Europeans and the use of alcoholics, which they learned from the white man, and which, throughout their whole career, has produced most deleterious effects, both physically and morally.

These causes, with others, have contributed in bringing about the present condition of deterioration, or rather the condition existing twenty or thirty years ago; for since that time there has been some improvement. At the time above stated, and very largely at the present time, one is impressed with the imperfect and poorly developed physique of the children, which is also well marked, although to a less degree, with the adults. This is especially characteristic in the males. The Indian woman, as a rule, presents a more vigorous appearance and evidence of larger vitality. There has been a decided decrease in height since the earliest recorded measurements. A man of six feet, or more, in height, is rarely seen. Chest measurements are smaller, and

the average chest expansion is less than that of the white man.

There is a decided tendency toward corpulency; this condition, always well marked with the older females, was in their early history, uncommon with the males. At the present time it is very frequent with them.

They are easily fatigued on exertion, and while engaged in games of ball, after running rapidly for a short time, their respiration is increased to such extent that it becomes fairly laborious. The same condition is observed in the dances which form a part of the pagan ceremonies still maintained, to some extent, among them.

The surrounding farmers find it impossible to obtain the same amount of work from the Indians whom they employ, as they get from white laborers, and this applies to the more industrious class who are willing to work. The larger number cannot endure any form of severe labor without speedy exhaustion.

They are extremely sensitive to changes of temperature, and the late fall and the winter months is a very disastrous time with them. Influenza, bronchitis, and pneumonia are exceedingly prevalent and very fatal.

Many of them occupy miserable habitations, frequently a hut in which a family of half a dozen or more are crowded into a room twelve feet square, occupying it day and night. Their sanitary surroundings are most unhealthful. They live largely upon a poorly cooked, mostly vegetable, diet, the only meat which most of them are able to procure being salt pork.

Drunkenness is very prevalent, and many of their diseases are directly traceable to the use of alcoholics. The habit is acquired, in many instances, at an early age, and seems more completely to control the individual than it does with any other people. With many of them a large part of all their earnings is spent for intoxicants.

The population of the Cattaraugus reservation is about 1,800, and during the past twenty years there has been but little variation from this number. The death rate is very large, as is also the increase from birth. About 100 die each year from some form of tuberculosis.

Consumption occurs among them from early infancy. There is good reason to believe that one third of the children die of this disease, or of some other form of tuberculosis, before the age of five years. If they pass this age in safety they are likely to enjoy immunity until they reach puberty, at which time, especially with the females, there is great fatality. Young men and women who, perhaps a few months before, were in good health, come for treatment for some indefinite complaint, and upon ex-

amination are found with tuberculous lungs. Whole families die from this disease within a few years, and, were it not for their wonderful fecundity, the whole race would speedily become extinct from this cause alone. A slight attack of bronchitis, which affection is far more common with them than with white people, is sufficient to lay the foundation of phthisis. The same is true of measles and whooping-cough. It is very rare for pneumonia in the adult to be followed by recovery; for, if the patient survives the acute stage of the disease, he almost certainly becomes the victim of acute or chronic tuberculosis.

From their poor sanitary condition, insufficient diet, and inability to provide proper care and treatment, consumption tends more rapidly to a fatal termination than with the white people.

Different forms of tuberculosis exist about as follows: First in order of frequency stand affected glands, internal and external; next follow tuberculous conjunctivitis, with frequent corneal ulcers, eczema, cold abscess, tuberculosis of the lungs, tuberculosis of the bones and joints. In the last named it is not at all uncommon to observe cases in which long-continued suppuration, with open sinuses and extensive destruction of bone and joint structure, have existed for long periods, followed by complete recovery. Many of these cases have been followed by ankylosis, lasting for months, but often, in time, permitting of motion and resulting in a useful joint. It is to be noted that in few of these cases is operation well borne. In several instances resection of a diseased joint or an amputation has been followed by the appearance of tuberculous trouble in the lungs, or elsewhere, with a fatal result.

The history of syphilis among these Indians presents many interesting features, the most important being their present immunity. It is very rare to find a case of the primary disease among them at the present time. Gonorrhœa is very prevalent, making it evident that the opportunity for the contraction of venereal disease exists to a large extent, but they no longer seem susceptible to syphilitic infection. Twenty years ago the evidences of its previous existence were frequently seen in cicatrices, the results of primary and secondary lesions, and in other conditions showing the former systemic infection. According to the account given by the older Indians, and by two aged physicians who had practised among them for forty years, previous to the time above stated syphilis was very prevalent. It was stated by one of these physicians that hardly a family on the reservation escaped its ravages. The epidemic, if such it may be called, continued for ten or fifteen years, since which time it has gradually grown less frequent until the present time, when it

has almost entirely disappeared. There is no doubt it has left its impress upon the people in added physical degeneracy. It was called by them the "bad disease," and they frequently ascribe their present chronic diseases to its previous existence in their families.

Another interesting fact, developed in connection with their syphilitic history, is the apparent recovery of many individuals, without treatment, from all stages of the disease; or, if any remedies were used, they were confined to the roots and herbs indigenous to the reservation, and prescribed by their native medicine men. Many years ago one would often see persons among the older people, presenting the evidences of extensive syphilitic ulcerations, who gave a history of the disease from the primary lesion through the secondary and even the tertiary stage, who stated that, throughout the whole course of the affection, they had at no time had any form of treatment, and who yet had, to all appearances, fully recovered.

It does not appear, from a careful inquiry into many instances of this natural history of syphilis, that recovery ensued in any case under a less period than two years. Probably the average duration was much longer. It is apparent that syphilis, among these Indians, pursuing its course unrestrained and uninfluenced by remedies, has undoubtedly in all cases passed into the secondary stage. During the secondary stage there has been a constant tendency toward recovery, which in most instances has taken place. With a less number, the disease has reached the tertiary stage, to be, in many instances also, followed by recovery. No doubt in many cases there has been such extensive destruction of tissue, and so much malnutrition induced, that a fatal result was inevitable, while more often death has resulted from some intercurrent affection. Still, the fact remains that the tendency has been to recovery.

The results of the growth of civilization upon this people are shown prominently in the health of the women. There is a constant increase in the diseases peculiar to their sex. While the older women state that painful menstruation was almost entirely unknown to them, it is a very common condition with the younger women.

It is only within recent years that secondary disease of the uterus and appendages, the result of gonorrhœa, has been recognized with them. Whether or not this disease has existed with them since a remote period, it is very certain that it has never been so prevalent as at the present time. It is widespread on the various reservations and no means are employed, or can be enforced, to prevent its dissemination. It is often seen in boys and girls from the age of fifteen years, and it is not unusual to find cases in which the disease has existed for

years. There is reason to believe that it is a potent cause of sterility, which condition must increase with the continuance of the disease. Its effect upon the future of the race is a factor of prime importance.

Nervous diseases are infrequent, but more common than formerly. Some cases of hysteria have been observed, mostly in the girls at school. Insanity is of rare occurrence.

As before stated, there has been some improvement in the physical condition of these Indians during the past twenty years. This is most marked in the decrease in the number of tuberculous diseases and lessened fatality from this cause. There is also a decided decrease in the number of cases of infantile diseases.

It is most interesting to trace the probable causes of this betterment. One evident factor is to be found in the effect upon the people, of the education and training given in the various institutions which receive and care for Indian children. The State of New York has maintained, for many years, on the Cattaraugus reservation, an asylum devoted to the care and education of orphan and destitute Indian children. At this institution one hundred beneficiaries are maintained, educated, and trained in useful occupations. During a large portion of the time of its existence its buildings were of limited capacity and its dormitories and living rooms were crowded, reducing the air space of each individual to less than one half that now required by law in this State. At that time the annual death rate, principally from tuberculosis, was from 3 to 5 out of the 100 children. Five years ago, by more liberal appropriations of the legislature, the managers were enabled to supply larger and better buildings with modern sanitary appliances. The result, in lowered death rate and generally increased healthfulness, has been marvellous. In fact, there has been but one death in three years past.

This institution is receiving children from an early age and taking care of them until they are seventeen years old, when homes are found for them, if possible, outside of the reservation. It thus becomes a most potent factor in protecting them from the encroachment of disease at the time of greatest danger.

A large number of children are cared for in like manner at Carlisle and Hampton. In all of these schools manual training is made an important part of the curriculum; but, above all things, in the production of good results, has been the adoption of thorough and systematic athletics. Its effects are speedily seen in better physical development and lessened tendency to the development of those diseases to which they are strongly predisposed.

The result of this method of education has been to

return to the reservations a large number of young men and women thoroughly trained in all lines which tend to physical upbuilding, and it is not at all difficult to understand that the race is being largely preserved through the work of these beneficent institutions. It would seem, therefore, from the good which has already been accomplished, that the physical regeneration of the Indian is not an impossible task.

Is it not reasonable, also, to believe that moral and mental improvement will follow efforts to raise the physical standard?

THE SIDEROSCOPE.*

By THOMAS R. POOLEY, M. D.,

NEW YORK.

The sideroscope is an instrument for the demonstration of the presence of particles of steel or iron in the eye. The direct purpose of this communication is to show that the writer was the first to employ the magnetic needle for the purpose of determining the presence of steel or iron in the eye.

In June, 1880, I read before the American Medical Association, Section of Ophthalmology, which was then in affiliation with this society, a paper entitled *On the Detection of the Presence and Location of Steel and Iron Foreign Bodies in the Eye by the Indication of a Magnetic Needle*, and published a preliminary notice thereof in the *Archives of Ophthalmology*, Vol. ix, 1880, page 219. In the next number of these *Archives* I published the article in full.

My attention was directed to the subject by my brother, the late Dr. J. H. Pooley. He had been experimenting on the application of the use of a magnetic needle to detect the presence of steel or iron foreign bodies broken off in the tissues. The results which he obtained were subsequently published in *Gaillard's Medical Journal*, 1880. It appears from this communication that the principle employed is not new and had already been used in surgery. A reference to the literature upon this point is to be found both in his paper and mine.

It at once occurred to me to determine the value of this method for the detection of foreign bodies in the eye and led me to carry on a series of experiments in the laboratory of the New York Ophthalmic and Aural Institute. These experiments had for their objects: 1. To determine whether unmagnetized particles of iron or steel would exert sufficient influence on a magnetic needle to indicate with certainty their presence at a distance sufficient to make such method valuable in their detection in the eye. 2. To determine the practicability of rendering such particles magnetic at such distance as to be

*Read before the Medical Society of the State of New York, January 28, 1902.

able to take advantage of their increased effect on the magnetic needle for the detection of their presence and location in the eye.

A magnetic needle 41 mm. in length was suspended over a scale; particles of steel and iron of various kinds and sizes, as shown in the tables, were brought near it, and the distance at which there was a marked deflection noted.

3. A simple bar magnet of 40 cm. in length, 4 cm. in breadth, and 6 mm. in thickness was passed several times over the piece of metal at the distance from it given in the table. The results thus obtained, without going into tedious detail, are given in tabular form, and enable one to see at a glance the signification of these experiments.

Another series of experiments was then conducted on the freshly enucleated eyes of pigs and sheep, which consisted in introducing steel and iron particles therein and then testing for their presence with a magnetic needle both before and after they had been rendered magnetic themselves.

In the first of these experiments the suspended magnet employed was an ordinary sewing needle, which had been rendered highly magnetic by contact with a strong horse-shoe magnet, then delicately balanced, suspended by a fibre of silk, and for convenience of manipulation attached to the handle of a camel's-hair brush or rod. In the next three experiments a needle pointed at both ends with the eye in the middle, which was made for me by Philip Schmidt, was used. In all the rest a needle made by Benjamin Pike's Sons, which was described in the first set of experiments, was employed. These several needles were about equally delicate.

To render the enclosed bodies magnetic a horse-shoe and a bar magnet were employed, the latter being the one generally made use of. To accomplish this the magnet was passed over the suspected part several times and in several directions. To avoid any ambiguity in these experiments proper care was taken to remove the magnets and all steel or iron instruments to a sufficient distance so that their influence would not affect the needle. Precautions were also taken to use no instruments in the introduction of steel and iron particles which were themselves magnetic.

From this series of experiments the following conclusions were drawn:

1. The presence of a steel or iron foreign body in the eye when of a considerable size and situated near the surface may be determined by testing for it with a suspended magnet.

2. The presence and position of such a foreign body may most surely be made out by rendering it a magnet by induction and then testing for it by a minute suspended magnet.

3. The probable depth of the enclosed foreign body may be inferred by the intensity of the action of the needle near the surface.

4. Any change from the primary position of the foreign body may be ascertained by carefully noting the changes indicated by the deflection of the needle.

In concluding this paper the writer adds: "Much may yet be done to perfect the method. It seems to me especially desirable that a more delicate needle than I have been able to obtain should be made use of. It is not too much to say that my studies of the method lead me to predict a useful future for it in practical ophthalmology."

In the same number of the *Archives* (*loc. cit.*, p. 207) Dr. Herman Knapp has an article on Two Cases of Removal of Fragments of Iron from the Vitreous. In the remarks thereon he says: "Powerful magnets have been passed by Dixon and others over the outer side of the sclerotic by which manœuvre chips of steel floating in the vitreous have been moved and drawn toward the wall. Far more important, however, appear to me the results of experiments which Dr. T. R. Pooley has of late been conducting in the laboratory of the New York Ophthalmic and Aural Institute, and of which he has handed me a preliminary communication to be published in the present number of these *Archives*."

"These experiments were based on the principle that if a fixed magnet attracts a movable piece of steel, a fixed piece of steel must attract a movable magnet. Simple and well known as this principle is it is strange that no one before Dr. Pooley has applied it to the eye, so much the more since it has been used with advantage in general surgery."

In the tenth volume of the *Archives of Ophthalmology*, 1881, page 145, appears an article written by Dr. Herman Pagenstecher, of Wiesbaden, entitled Two Cases of Extraction of Splinters of Iron from the Vitreous, with observations on the diagnosis and extraction of steel and iron particles by means of the magnet.

Referring to the second of these cases, in which it was doubtful whether the foreign body which entered the eye was a stone or iron fragment, he says: "This gave me the incentive to make the experimental inquiry whether I could not succeed in proving from the existing condition by use of the magnet if we had a steel or iron foreign body in the vitreous, especially as T. R. Pooley, in the visit which he made to our institute in the course of the summer, said that he had been successful in so doing. Pooley's paper, including his preliminary communication, was not yet known to me when I made my experiments. It had, however, already appeared in the American edition of these *Archives*, and in any

case secures for him the priority of this valuable means of diagnosis. I can only give my assurance that in my experiments I was soon led to the necessity of rendering the foreign body magnetic. I accomplished this by repeatedly touching the eye under examination by a strong electromagnet. I allowed the needle used to indicate the presence and position of the suspected foreign body, to rotate as in a compass on a fine needle. Pooley suspends the same by a fine thread by which it is rendered more sensitive, although the difficulty of experimenting is thus somewhat enhanced. The results obtained by Pooley in his experiments I can on the whole fully confirm."

The prediction which I then made of a useful future for this method in practical ophthalmology has been most fully realized. My communication as well as that of my distinguished colleague, Dr. Pagenstecher, after a period of apparent indifference gave rise to a number of publications upon the subject.

These, however, I have not here time to attempt to enumerate. I only wish to call attention to the perfecting of the method by making it more available for practical application through the invention of two instruments which have lately been introduced, under the name of the sideroscope, one by Dr. Edward Asmus,¹ then assistant surgeon in the University Augenlinik in Breslau, but now of Düsseldorf. His instrument, without going too much into detail, consists merely in making an improved magnetic needle more available for practical application by the addition of a scale and a telescope. Since then Dr. Hirschberg, of Berlin, in the *Centralblatt für Augenheilkunde*, Vol. xxiii, 1899, p. 285, describes another instrument which he has invented, which however, is only a modification and simplification of Asmus's instrument, which is essentially the same except that the telescopic attachment is left out and the deflection of the magnetic needle by means of a small reflecting mirror thrown upon a screen divided into a scale which measures the deflection of the needle.

It has been, I think, sufficiently well demonstrated by this communication that the priority of the discovery of this instrument which now promises to come into universal use, belongs to the writer of this paper as much as the discovery of the ophthalmoscope by Helmholtz belonged to him, for it is equally true of his discovery that a vast improvement has been made on the original instrument of which he made use.

The sideroscope can be obtained of E. B. Meyrowitz, 104 East Twenty-third Street.

107 MADISON AVENUE.

¹Das Sideroskop, *Arch. für. Ophthal.*, Bd. xl., 1894, p. 280.

THE SEVERING OF THE VASA DEFERENTIA AND ITS RELATION TO THE NEUROPSYCHOPATHIC CONSTITUTION.

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The masterly labors of Galton and Ribot have established the fact that a general law of heredity obtains in the mental as well as in the physical life. The influence of this law in forming the character of intellect, will-power, and control of the appetites and passions is undisputed. In its supreme ascendancy are included all the moral impulses, either normal or abnormal, and the pathological condition to which the physical and mental life are subject.

Testimony is conclusive in establishing this diathesis, in which chorea, hysteria, hypochondriasis, inebriety, imbecility, criminality, and insanity are the chief manifestations. However, I do not wish to be understood to say that all persons of this constitution are useless creatures, a burden to themselves and a charge upon society. For, included within its subjects, are to be found the most gifted as well as the most vicious, weakest, and ordinarily the most unhappy, of mankind. Chatterton, Goldsmith, Burns, Steele, Coleridge, Charles Lamb, and Cowper are instances of this perverted organic disposition. Dr. Folsom doubts if the compensation to society of such members of this family as Byron, Burns, De Quincey, and others is equal to the loss and injury sustained through the acquisition of the men and women who become the inmates of our prisons, insane asylums, and almshouses, and the destroyers of home peace; and he quotes Clouston as saying that the world would be better off to lose the comparatively few ill-balanced geniuses, the hundreds of impractical, unwise, talented men and women, along with the thousands of people who cannot get on and either become a public charge or a menace to society.

Such men of genius, such exalted originals in mind, who tower above mankind, have no fathers and leave no sons; they leap from obscurity, as it were; you know nothing of their ancestry, likewise nothing of their posterity. But if you were to take the roll of the prisons, insane asylums, and almshouses, you might establish the family tree.

Coleridge's father was an opium eater, the son himself a genius, notwithstanding his brother thus wrote of him when he was young: "A certain infirmity of will has already shown itself; his sensibilities are intense and he has not wherewithal to

control it. He cannot open a letter without trembling. He yields, as it were, unconsciously to slight temptations—slight in themselves and slight to him—as if swayed by a mechanical impulse apart from his own volition. It looks like an organic defect; a congenital imperfection." The individual's higher brain centres are inhibited, and he dashes about like a ship at sea without a rudder—fairly well if the winds are fair and the sea calm, but depending upon the elements for the character and time of the inevitable wreck. Invention, music, and art are sometimes of high order among these persons, but desultory, half-finished work and shiftlessness are decidedly the more common. Concentrated, sustained effort is impossible, and an attempt to keep them at it results disastrously. Executive or business faculty and judgment are seldom developed.

As a further evidence of mental heredity let us take the perfectly healthy mind. Allow me to cite to you the families of Aristotle, Bacon, and James Watt among the scientists, and, among men of letters, the families of Addison, Thomas Arnold, Macaulay, and Madame de Stael; or, let us follow the family of one of America's familiar names, Adams: John Adams, second President of the United States; John Quincy Adams, sixth President of the United States; Charles Francis Adams, minister to England; C. T. Adams, scholar and statesman; J. Q. Adams, son of C. T. Adams, student of social problems.

Ribot says: "The law of heredity I make no effort to establish; I assume it. It is not doubted by careful students of human nature any more than by students of biology. The mistake should not be made of supposing that it is a new discovery, one of the as yet unproven hypotheses of modern science, or that we owe our knowledge of it to Charles Darwin, August Weisman, and a few other scientists. These men have indeed done much in the field of research, but heredity has been recognized as a most potent force in the development of life as long as history has been written."

The quaint old Anatomist of Melancholy, Burton, in his sixth edition, published in 1652, very truly writes at the end of his chapter on Inheritance of Defects: "So many several ways are we plagued and published for our fathers' defects, insomuch that Fernelius truly saith: 'It is the greatest part of our felicity to be well born, and it were happy for human kind if only such parents as are sound of body and mind should be suffered to marry.' An husbandman will sow none but the best and choicest seed upon his land; he will not rear a bull or a horse except he be right shapen in all parts, or permit him to cover a mare except he be well assured of his breed. We make choice of the best rams for our sheep, rear the neatest kind, and keep the best dogs,

quanto id diligentius in procreandis liberis observandum! And how careful, then, should we be in begetting of our children! In former times some countries have been so chary in this behalf, so stern, that if the child were crooked or deformed in body or mind they made him away. So did the Indians of old by the relation of Curtius, and many other well-governed commonwealths according to the discipline of those times. 'Heretofore in Scotland,' saith Hect Boethius, 'if any were visited with the falling sickness, madness, gout, leprosy, or any such dangerous disease which was likely to be propagated from father to son, he was instantly gelded; a woman kept from all company of men; and if by chance, having such disease, she were found to be with child, she, with her brood, were buried alive'; and this was done for the common good, lest the whole nation should be injured or corrupted. A severe doom, you will say, and not to be used among Christians; yet more to be looked into than it is. For now by our too much facility of this kind, in giving way for all to marry that will, too much liberty and indulgence in tolerating all sorts, there is a vast confusion of hereditary diseases; no family secure, no man almost free, from some grievous infirmity or other, when no choice is had, but still the eldest must marry, as so many stallions of the race; or if rich, be they fools or dizzards, lame or maimed, unable, intemperate, dissolute, exhaust through riot, they must be wise and able by inheritance. It comes to pass that our generation is corrupt, we have many weak persons both in body and mind, many feral diseases raging among us, crazed families; our fathers bad, and we are like to be worse."

How forcibly this impresses us if we stop to observe the rapid proportional increase of dependents. Take the criminal class alone for the past fifty years. We find that in 1850 there were 6,737 criminals in the United States, or one to each 3,442 of the population; while in 1890 the penal population is shown to be 83,329, or one to each 957 of the population. This is of the criminal alone. If all dependents were considered, such as inhabit public and private insane hospitals, almshouses, and institutes for the feeble-minded, we should find the proportion to be in the neighborhood of one to three hundred of the population. This is most alarming, and surely calls for a most heroic method of treatment. The condition has come about notwithstanding the relentless labor of such eminent sociologists as Gall, Lombroso, Benedict, Ellis, Brockaway, and others, who have been well supported by statutory law and liberal appropriations to carry into effect the reformatory methods suggested by them.

This condition obtains only in the human species, since practically all other animal kind protect themselves, or are protected, by putting to death those

weaklings that are unable to weather the storm, and others that appear peculiar are castrated by their sires, and none but the perfectly healthy are left to reproduce their kind.

It is altogether probable that we, through our spirit of humanity, our broad ideas of liberty and individual right, have gone too far in this direction for the good of the entire race. Many scientists, realizing the true condition, have offered a means, namely castration, that would eventually overcome this unfortunate condition; but each time they have been overruled and driven back by public sentiment. In fact, F. Hoyt Pilcher, superintendent of the Asylum for Idiotic and Imbecile Youth, of Kansas, went so far as to castrate forty-seven of his inmates, and alleged as a result of the operation (so far as the patients themselves were concerned) a marked physical and mental improvement; in fact, he reports one patient so much improved that he was discharged from the institution and is now making a full hand on a farm.

I believe, however, that castration will never become popular, nor do I believe it justifiable, for the method employed to render these unfortunates sterile should not in itself be a punishment to the individual—it must not result in a deformity, neither must it interfere with his enjoyment of life. The strongest argument against the advocacy of castration has been that it practically destroys the future enjoyment of life, and that the knowledge of the patient that he is deprived of sexual power has a very depressing effect.

This is not true of the operation referred to in the title of this paper. Dr. Ochsner, of Chicago, says in speaking of this operation, which he has twice performed for diseases of the prostate: "Judging from the results obtained in the two cases reported, it is evidently possible to obtain sterility without in any way interfering with the possibilities of future enjoyment." Dr. Ochsner, in an article published in the *Journal of the American Medical Association* for April 22, 1899, entitled *Surgical Treatment of Habitual Criminals*, suggests that this operation may become a popular means of preventing the propagation of criminals, but fails to mention the other manifestations of the above diathesis. Dr. Daniel Brower, of Chicago, in his very excellent paper, entitled *Medical Aspects of Crime*, read before the American Medical Society in 1899, says, in speaking of this operation, that it does not mutilate the person, it does not destroy his sexual power, but it does prevent his power of propagation; and it is an operation attended with very little risk to life, and in my judgment it may be made a most useful agent in preventing an increase in criminals.

After having personally severed the vasa deferen-

tia in forty-two patients, whose ages range from seventeen to twenty-five, I am prepared to speak most favorably of the operation, and to state positively that it does not impair the sexual power of those operated upon, that they improve mentally and physically, in that they increase in flesh, feel that they are stronger, sleep better, their memory improves, the will becomes stronger, and, that while prior to the operation they made no advance in school, their advance is now fairly satisfactory. As time presses I will give but one case, but what is true here is largely true in all.

CASE.—A boy nineteen years of age, operated upon October 11, 1899. He was born in Missouri, of criminal parentage; had masturbated since twelve years of age. He was very dull, unable to make favorable progress in school, and mental concentration was impossible. He attributed his mental condition to his excessive masturbation, and applied to me for relief. Sixty days after the operation he had gained twenty-two pounds, felt well, asserted that erections were even more vigorous than they were prior to the operation, and believed that I had performed the operation simply for the purpose of deceiving him, and requested that I perform castration. One year following the operation his weight had increased thirty-eight pounds, his mental condition had greatly improved, and he had ceased to masturbate. Upon questioning him he stated, to use his own words, that "the desire is as great as ever, but I have the will to resist."

The method of operation I formerly used was the one suggested by Dr. Ochsner: Disinfecting over the external inguinal ring; infiltrating the tissue with a two-per-cent. sterile solution of cocaine; making an incision about an inch long, in the direction of, and directly over, the cord down to the vas deferens, clearing it for about half an inch; ligating at the nearest point to the seminal vesicle, letting the testicle end go free; removing about one fourth of an inch of the vas; closing the wound with a buried stitch. Latterly, I have been following the English method, which selects the scrotal region as the site of operation. They clasp the vas between the thumb and index finger, make a longitudinal incision about three eighths of an inch in length, and sever the vas; thus ending the operation, as they do not close the scrotal wound.

Gentlemen, it is my judgment, founded on research and observation, that this is the rational means of eradicating from our midst a most dangerous and hurtful class. Too much stress cannot be placed upon the present danger to the race. The public must be made to see that radical methods are necessary. Even radical methods may be made to seem just if they are shown to be rational. In this we have a means which is both rational and sufficient. It remains with you—men of science and

skill—to perpetuate a known relief to a weakening race by prevailing upon your legislatures to enact such laws as will restrict marriage and give those in charge of State institutions the authority to render every male sterile who passes its portals, whether it be almshouse, insane asylum, institute for the feeble minded, reformatory, or prison. The medical profession has never failed in an attempt, and it will not fail in this.

ON GONORRHOEAL ARTHRITIS.

By A. HERZFELD, M. D.,

NEW YORK.

"In considering gonorrhœa, we have now reached the standpoint from which we no longer see in this disease a relatively harmless local affection, but a disease with a decided tendency of general infection in the sense of formation of metastases and probably toxins." Referring to these remarks contained in Benecke's monograph on *Gonorrhœal Inflammation of the Joints* (Hirschwald, Berlin, 1899), I consider the following case of gonorrhœal arthritis and general gonorrhœal infection worthy of publication.

CASE.—J. R., thirty-one years old, has always enjoyed good health. His father died of morbus Addisonii. Within the last few years, the patient has had several attacks of acute gonorrhœa. He states that after each connection he has noticed a white discharge from the urethra. Examining the patient in June, 1899, I found him in general good health, but with a slight mucopurulent discharge from the urethra, which had a few small polypoid growths in its orifice. These I immediately removed. After many examinations without result, I at last found the gonococci in the discharge, and, on further examination by means of the two-glass method and endoscopy, I located his trouble in the posterior urethra, in which I found a decided narrowing of the canal. The treatment I at once adopted was irrigation and dilatation, as this method has lately and often been recommended to us by excellent authorities in these affections of the urethra.

"The gonococci in the discharge or in the gonorrhœal threads are no contraindication to the dilatation and irrigation treatment; on the contrary, by this method of treatment they will soon disappear from the discharge, and the cure of chronic gonorrhœa, even in presence of gonococci, is by the dilatation method, not only not retarded, but rather hastened. (Wossidlo, *Deutsche medicinische Wochenschrift*, No. 48, 1900.)"

About thirty-six hours after the first irrigation (Janet) and dilatation, under all antiseptic precautions, the patient was seized with a violent chill, which lasted all night. The following morning I found the patient with a temperature of 104.2° F., pulse 96, severe pains in all the joints of the upper and lower extremities. The next day I found him with severe pains in the right wrist joint, right shoulder joint, right knee joint, several finger joints, and the left ankle joint, all of them swollen

and extremely painful; temperature and pulse the same, and very profuse night sweats. Under local antiseptics and salol internally, all the joints, with the exception of the right knee joint, returned to their normal condition, only a slight sensitiveness remaining in the others. The urine contained pus cells and gonococci, but no other bacteria. About one week after the initial chill, the right knee joint was filled to its maximum with fluid, so that its contours were entirely lost, and it was very sensitive to the touch and painful on passive motion. In this case the violent onset and symptoms were in direct proportion to the rise of temperature and to the apparent pathological changes in the joints affected. (*Vide Benecke.*)

Heat and strong counterirritants (etheral iodine solution) were of no avail. A few days later the first paracentesis of the joint was made and it thoroughly washed out with a carbolic-acid solution, 4 per cent.; the joint fluid was more of a serous than of a purulent character; it was carefully examined for bacteria, but none were found. The leg was immobilized by a Volkmann splint; the temperature and pulse went down to normal immediately and remained so for two days. On the third day there was again a rapid rise of temperature and pulse, and the joint began filling again; the temperature rose to 104.5° F., pulse 112; there were very profuse night sweats, and knee joint extremely painful; a second paracentesis of the joint and another carbolic-acid solution washing was resorted to. Two days later the condition of the patient was the same as after the first washing; temperature again 104° F., pulse 96, the joint also filled to its maximum capacity. The fluid of the second paracentesis was again more of a serous than a purulent character and contained no bacteria. The two paracenteses and washings having been without avail, the opening of the joint was resorted to and two drainage tubes were passed through it (Dr. Kammerer). The joint fluid was again of the same character as described above. The patient had to be kept in bed for two months, and left it with a paralysis of the peroneal nerve and a nearly complete ankylosis of the knee joint, making any attempt at moving the same extremely painful. Massage and hot-air baths were resorted to, in consequence of which the pains were relieved. I then applied very strong galvanic currents, under which the peroneal paralysis soon disappeared, and the joint motion improved to such an extent that the patient could move his leg to a right angle after three months' treatment. At present, about eighteen months after the beginning of the disease, there still remains a restriction of the movement.

In publishing this case I intend to call attention to the fact that, in the presence of gonococci, the dilatation and irrigation treatment of gonorrhœa is one which has to be resorted to with great caution, and before resorting to this method the gonococci should be destroyed by proper antiseptics, or at least be reduced to a minimum.

This case demonstrates the fact that we have in gonorrhœa, not a relatively harmless local affection, but a disease with a decided tendency to general in-

fection in the sense of the induction of metastases and the formation of toxins. (Abel Souplet, *La Blennorrhagie maladie générale*.)

The general infectious character of the disease was also illustrated by the profuse night sweats and constant high temperatures, which should, according to Benecke, be a rather rare occurrence when gonorrhœa becomes a general infection.

224 WEST TWENTY-FOURTH STREET.

THE TREATMENT OF HABITUAL CONSTIPATION.

By W. L. CALLAWAY, M. D.,

CHICAGO.

Living in this age when sedentary life is the rule, when time is so valuable, and the nervous tension so great, habitual constipation with its attending evils is one of the ailments the physician is most called upon to treat, and one in which he can, with the hearty and earnest cooperation of his patient, secure the most favorable results. First, and above all, he must secure the confidence and willingness on the part of his patient to carry out his or her part of the treatment methodically and devotedly; he must instruct him to set apart a time for going to stool, preferably within an hour after eating breakfast, or better, immediately thereafter, and to allow nothing to interfere with the habit. The diet will generally be found to be as carelessly selected and as imprudent as the habits. The patient should be provided with a diet list suited to his needs, and should usually contain a restriction in the amount of meats, an increase in that of the coarser vegetables and fruits, a limitation in the use of tea and coffee, an increase of good, pure water (especially before breakfast), and a minimum of pastries and sweetmeats, and the food selected must be well masticated. Teach the patient that proper exercise is absolutely essential to health, out of doors if possible, as walking, horseback riding, rowing, etc.; if that is not possible, substitute for it the best attainable, by from ten to twenty minutes' indoor exercise each morning, on first arising by opening the windows, and by movements secured by some form of elastic or pulley exercise that will bring into play the abdominal and thoracic muscles, or abdominal massage by means of a roller or by manipulation and kneading, and deep breathing exercises for from two to three minutes to complete the procedure. The exercises should be followed by brisk rubbing of the entire body with a coarse towel. With the observance of these instructions the ordinary patient will require but little medicine and that but for a short time. I usually begin with pill or tablet containing

℞ Aloin..... $\frac{1}{8}$ to $\frac{1}{2}$ grain.
Extract of belladonna leaves.... $\frac{1}{16}$ to $\frac{1}{8}$ "
Strychnine sulphate..... $\frac{1}{120}$ to $\frac{1}{60}$ "
Extract of cascara sagrada..... $\frac{1}{2}$ to 1 "
M. ft. pil.

I combine with this, if hepatic torpor is present, podophyllum resin, $\frac{1}{16}$ to $\frac{1}{4}$ of a grain, instructing the patient, if the bowels are hard to move, to take two such at bedtime, and one or two the succeeding night, as may be required to secure good free movements. Now alternate the dose between one and two pills each day until some degree of regularity is established; then omit them entirely for one night, then take them for two or three nights, and gradually lessen them, until in a surprising short space of time it will be found that one pill occasionally, and finally none, will be required.

Another favorite prescription, especially when the appetite needs stimulating and tone must be given to the stomach, is

℞ Tincture of nux vomica,..... $1\frac{1}{2}$ drachm;
Solution of potassium arsenite,.... 1 "
Extract of cascara sagrada,..... 1 ounce;
Essence of pepsin, q. s. ad..... 3 ounces.

M. Sig. One teaspoonful after meals in half a glassful of water, gradually decreasing and omitting the dose as regularity is established. The drugs of this class seem to be the proper ones for use in habitual constipation. The use of salines and mineral waters, taken before breakfast, is at times beneficial, but very often they require a gradual increase in the amount to secure the evacuation of the bowels. Their constant employment tends to deplete, rather than to give tone and vigor to, the intestinal tract. Of course, any obstructions, such as hæmorrhoids, tumors, rectal stenosis, or any irritable conditions, such as ulcers and fissures of the rectum, prolapsus, etc., must first be removed. This done, and with a willing and persevering patient, success will usually crown our efforts.

1375 MADISON STREET.

Antirabic Inoculations in Portugal. — *A Medicina Contemporanea* of February 9th publishes a report of the work of the Royal Bacteriological Institute at Lisbon, which shows that during the year 1900 the total number of patients treated was 651. Of these, two died, one of the deaths occurring during the course of treatment. This case being left out of account, the rate of mortality is 0.15 per cent. During the last four years the treatment has also been carried out in the Pasteur Institute at Oporto, founded by Dr. Avantes Pereira, under whose direction it has from the first been conducted. The following statistics show the results obtained: In 1897, the number of patients treated was 79 with no death; in 1898, 77, also without a death; in 1899, 140, with a mortality rate of 0.71 per cent.; and in 1900, 395, with a death-rate of 0.50 per cent.

A CASE OF ACUTE ANTERIOR POLIOMYELITIS; RECOVERY.

By DAVID DAVIDSON, M. D.,
BROOKLYN, N. Y.

The following is a history of a case of acute anterior poliomyelitis, which came under my observation on October 12, 1901. I publish this case on account of the rarity of this disease among adults, its usually bad prognosis, and the very successful therapeutic result, based on a specific ætiology:

T. L., a man, aged twenty-eight years; occupation, florist; born in Greece.

Family history: Mother died in childbirth; father is still living; brother and sister accidentally killed.

Personal history: Never had any sickness until nine years ago, when he contracted gonorrhœa and chancroid. The gonorrhœa subsided in six months. A suppurating bubo resulted from chancroid, which eventually healed.

About three years ago, several weeks after intercourse, a primary sore appeared at the meatus of the urethra. This was followed in a few months by a general alopecia and other symptoms indicating secondary syphilis. At this stage he was treated by a genito-urinary specialist, with mercurial inunctions, for five months. The patient then ceased treatment.

Four months ago patient had a "feeling like pins and needles in fingers and toes," and a sense of progressive loss of power, in the upper and lower extremities, which continued until he was unable to ascend stairs, or to attend to his business, or to his personal care. There were severe pain in anterior portions of both forearms, in left deltoid, both thighs (anterior portions), and both calves. Sensation was always good as to distinguishing size, shape, and consistence of objects. Headaches were very severe at night; appetite never impaired; bowels always regular; bladder always well under control. Slept well except when in pain, which was usually worse at night or when attempting to use affected limbs. He "saw double."

Physical examination: Heart and lungs normal; alimentary tract in good order, with the exception of slight coating on tongue. Myopia of both eyes. Smell normal. Hearing normal. Slight atrophy of muscles of shoulder girdle. Head hanging forward. Marked atrophy of left deltoid. Coordination unimpaired. Sensation over paralyzed muscles only slightly impaired. Paralysis of left deltoid complete; paralysis of muscles of both forearms (anterior aspect) almost complete; more marked on left side. Motor impairment of muscles used in flexing the thighs almost complete and more marked in quadriceps extensors. Reaction to faradaic current subnormal.

The foregoing examination was made four months after primary evidence of paralysis and three months previous to this writing.

Diagnosis: Acute anterior poliomyelitis.

Treatment: I immediately put the patient on potassium iodide, grains 10, t. i. d., and increased ten grains to the dose daily, until he was taking about half an ounce a day, when a severe coryza and acne

made it advisable to reduce the dose again to the initial quantity. I again increased the dosage as before.

His tolerance for the drug was increased at this stage by his taking Turkish baths bi-weekly, which greatly increased the emunctory power of the skin to such an extent that the acne was so slight as to almost escape observation, even when taking maximum doses.

Strychnine sulphate, grain $\frac{1}{60}$, with arsenious acid, grain $\frac{1}{60}$ t. i. d., was administered, for their special stimulating action on the nervous system.

In conjunction with these, I applied the faradaic current (positive electrode over the spine at the exit of nerves supplying the parts affected; negative electrode over the affected muscle), for five minutes to each group, at first every second day, then, as improvement took place, twice weekly.

Result: At this writing, the eye symptoms have totally disappeared; the patient is able to attend to business as well as before his sickness. The atrophied muscles have filled in to normal, and I might mention as evidence of stage of recovery that the patient is now quite a clever pool player.

Note: This case was shown at the December, 1901, meeting of the Hospital Graduates' Club of Brooklyn.

445 STATE STREET.

Therapeutical Notes.

Lumbar Puncture in Chorea.—Jemma (*Gazzetta degli Ospedali*, December 1, 1901; *British Medical Journal*, January 25) recommends the use of this treatment in severe and intractable cases of chorea. He records two cases, implicating speech and deglutition, with movements so severe and incessant that sleep was impossible. In the first patient, aged ten years, lumbar puncture, with removal of 20 cubic centimetres of cerebro-spinal fluid, was followed by an immediate improvement lasting ten days. The symptoms then recurred with such severity as to require a second puncture, by which another rapid improvement was obtained, and by the administration of arsenic in large doses a cure was effected. In the second patient, aged eleven years, puncture with withdrawal of 25 cubic centimetres of fluid caused almost immediate relief. Arsenic was begun at once, and though after seven days there was some increase in the symptoms, yet cure was effected without a second puncture.

For Ecthyma.—Dr. Sabouraud (*Pratique dermatologique; Gazette hebdomadaire de médecine et de chirurgie*, February 2, 1902) recommends the use of the following solution to moisten the crusts and regulate the local circulation:

℞ Boiled water, saturated with camphor
and filtered. 1 quart;
Saffron. 6 grains;
Zinc sulphate. 105 "
Copper sulphate. 30 "
M.

In a few days the epidermic lesions dry up and the new epidermis may be protected with the following ointment:

- R Zinc oxide. 15 grains;
 Calomel. 3 "
 Petrolatum. 300 "
 M. The treatment lasts from ten to twenty days.

For Warts.—The following remedies are suggested by various writers in the *Lancet* for February 15th, in answer to a correspondent's query:

Mr. I. D. Staple, M. R. C. S., recommends re-vaccination, the effect of which upon warts he published in the *Lancet* for September 22, 1900.

Dr. Heywood Smith recommends that oleum terebinthinæ be applied many times (say twenty) a day, and rapidly dried before the fire. He knows of obstinate cases successfully thus treated.

An anonymous writer suggests the constant wearing of gloves kept well dusted inside with equal parts of French chalk and calomel, carefully mixed, watch being kept for symptoms of mercurial absorption. He has found this more useful than anything else.

Mr. H. M. Singleton, M. R. C. V. S., says that he is not in the habit of prescribing for one of the *genus homo*, but if the warts are papillomata, a saturated watery solution of sodium hydroxide will remove them. It would first be necessary to get rid of the acetic acid which the patient had been applying to the growths by a liberal application of soap and water, otherwise the soda solution would be neutralized by the acid. Then with a glass rod apply and smear over each wart one drop of the caustic soda once a day or oftener for two or three days.

[To which we would add that we have found nothing more generally useful than the repeated application of the end of a bit of wood (*e. g.*, a match) moistened with acid nitrate of mercury, care being taken only to touch the top of the wart and not to let the fluid run to the sound tissue. The wart gradually shrivels and finally falls off.]

For Menorrhagia without Pain.—Dr. Lafond-Grelletty (*Gazette hebdomadaire des sciences médicales de Bordeaux*; *Gazette hebdomadaire de médecine et de chirurgie*, January 30th) prescribes the following formula of Dr. Dalché:

- R Ergotine. 1½ grain;
 Quinine sulphate. ⅓ "
 Powdered digitalis. ⅓ "
 Powdered coca. q. s. for 1 pill.

M. From four to five pills daily.

When the menses are regularly profuse, M. Lafond-Grelletty combines this treatment with the internal use of calcium chloride:

- R Calcium chloride. 135 grains;
 Syrup. 5 drachms;
 Water, to. 6 ounces.

M. From one to two tablespoonfuls daily. This is not disagreeable and is well borne.

In anæmic subjects with Bright's disease, however, calcium chloride easily determines intoxication, with vomiting and headache, and consequently it must not be prescribed when there is reason to suspect nephritis. The calcium chloride can then be replaced by a ten-per-cent. gelatin preparation, of which from five to ten cubic centimetres may be injected once or twice daily.

For Influenza.—The *Journal médical de Bruxelles* for January 30th quotes the following formulæ from the *Monde médical*:

For disinfection of the ears:

- R Glycerin. 30 parts;
 Van Swieten's solution (Fr. Cod). 15 "
 M.

A few drops to be instilled into the ear three times daily.

[Liqueur van Swieten consists of corrosive sublimate, 1 part, in alcohol, 100 parts, and water 900 parts.]

For disinfection of the nose:

- R Menthol. 3 grains;
 Liquid petrolatum. ½ an ounce.
 M.

A few drops to be instilled into the nostrils three times daily.

For disinfection of the throat:

- R Alcohol. 1½ ounces;
 Resorcin. 45 grains;
 Salol. 30 "
 Water, enough to make. 1 quart.
 M. To be used frequently as a gargle.

Or:

- R Salicylic acid. 15 grains;
 Spirit of peppermint, enough to dissolve;
 Water. 1 quart.
 M.

For disinfection of the room:

- R Thymic acid, }
 Carbolic acid, } of each. 75 grains;
 Salicylic acid, }
 Menthol. 30 "
 Alcohol. 8 ounces;
 Tincture of eucalyptus. 75 minims.
 M.

From two to four tablespoonfuls, in 16 ounces of water, to be evaporated in the sick room.

To Combat Collapse in Pneumonia.—Dr. Du-leau (*Journal de médecine interne*, February 15th) uses injections as follows:

- R Strychnine sulphate. 15/100 of a grain;
 Distilled water. 150 minims.

M. Three injections, of about 20 drops each, daily.

Where the tendency to collapse is not great, he recommends the following:

- R Extract of cinchona. 45 grains;
 Tincture of cinnamon. 75 minims;
 Ammonium acetate. 150 grains;
 Syrup of orange peel, } of each. 3 ounces.
 Brandy, }
 Melissa water, to. 8 "

M. A tablespoonful every hour.

To Allay the Irritation in Varicella.—Rochardière (*Journal de médecine interne*, February 15th) recommends powdering the body with the following to allay irritation:

- R Tartaric acid. 30 parts;
 Starch, }
 Talc, } of each. 50 "
 M.

For the face, sterilized petrolatum is recommended, to which, if the irritation is very intense, a little tartaric acid may be added.

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THREATENED VICIOUS LEGISLATION IN
MASSACHUSETTS.

About a year ago a committee of the Massachusetts legislature had under consideration a bill entitled An Act to Regulate the Practice of Vivisection, but really intended to restrict the practice to the utmost. A public hearing was held, and the committee's unanimous report was "Leave to withdraw." The report was accepted and the bill was killed for the time being. But similar bills lift their vicious heads at almost every session of a State legislature and annually in the Congress of the United States. It is well, therefore, that Dr. Harold C. Ernst, professor of bacteriology in the Medical School of Harvard University, who closed for the remonstrants at the hearing mentioned, has issued a volume giving the purport of the statements made by his coadjutors, together with his own as uttered and the written statements of those remonstrants who were unable to be present at the hearing.¹

In addition to Dr. Ernst, the remonstrants represented in the volume are President Eliot, of Harvard University; Professor Henry P. Walcott, who was the acting president of the university at the time that the hearing was held; President Hall, of Clark University; President Capen, of Tufts College; Bishop Lawrence; Dean Hodges, of the Episcopal Theological School, Cambridge; the Rev. James de Normandie, of Roxbury; the Rev. J. T. Magrath, of Cambridge; Dr. William T. Sedgwick, professor of biology in the Massachusetts Institute of Technology and formerly biologist to the State board of health; Professor Harris Hawthorne Wilder, occupying the chair of zoology in Smith College, North-

ampton; Professor Mary A. Willcox, of the chair of zoology, Wellesley College; Professor J. S. Kingsley, of the chair of biology, Tufts College; Dr. C. F. Hodge, assistant professor of physiology and neurology in Clark University; Dr. J. P. Sutherland, dean of the Boston University School of Medicine, professor of anatomy; Dr. Arthur W. Weyse, professor of physiology in the Boston University School of Medicine; Dr. T. M. Strong, secretary of the Massachusetts Surgical and Gynecological Society; Dr. John Collins Warren, professor of surgery in the Medical School of Harvard University; Dr. Arthur T. Cabot, surgeon to the Massachusetts General Hospital; Dr. Maurice H. Richardson, surgeon to the Massachusetts General Hospital; Dr. James J. Putnam, professor of neurology in the Medical School of Harvard University; Dr. George L. Walton, instructor in neurology in the Medical School of Harvard University; Dr. Horace D. Arnold, professor of clinical medicine in the Medical School of Tufts College; Dr. Henry P. Bowditch, professor of physiology in the Medical School of Harvard University; Dr. William Townsend Porter, associate professor of physiology in the Medical School of Harvard University; Dr. William T. Councilman, professor of pathological anatomy in the Medical School of Harvard University; Dr. Theobald Smith, professor of comparative pathology in the Medical School of Harvard University; Surgeon Henry G. Beyer, of the navy; Dr. Theodore Hough, assistant professor of biology in the Massachusetts Institute of Technology; and Secretary Edward G. Gardiner, of the trustees of the Marine Biological Laboratory, Wood's Holl.

Such an array of names would command respect in any community having even an elementary appreciation of the value of experiments on animals or even of the importance of progress in medical knowledge. It is less true of Massachusetts than of almost any other part of the world that a prophet is not without honor save in his own country, and it could hardly have been imagined that the statements of these eminent persons would lead to any other decision than that of "Leave to withdraw." It is to be expected, moreover, that they will have great influence with other legislative bodies, for, taken together, they amount to a complete refutation of the allegations made by the antivivisection zealots.

Another piece of proposed legislation hardly less

¹*Animal Experimentation; a Series of Statements Indicating its Value to Biological and Medical Science.* Boston: Little, Brown & Company, 1902.

vicious than the antivivisection bill has lately been introduced into the Massachusetts legislature, a bill empowering the State board of health to engage in the production of vaccine to be sold. It is unfortunate that this bill should have come up at a time when there is a glimmer of hope that we of the city of New York may be able to deprive our board of health of its power to trade to the prejudice of private interests and to the detriment of individual achievement, doing so with the aid of public money. It has often been said to the credit of the Massachusetts board that, while it produced diphtheria antitoxine and analogous remedial and prophylactic material, it did not traffic in them. We hope that it will not now be allowed to do so.

PREVENTIVE PSYCHIATRY.

Jealously guarded as is almost invariably the secret of a taint of tendency to insanity in a family, it is not generally altogether withheld from the family physician, and most assuredly it should not be. The prevalent feeling that such a taint is a disgrace has no rational foundation, but it leads to no end of ingenious dissimulation even in the presence of the trusted medical adviser; consequently it is really incumbent on physicians to take the initiative in managing the hygienic affairs of a family in this respect, rather than to wait to be "called in" when an outbreak of mental disturbance has actually occurred or when marital or other like negotiations have proceeded so far that they cannot honorably be broken off without full exposure of the facts, an exposure always more or less humiliating and prone to work subsequent injury.

We are convinced that the experienced family physicians of the present day realize the need of their kindly intervention in order to reduce the chances of actual mental breakdown in persons born with the inherited tendency in question, and to encourage them in their efforts we shall quote from an article by Dr. T. S. Clouston which appeared in the February number of the *Scottish Medical and Surgical Journal*. The main purpose of the article is to combat the tendency to regard melancholia as primarily due to some form of toxæmia. The author contends that in many cases toxæmia plays no demonstrable part in the causation, and that when it does enter as a factor there must be some contributory or predisposing cause, especially a congenital

defective structure of the cerebral cortex, and it is to ward off the possible effects of this structural defect that the physician should strive.

Measures to counteract the inherited tendency, says Dr. Clouston, should be begun from birth, and he goes on to say: "Diet, environment, education, attention to infantile nervous ailments, choice of occupations, special training in habits of self-control, avoidance of alcoholic excess and sexual errors, and suitable choices of mates might do much to reduce the number and intensity of the higher neuroses, but are seldom systematically carried out in the families where they are the most needed. I am persuaded that there is a great future for preventive psychiatry, whereby the sum of human misery will be lessened and the effectiveness of human brain power much increased. I have seen a few instances of the success of such measures in families not too far gone, but I have seen far more examples where degeneration and extinction took place through the neglect of such preventive means in two or three generations, this process being accompanied by much crime, moral error, and unhappiness."

We believe that the recovery of lost mental as well as physical perfection may often be achieved by such means as Dr. Clouston mentions, and that if such measures are adopted early and adhered to persistently, the subject of an hereditary tendency to insanity, if it is not of too confirmed a type, need not be condemned to celibacy either by medical opinion or by his own conscientious scruples. Other morbid tendencies of an inheritable character are over and over again observed to be overcome, and it is difficult to see why mental trouble from heredity should necessarily be unavoidable.

A PROPOSED OPERATION FOR MITRAL STENOSIS.

One of the most daring, not to say one of the wildest, of surgical dreams has lately come from a pure physician, Sir T. Lauder Brunton. It appeared in the *Lancet* for February 8th, under the heading of Preliminary Note on the Possibility of Treating Mitral Stenosis by Surgical Methods, and we gave an abstract of it in our issue for February 22d, in the department of Pith of Current Literature. Despairing of ever achieving success in the medicinal treatment of mitral stenosis, the author some time ago conceived the idea that it might be feasible to enlarge the mitral orifice by an incision

or to divide the valves at right angles to their bases. To test the idea, he has performed a number of experiments on animals, but apparently without advancing further than to convince himself of the comparative innocuousness of subjecting the heart to manipulation of all kinds. He now relinquishes his experimental investigation and leaves his suggestion to be followed up by anybody who may be willing to enter upon the task.

Wonderfully as the possibilities of operative surgery have been unfolded within the last few decades, it is with bated breath that we contemplate such an heroic proposal as Sir Lauder Brunton's. "Beware the fury of a patient man" may in this instance have the most pointed of all possible illustrations in the daring of a medical man who has for the nonce invaded the domain of surgery. Still, he who fifty years ago should have predicted the surgical triumphs of the last half-century would undoubtedly have been looked upon as a madman, and we may take warning not to flinch at any operative procedure, however chimerical it may appear.

Of the two operations, that of directly enlarging the mitral orifice and that of incising the valves, Brunton thinks that the former is theoretically preferable, but that the latter would probably prove less difficult of execution. This seems to us questionable, for a *priori* we should think it easier to find the orifice and incise the bordering tissue than to single out and incise each cusp of the valve—either operation, be it understood, to be done without other aid to the perception than what is to be obtained by the sense of touch transmitted through a tenotome plunged into the ventricular cavity. A blinder procedure it would be difficult to imagine.

SUPPURATIVE OOPHORITIS.

This disease has lately been investigated anew by Mauger (*Thèse de Paris; Berliner klinische Wochenschrift*, January 6th). He concludes that it is often an isolated affection, and that it is almost always unilateral. If the tube is affected, changes occur in its wall. The broad ligament is thickened, oedematous, and infiltrated; it walls in the ovarian mass in front and often shows little lymphangitic abscesses in its substance. This form of oophoritis may remain latent for years, progressing by subacute exacerbations during a long period, the patient feeling well in the intervals. Although the onset is often sudden, in the midst of perfect health, the disease is generally the outcome of an old metritis which the patient has forgotten.

THE COMMERS AT ARION HALL.

We are glad to see the names of so many physicians on the list of members of the committee charged with arranging the *Commers alter deutscher Studenten* for Friday evening of this week, at which Prince Heinrich was expected to be present for a short time. At least fifteen of the thirty-two committeemen are doctors of medicine, including the chairman, Dr. Carl Beck. We might all do well to emulate our German brethren in participating in public functions, and it is encouraging to find on this list the names of four doctors who are not of German descent.

"OSTEOPATHY" IN ILLINOIS.

We congratulate the Illinois State Board of Health on its final success in the prosecution of one Joseph P. Gordon for illegal practice. The Illinois law authorizes the board to classify applicants for its license into those who wish to practise medicine in all its branches and those who intend to carry on the practice of some real or pretended system of healing, but they must all acquire a license. Gordon had not applied for a license, and in his testimony he said: "I understand nothing about medicine." He professed to make diagnoses, however, and he alleged his immunity under the law, grounding his allegation on the pretense that his system of treatment was "magnetic" or of the nature of suggestion, although his own testimony showed plainly that manipulation was his one therapeutical resource. The circuit court, apparently accepting this quack's sophistry, instructed the jury to find for the defendant, and the appellate court affirmed that judgment, but it has been reversed by Chief Justice Wilkin, of the supreme court, whose opinion is an admirable example of common sense reasoning.

ANOTHER MEDICAL LAWYER.

We are glad to learn that so busy a member of our profession as Dr. William Oliver Moore, of New York, a well known ophthalmologist, has found time to study law. Dr. Moore was admitted to the Bar on February 17th. We are informed that he will continue in medical practice, but will pay particular attention to medicolegal matters. It would be well for our profession, we think, if more of its members were learned in the law. We know of two other New York physicians who have become lawyers, but both of them, we understand, forsook medicine when they entered upon the study of law, so that, so far as we know, Dr. Moore is the only practising physician in New York who is qualified as an attorney and counsellor.

News Items.

Society Meetings for the Coming Week.

MONDAY, March 10th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, March 11th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, March 12th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, March 13th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, March 14th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Dr. J. M. Langsdale has been appointed city physician for Kansas City, Mo., to succeed Dr. G. O. Coffin.

Cremation of Patients Dying of Infectious Diseases is warmly commended in a resolution adopted by the Medical Society of the Southern Section of Vienna.

Fifty Years a Physician.—The physicians of Winnebago county, Ill., gave a banquet on February 23d to Dr. Clinton Helm in celebration of the fiftieth anniversary of his entry on the practice of medicine.

The New Relief Station of the Boston City Hospital was scheduled to be open for the reception of patients at 9 o'clock on February 20th. At twelve minutes before the hour an accident case was brought in from the neighborhood, and the patient was suitably cared for within fifteen minutes of the time when the accident occurred.

The St. Louis Medical Society of Missouri.—At the meeting held on Saturday evening, March 1st, the following papers were presented: The General Diagnosis of Small-pox with Lantern-slide Demonstrations, by Dr. William T. Corlett, of Cleveland; The Present Epidemic of Small-pox in the United States, by Dr. A. W. Brayton, of Indianapolis, and Remarks upon the Difficulties in the Diagnosis of Small-pox, by Dr. W. A. Hardaway.

The American Medical Association.—The demand for space by exhibitors at the meeting of the American Medical Association, to be held at Saratoga Springs in June, has been so great that a special annex to the Hathorn Spring building is being erected to provide the additional space required.

Skiagrapher to the Cook County (Ill.) Hospital.—The value and importance of x-ray work has been officially recognized by the authorities of the Cook County (Ill.) Hospital by the appointment of Dr. H. J. Heiselden as attending skiagrapher to the institution.

Protection of Infants in Spain.—Two measures for the better protection of infants have been introduced in the Spanish Legislature. One of these, according to the *British Medical Journal*, is based on the Roussel law, which, though it has been in force only a few years in France, has already been found to need considerable modification.

The Superintendent of the Dayton (O.) State Hospital.—Dr. A. F. Shepherd, of Toledo, has been elected superintendent of the Dayton (O.) State Hospital. There were about a dozen applicants for the position. Dr. Shepherd is thirty-eight, single, and is now assistant superintendent of the Toledo Hospital.

Preponderance of Deaths Over Births in France.—The official statistics show that during the year 1900 there were 827,297 births as against 853,285 deaths, showing an excess of deaths over births of 25,988. In the year 1899 there were 847,627 births as against 816,233 deaths, showing an increase during that year of 31,394.

Medical Banquet at Akron.—The annual dinner of the Celsus Club was held at the Empire Hotel, Akron, O., on February 26th. Dr. E. O. Leberman was toastmaster and the following speakers responded to the various toasts: Dr. J. H. Seiler, Dr. L. S. Ebright, Dr. H. I. Cozad, Dr. C. T. Hill, Dr. A. E. Foltz, and Dr. L. E. Sisler.

Dr. Morris W. Townsend died at his home, near Rochester, on February 26th, at the age of seventy-five. Dr. Townsend was very prominent in the western part of the State. He served as a surgeon throughout the civil war with distinction, and was well and widely known. He graduated from the Jefferson Medical College, Philadelphia, in 1853.

Banquet to Dr. Enno Sander.—A banquet was tendered Dr. Enno Sander, of St. Louis, on the occasion of his eightieth birthday, which occurred on February 26th. During the banquet the St. Louis College of Pharmacy conferred the degree of professor emeritus of materia medica and botany upon the doctor. He was also elected an honorary member of the alumni association of the institution. Albert E. Ebert, of Chicago, acted as toastmaster. Among the speakers were Dr. Henry M. Whepley, Dr. Otto A. Wall, Sr., Henry T. Rohlfing, Christian F. G. Meyer, William H. Lamont, Otto F. Claus, and Professor James M. Good.

The International Congress of Dermatologists, which was to have been held in 1903, has been postponed until September, 1904, on account of the meeting of the International Medical Congress, which will take place during 1903. Professor E. Lesser will preside over the deliberations of the Congress of Dermatologists, which will be held at Berlin.

The Royal Commission on Tuberculosis.—The English Royal Commission on Tuberculosis has been tendered the use of two farms situated at Stanstead, Essex county, belonging to Sir James Blyth, for carrying out their experimental work on the prevention and cure of tuberculosis. Arrangements have been made for the occupation of the farm for three years, though it is hoped that the inquiry will be completed before that time. The laboratories and other buildings necessary for carrying on this work have already been erected.

Medical Association of the Greater City of New York.—A stated meeting will be held at the Academy of Medicine on March 10th. The order of exercises includes A Report of the Committee on the Death of Dr. P. F. Mundé; The Presentation of a Patient with Tuberculous Tumor of the Larynx, with Remarks on the Indications for Operative Intervention in such Cases; a paper on The Induction of Premature Labor, by Dr. Henry C. Coe, the discussion of which will be opened by Dr. J. Clifton Edgar and continued by Dr. E. B. Cragin, Dr. R. L. Dickinson, Dr. Austin Flint, Jr., Dr. E. H. Grandin, Dr. G. M. Jarman, Dr. Charles Jewett, Dr. S. Marx, Dr. E. E. Tull, and others.

Dr. von Bergmann Honored.—Dr. von Bergmann, professor of surgery at the University of Berlin and director of the university surgical clinic, has been invested with the rank of real privy councillor. This dignity, which is the highest of its class in Germany, carries with it the title of excellency and is, as a rule, conferred only on great officers of State and persons occupying important positions at court, very few medical men having been thus honored. Professor von Langenbeck, who preceded Professor von Bergmann in the chair of surgery in Berlin University, was invested with this rank, but not until he had reached an advanced stage of his career, although in addition to his scientific eminence he had distinguished himself in two great wars. Professor Esmarch, of Kiel, has also been Wirklicher Geheimer Rath, though his social connections are of such a character as to render this fact somewhat less of a compliment to his ability than in the case of Professor von Bergmann. He and von Bergmann are the only two physicians now bearing the title.

A Clinical School at the Cook County (Ill.) Hospital.—The efficiency of the Cook County Hospital is to be increased by additions to the laboratory and pathological museum. The nucleus of the laboratory was obtained last year through the contributions of the county commissioners, who turned over part of their salaries to the county because on the platform on which they had been elected they stood for a maximum salary of \$3,000.

The budget reduced the salary of \$4,000 to \$3,600 for each commissioner, and the balance was donated by them to the institution. Since then contributions have been received from several sources, and the laboratory has grown beyond the control of the county board. In order to provide suitable conditions for rapid growth the county officials decided to incorporate the laboratory and museum into a school, the management of it to be placed in the hands of the warden, the president of the county board and the superintendent of public service. The clinical school will be of benefit to students at medical colleges, who patronize the public clinics. From the great number of patients in the hospital the opportunities of securing important specimens of physiological growth are numerous, and it is expected that within a few years the pathological museum will be one of the most complete in the country.

Monkey Lymph for Vaccination.—In the English House of Commons, on February 13th, Mr. Thomas Bayley asked Mr. Long, the president of the Local Government Board, whether his attention had been drawn to the use of small-pox virus passed through pustules on monkeys as a source of vaccine by Dr. S. Monckton Copeman, medical inspector, Local Government Board, who stated that a considerable number of children had been vaccinated with vaccine thus obtained; and whether the Local Government Board had given its medical inspector leave to vaccinate children with vaccine of such a nature. Mr. Long replied that Dr. Copeman had informed him that he had made experiments of the kind referred to, but the Local Government Board had not given him permission to vaccinate children with lymph yielded by the monkey, and he (Mr. Long) understood that he had not done so. In all cases vaccinations had been performed with lymph derived direct from the calf. The idea of using lymph derived from monkeys will strike Americans generally as quite an original one, and one which, but for the assertion of the president of the Local Government Board that such experiments had really been made, would be looked upon as being in the same class with the story of the Michigan lumberman who proposed to undertake the culture of cotton in the Gulf States, using trained monkeys as field hands.

The Physicians' Bills on the President's Case.—Various conflicting statements have appeared in the daily papers of Buffalo concerning the compensation of the physicians concerned in the case of President McKinley, but the following statement which was written by Mr. John G. Milburn, president of the Pan-American Exposition Company, and published in the *Buffalo News*, says that none of the reports hitherto published are correct. Mr. Milburn is quoted as saying: "There is no basis whatsoever for the statement that the bills for the services of the doctors who attended the late President were referred to Senator Hanna and myself; that any bills rendered had been revised or cut down; or that I have anything to do with the preparation of any bill to be submitted to Congress. Some time ago I was requested to confer with the doctors about their compensation. No bills have

been rendered by them. We met and talked the matter over. There has been no controversy between the doctors themselves or between me and any of them. As the result of our talk certain figures were made which were agreed on all around and impressed me as very reasonable, and those figures I sent to Washington, which is the last I have heard of the matter. It is unjust to the doctors to represent them as having rendered bills which were cut down, or as having asked for compensation which was not allowed, or as differing between themselves. I am not at liberty to give the figures which I sent to Washington. Those which are given in the *Enquirer* are not correct. That is all I can say." The figures referred to as having been given in the *Enquirer* are as follows: Dr. Matthew D. Mann, \$10,000; Dr. Herman Mynter, \$5,000; Dr. Roswell Park, \$5,000; Dr. Charles McBurney, \$2,500; Dr. Charles G. Stockton, \$1,000; Dr. N. W. Johnson, \$1,000; Dr. Janeway, \$1,000.

International Medical Press Association.—The reunion of the official delegates to the International Medical Press Association will be held on April 7th at Monte Carlo, under the auspices of the Prince of Monaco. This reunion was to have been held immediately prior to the congress which was fixed for the month of September, 1901, but has since been postponed to 1902. In order to facilitate the work of the congress the reunion of official delegates has been called several months in advance of the date of the meeting of the congress. All of the national delegates who have been officially designated as such by the medical press associations of their respective countries are invited to participate in the reunion. It is proposed to draft at Monte Carlo the laws to be submitted to the association in respect to property rights in scientific publications. Each of the delegates will be expected to present the views held in his country on the subjects discussed, with a view to bringing about a general agreement. A report of the results of the conference will be sent to each of the constituent associations, so that the delegates to the final congress may come prepared to present the definite views of the association which they represent. At Monte Carlo there will also be discussed a project for organizing a permanent international bureau, somewhat similar to those now in existence among the political press, the object of which will be to receive and distribute throughout the world abstracts prepared by the authors of original articles for reproduction in all of the journals belonging to the international association. The secretary of the provisional bureau of the association is Dr. R. Blondel, 93 Boulevard St. Germain, Paris.

The German Surgical Society.—The Thirty-first Congress of the German Society for Surgery will convene in Langenbeck House, Berlin, on April 2d, remaining in session three days. A formal welcome to the society will be extended on the evening of April 1st, in a room of the Spatenbräu, at 172 Friederich Strasse. The congress will be opened on Wednesday, April 2d, at 10 a. m. in the Langenbeck House. The sessions of the congress will be held from 9 to 12.30 in the morning and from 2 to 4 in the afternoon each day. The morning session of April 2d, and also the afternoon session on Fri-

day, April 4th, will be in the nature of general sessions, the president for the year 1903 being elected at the session on Friday afternoon, and honorary members will also be elected on that occasion. Patients who are to be used for demonstration purposes will be furnished with quarters in the Royal Clinic. An exhibit of Röntgen photographs contributed by various members will be made in the library of the Langenbeck House. Papers concerning the treatment of wounds will be submitted by Dr. von Bruns, Dr. Honsell, Dr. Borchardt, Dr. Tavel, Dr. Küttner, Dr. Völker, and Dr. Sultan. Various aspects of the ætiology, diagnosis, and treatment of cancer will be treated by the following authors: Dr. Gussenbauer, Dr. Petersen, and Dr. von Mikulicz. The pathogenesis and treatment of perityphlitis and peritonitis will be discussed by Dr. Körte, Dr. Rehn, Dr. Sprengel, Dr. Roux, and Dr. Sonnenberg. The following surgeons will present papers on abdominal surgery: Dr. Bunge, Dr. Ehrhardt, Dr. Sprengel, Dr. von Eiselsberg, Dr. Payr, Dr. Graser, Dr. Tavel, and Dr. de Quervain.

The Question of Autopsies before the Massachusetts Legislature.—A hearing was given by the committee on public charitable institutions of the Massachusetts Legislature on an act permitting autopsies in the State insane hospitals and asylums. Dr. Arthur H. Harrington, superintendent of the Danvers Insane Hospital, appeared in favor of the amendment to the present law so as to permit autopsies. The doctor explained that very often a patient comes into one of these institutions and that clinical data in the case is recorded for a number of years. When the patient dies it is quite important that the authorities have an opportunity to perform autopsy, as it may open a new line of inquiry or explain the data already taken. The hospitals of the commonwealth spend \$6,000 annually for assistant physicians to pursue pathological inquiries, and he felt that the law which now provides that bodies shall be sent immediately to the medical schools for dissection before such autopsies are permitted should be changed. He did not think that these bodies would be absolutely injured for dissection through this law. Dr. Owen Copp, executive officer of the State Board of Insanity, favored the bill. The committee also heard Hon. Solon Bancroft, one of the trustees of the Danvers Hospital, and Dr. Harrington in favor of the purchase of additional land and erection of buildings for the hospital on the recommendations of the trustees in their annual report. Professor Dwight, of Harvard; Dr. J. Collins Warren, and Dr. Frederick C. Shattuck opposed the autopsy bill on the ground that it would interfere with the work of the medical schools if the autopsy were held before the bodies were sent to the schools. The committee left the matter open that the two sides to the controversy might get together and reach a compromise if possible.

Health Department Funds Used for General Purposes.—The sanitary inspectors of the Jersey City Board of Health have just learned that there are no funds with which to pay their last month's salary. The health department has always been self-supporting, and a few months ago it had a surplus of \$6,000 to its credit. The board of finance

transferred this amount into the general account in an effort to keep down the tax rate. The health commissioners did not know their fund had been taken away from them until afterward. Then they made an application for a special appropriation, but it has not been allowed yet. The president of the health board asserts that a small-pox epidemic cannot be fought successfully without money. He has suggested that perhaps the officials might be brought to their senses if the board of health discontinue its work for a while.

The Society of Medical Jurisprudence.—The 165th regular meeting will be held on Monday evening, March 10th, at 8 p. m., at the Academy of Medicine. A long list of candidates will be acted upon. The paper of the evening will be on Medical Expert Testimony, by Dr. Graeme M. Hammond.

Dr. Arthur T. Muzzy, who died on March 4th in New York, at the age of fifty-one, was born in southern India, was educated at Amherst College, and took his degree of M. D. from the College of Physicians and Surgeons in 1879. He had devoted himself since that time to practice in New York, making a specialty of the eye and ear. At the time of his death he was assistant surgeon of the New York Eye and Ear Infirmary and consulting physician for the eye and ear at the Isabella Home for Aged Couples. He devoted much of his time to philanthropic work, taking an active part in Sunday school and Young Men's Christian Association affairs.

No Quarantine against Consumptives in Colorado.—The following letter has been received, signed by members of various boards of health, etc., in Colorado:

"Owing to the fact that repeated statements have been made that Colorado has seriously considered quarantining against consumptives, and owing to the further fact that an editorial in the *Journal of the American Medical Association* for January 25, 1902, page 254, repeats this assertion, despite an official denial by the secretary of the Colorado State Board of Health published in the same journal for June 2, 1900, page 1430, it is deemed but just and fair to request that the following statement be published in a conspicuous place in your next issue:

"We hereby certify on our honor as professional gentlemen:

"1. That, so far as we are aware, no member of the Colorado State Board of Health ever proposed the subject of preventing tubercular persons entering the State.

"2. That, so far as we are aware, no member of the legislative or executive branch of the State of Colorado ever suggested such a course.

"3. That there is no law to that effect on the statute books of the State of Colorado, nor so far as we know has any such law ever been suggested by any responsible citizen of the State.

"4. That, so far as can be ascertained, there does not now exist, nor has there ever existed any ordinance to that effect in any city or town in Colorado, nor has there been any suggestion by those in authority or by any responsible citizen that such an ordinance be passed.

"5. That, so far as we can learn, there does not now exist, nor has there ever existed, any regulation of any board of health in the State of Colorado covering the subject of quarantining against consumptives, nor has any such regulation been suggested by any responsible citizen of the State.

"6. That, on the contrary, in February, 1900, the Colorado State Board of Health issued a circular containing the following: 'That this climate has saved the lives of many who have come early cannot be doubted. There is no need to talk of quarantining against consumption. Such a course is both unnecessary and impracticable. Doubtless many persons with advanced tuberculosis should not be sent here, but for those who can be benefited by coming, Colorado should have nothing but a warm welcome.'

"7. That we know of no proposition of the sort mentioned by any one in Colorado, and that all of us who sign this paper have held responsible sanitary positions, and that we have persistently and constantly stated that no such measures are necessary.

"C. E. TYLER, M. D., Secretary Colorado State Board of Health since 1899.

"HUBERT WORK, M. D., President Colorado State Board of Health since 1899; member of said board since 1895.

"J. M. HALL, M. D., Treasurer and Vice-President Colorado State Board of Health since 1899; President Colorado State Medical Society, 1899-1900.

"HENRY SEWALL, M. D., Secretary Colorado State Board of Health, 1893-1899.

"L. H. LEMON, M. D., Member Colorado State Board of Health, 1899-1901; Health Commissioner of Denver, 1893-1895; President of Colorado State Medical Society, 1897-1898.

"WILLIAM P. MUNN, M. D., Member of Colorado State Board of Health, 1893-1899; Health Commissioner of Denver, 1895-1899; President Colorado State Medical Society, 1900-1901.

"LEONARD FREEMAN, M. D., Member and Treasurer Colorado State Board of Health since 1899.

"A. A. CLOUGH, M. D., Health Commissioner of Denver since 1901.

"W. H. CAMPBELL, M. D., Health Officer of Pueblo since 1901."

Foreign Obituary Notes.—Dr. Robert Peel Ritchie, F. R. C. P. E., F. R. S. E., consulting physician to the Hospital for Sick Children, Edinburgh, is dead at the age of sixty-seven.—Samuel Robert Lovett, L. R. C. P. Edin., L. R. C. S. Irel., L. S. A. Lond., one of the oldest health officers of England, died recently at the age of sixty-nine.—Other deaths recorded among members of the profession in foreign countries are those of: Mavroyéni Pasha, physician-in-ordinary to the Sultan and formerly professor in the Medical School of Constantinople; Dr. A. Kosheffnikoff, emeritus professor of neuropathology in the University of Moscow, aged sixty-six; Dr. Eugenio Fazio, professor of hygiene in the University of Naples; Dr. Elias Blix, professor of otology in the University of Christiania; Dr. Arthur Geissler, of Dresden, director of the Statistical Bureau of the Kingdom of Saxony, formerly a practising physician at Meran, aged seventy; Dr. Chedevergne, director of, and professor of clinical medicine in, the Medical School of Poitiers.

Official News.

Army Intelligence.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending March 1, 1902:

- BAILEY, EDWARD B., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.
- BROWN, HENRY L., Contract Surgeon, will proceed to Morro Castle, Santiago, Cuba, for temporary duty.
- CLARKE, JOSEPH T., Captain and Assistant Surgeon, is granted leave of absence for twenty days, to take effect after his arrival in Philadelphia.
- CURRY, JOSEPH J., Captain and Assistant Surgeon, will proceed to Fort Bayard, N. M., for duty.
- DAVIS, OSCAR F., Contract Surgeon, will proceed to Fort de Soto, Florida, for duty.
- DENNIS, MILLS, Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.
- GILCHRIST, HARRY L., First Lieutenant and Assistant Surgeon, is relieved from temporary duty at Fort Flagler, Washington, and will return to his proper station.
- GREENBERG, HARRY, Contract Surgeon, will proceed to the Presidio of San Francisco, for temporary duty, awaiting transportation to the Philippine Islands.
- GRIEGER, HUBERT, Contract Surgeon, will proceed to the Presidio of San Francisco, for temporary duty, awaiting transportation to the Philippine Islands.
- HARVEY, L. S., Captain and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.
- IVES, FRANCIS J., Major and Surgeon; THOMAS U. RAYMOND, Captain and Assistant Surgeon; EUGENE R. WHITMORE, First Lieutenant and Assistant Surgeon, are detailed to accompany headquarters and the Second and Third Battalions of the Twenty-ninth Infantry from Fort Sheridan, Illinois, to San Francisco, and furnish the necessary medical attendance while *en route*. They will return to their permanent stations after the performance of the duty.
- PEASE, FRANK D., Contract Surgeon, is relieved from duty at Fort Mackenzie, Wyoming, and will proceed to Fort Harrison, Montana.
- SUGGS, FRANK, Contract Surgeon, will proceed from Hornbeck, Louisiana, to San Francisco, for transportation to the Philippine Islands.
- WADHAMS, SANFORD H., First Lieutenant and Assistant Surgeon, and FRANCIS M. WALL, Contract Surgeon, are detailed to accompany the First Battalion of the Twenty-ninth Infantry from Columbus Barracks, Ohio, to San Francisco, and furnish the necessary medical attendance while *en route*. They will return to their permanent stations after the performance of the duty.
- WARWICK, CLARENCE A., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 1, 1902:

DISEASES.	Week end'g Feb. 22		Week end'g Mar. 1	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	26	4	37	6
Scarlet fever.....	299	25	342	33
Cerebro-spinal meningitis.....	0	2	0	0
Measles.....	989	35	1105	40
Diphtheria and croup.....	300	54	303	38
Small-pox.....	55	13	56	11
Tuberculosis.....	270	169	238	166

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 28, 1902:-

Smallpox—United States.

Alabama.....	Birmingham.....	Jan. 1-31.....	5 cases.	
Alaska.....	Hooniah.....	Jan. 29.....	8 cases.	
California.....	Sacramento.....	Feb. 8-15.....	1 case.	
"	San Francisco.....	Feb. 9-16.....	20 cases.	
Colorado.....	Denver.....	Feb. 8-15.....	5 cases.	
Illinois.....	Belleville.....	Feb. 15-22.....	2 cases.	
"	Chicago.....	Feb. 15-22.....	5 cases.	
"	Danville.....	Feb. 15-22.....	7 cases.	
"	Galesburg.....	Feb. 15-22.....	2 cases.	
Indiana.....	Elkhart.....	Feb. 1-15.....	20 cases.	
"	Evansville.....	Feb. 15-22.....	14 cases.	
"	Indianapolis.....	Feb. 8-15.....	8 cases.	
Iowa.....	Clinton.....	Feb. 15-22.....	1 case.	
Kentucky.....	Covington.....	Feb. 16-23.....	6 cases.	
Louisiana.....	New Orleans.....	Feb. 15-22.....	2 cases.	
Maine.....	Durham.....	Feb. 15.....	5 cases.	
"	Freeport.....	Feb. 15.....	1 case.	
"	Portland.....	Feb. 15.....	2 cases.	
Maryland.....	Baltimore.....	Feb. 15-22.....	3 cases.	
Massachusetts.....	Boston.....	Feb. 15-22.....	19 cases.	4 deaths.
"	Cambridge.....	Feb. 15-22.....	4 cases.	
"	Everett.....	Feb. 14-21.....	1 case.	
"	New Bedford.....	Feb. 14-21.....	3 cases.	
"	Newburyport.....	Feb. 15-22.....	1 case.	
"	Quincy.....	Feb. 15-22.....	2 cases.	
"	Waltham.....	Feb. 15-22.....	1 case.	
Michigan.....	Detroit.....	Feb. 15-22.....	5 cases.	
"	Ludington.....	Feb. 15-22.....	7 cases.	
Minnesota.....	Minneapolis.....	Feb. 8-22.....	48 cases.	
Montana.....	Butte.....	Feb. 9-16.....	4 cases.	
Nebraska.....	Omaha.....	Feb. 15-22.....	45 cases.	
N. Hampshire.....	Nashua.....	Feb. 15-22.....	1 case.	
New Jersey.....	Camden.....	Feb. 15-22.....	3 cases.	
"	Jersey City.....	Feb. 15-22.....	23 cases.	
"	Newark.....	Feb. 15-22.....	29 cases.	5 deaths.
New York.....	Binghamton.....	Feb. 15-22.....	2 cases.	
"	New York.....	Feb. 15-22.....	55 cases.	13 deaths.
"	Yonkers.....	Feb. 14-21.....	1 case.	
Ohio.....	Cincinnati.....	Feb. 14-21.....	19 cases.	
"	Hamilton.....	Feb. 15-22.....	1 case.	
"	Middletown.....	Feb. 8-15.....	1 case.	
"	Youngstown.....	Feb. 8-15.....	1 case.	
Pennsylvania.....	Allegheny.....	Feb. 15-22.....	2 cases.	
"	Lebanon.....	Feb. 15-22.....		1 death.
"	Philadelphia.....	Feb. 15-22.....	63 cases.	15 deaths.
"	Pittsburgh.....	Feb. 15-22.....	1 case.	
"	Reading.....	Feb. 17-24.....	1 case.	
"	Steelton.....	Feb. 15-22.....	1 case.	
So. Carolina.....	Charleston.....	Feb. 15-22.....	4 cases.	
Tennessee.....	Memphis.....	Feb. 15-22.....	6 cases.	
Texas.....	Fort Worth.....	Jan. 1-31.....	8 cases.	
"	Houston.....	Feb. 15-22.....	12 cases.	
Vermont.....	Burlington.....	Feb. 15-22.....	17 cases.	
Washington.....	Spokane.....	Feb. 8-15.....	25 cases.	
"	Tacoma.....	Feb. 8-16.....	8 cases.	
Wisconsin.....	Green Bay.....	Feb. 16-23.....	9 cases.	
"	Milwaukee.....	Feb. 16-22.....	2 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	Jan. 25-Feb. 8.....	12 cases.	
Belgium.....	Antwerp.....	Jan. 25-Feb. 8.....	16 cases.	3 deaths.
Brazil.....	Bahia.....	Jan. 10-25.....	2 cases.	1 death.
Canada.....	Halifax.....	Feb. 15-22.....	1 case.	
"	Victoria.....	Jan. 4-11.....	1 case.	
Colombia.....	Cartagena.....	Feb. 3-9.....		2 deaths.
"	Panama.....	Feb. 10-17.....	50 cases.	10 deaths.
France.....	Nantes.....	Jan. 1-31.....	2 cases.	
"	Paris.....	Feb. 1-8.....		3 deaths.
Gt. Britain.....	Birmingham.....	Feb. 1-8.....	1 case.	
"	Glasgow.....	Feb. 7-14.....	6 cases.	1 death.
"	Liverpool.....	Feb. 1-15.....	26 cases.	
"	London.....	Feb. 1-8.....	1102 cases.	82 deaths.
"	Plymouth.....	Feb. 8-15.....	1 case.	
India.....	Bombay.....	Jan. 14-28.....		9 deaths.
"	Karachi.....	Jan. 12-19.....	10 cases.	3 deaths.
"	Madras.....	Jan. 17-24.....		2 deaths.
Italy.....	Naples.....	Feb. 1-8.....	11 cases.	
"	Palermo.....	Jan. 25-Feb. 1.....		1 death.
Malta.....		Feb. 1-8.....	2 cases.	
Russia.....	Moscow.....	Jan. 18-Feb. 1.....	32 cases.	12 deaths.
"	Odessa.....	Jan. 25-Feb. 8.....	11 cases.	3 deaths.
"	St. Petersburg.....	Jan. 25-Feb. 1.....	13 cases.	4 deaths.
Straits Settlements.....	Singapore.....	Jan. 4-11.....	1 case.	
Uruguay.....	Montevideo.....	Jan. 4-11.....	65 cases.	6 deaths.

Yellow Fever.

Mexico.....	Vera Cruz.....	Feb. 8-15.....	2 cases.	2 deaths.
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Cholera.

India.....	Bombay.....	Jan. 14-28.....		7 deaths.
"	Madras.....	Jan. 11-24.....		3 deaths.
Straits Settlements.....	Singapore.....	Dec. 28-Jan. 11.....		4 deaths.

Plague.

India.....	Bombay.....	Jan. 14-28.....		643 deaths.
"	Karachi.....	Jan. 12-19.....	26 cases.	25 deaths.

Marine-Hospital Service.

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending February 27, 1902:

PERRY, T. B., Surgeon. Granted leave of absence for seven days from February 12th, under paragraph 181 of the Regulations.

THOMAS, A. R., Passed Assistant Surgeon. Relieved from duty at Glasgow, Scotland, and directed to proceed to London, England, for duty in the office of the United States Consul General.

WILLIAMS, L. L., Surgeon. Granted leave of absence for one day.

Naval Intelligence.

Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 1, 1902:

BERTOLETTE, D. N., Medical Inspector. Detached from the Brooklyn and ordered to the New York.

GARDNER, J. E., Surgeon. Detached from the New York and ordered to the Cavite Naval Station, Philippine Islands.

HIBBETT, C. T., Surgeon. Detached from the Cavite Naval Station, Philippine Islands, and ordered to the Brooklyn.

LAW, L. H., Surgeon. Detached from duty at the naval and marine recruiting rendezvous, Buffalo, and ordered home.

SNYDER, J. J., Assistant Surgeon. Ordered to the Port Royal Naval Station for temporary duty with recruiting party.

SPRATLING, L. W., Surgeon. Ordered to Buffalo for duty at the naval and marine recruiting rendezvous.

ULSH, W. H., Assistant Surgeon. Reported at the Naval Hospital, Mare Island, California.

WRIGHT, B. L., Assistant Surgeon. When discharged from treatment at the Naval Hospital, New York, ordered home and granted leave of absence for three months on account of sickness.

Births, Marriages, and Deaths.

Born.

GUITTARD.—In San Francisco, on Thursday, February 20th, to Dr. Alwin Guittard, United States Army, and Mrs. Guittard, a daughter.

HARVEY.—In Holquin, Cuba, on Saturday, February 22d, to Dr. Luther S. Harvey, United States Volunteers, and Mrs. Harvey, a daughter.

Married.

SMITH—CATLIN.—In Boston, on Monday, February 24th, Dr. George B. Smith and Miss Ida Catlin.

Died.

BOOTH.—In New York, on Wednesday, February 26th, Dr. Joseph A. Booth, in the sixty-second year of his age.

EWING.—In Kenosha, Wisconsin, on Wednesday, February 26th, Dr. Alice Ewing, of Chicago, in the fifty-second year of her age.

FISHER.—In Buffalo, on Saturday, March 1st, Dr. Edward A. Fisher, in the forty-second year of his age.

LEWIS.—In Philadelphia, on Sunday, March 2d, Dr. Francis W. Lewis, in the seventy-seventh year of his age.

MOORE.—In Rochester, on Monday, March 3d, Dr. Edward Mott Moore, in the eighty-ninth year of his age.

MUND.—In Amagansett, Long Island, on Monday, March 3d, Dr. Conrad Mund, in the twenty-seventh year of his age.

MUSGRAVE.—In Cincinnati, on Sunday, February 23d, Dr. James Musgrave, in the eighty-third year of his age.

RUSSELL.—In Farmington, Maine, on Monday, February 24th, Dr. F. H. Russell, in the fifty-fourth year of his age.

TOWNSEND.—In Bergen, N. Y., on Wednesday, February 26th, Dr. Morris W. Townsend, in the seventy-fifth year of his age.

TUCKER.—In New York, on Monday, March 2d, Dr. Erwin Alden Tucker, in the forty-first year of his age.

WALTERS.—In Lynn, Massachusetts, on Tuesday, February 25th, Dr. William Walters, in the fifty-eighth year of his age.

WAKELEY.—In Orange, N. J., on Thursday, February 27th, Dr. Elizabeth B. Wakeley, in the seventieth year of his age.

YOUNG.—In Cincinnati, on Thursday, February 20th, Dr. Daniel Schuyler Young, in the seventy-fifth year of his age.

Obituary.

EDWARD MOTT MOORE, M. D.,

OF ROCHESTER.

Dr. Moore, who died on March 4th, at the ripe age of eighty-eight, had of late years been chiefly known as a public-spirited citizen of Rochester, but during the greater part of his career he was one of the leading surgeons of the State. Many an old member of the Medical Society of the State of New York will recall Dr. Moore's grave and impressive way of addressing that body, and will realize anew the weight that his words had with the assembly, as indeed his teachings had with all to whom they were conveyed, whether by word of mouth or in print. As a surgeon, Dr. Moore had a large and enthusiastic following. He was not a voluminous writer, and what he did write was almost confined to matters connected with fractures and dislocations; as to them he was generally acknowledged to be a master. In 1889 Dr. Moore was elected president of the American Medical Association, and the dignity with which he presided over the ensuing meeting, held in Nashville in May, 1890, and the pithy construction of his presidential address will long be remembered by those who were present.

ERVIN ALDEN TUCKER, M. D.,

OF NEW YORK.

Dr. Ervin Alden Tucker died at his home, 110 West Fifty-seventh Street, of pneumonia, on March 3d. He was born in Attleboro, Mass., on February 2, 1862, and received his literary education at Amherst College, graduating from that institution in 1885, and receiving the degree of A. M. in 1888. He took his degree of M. D. at the College of Physicians and Surgeons in New York in 1889, taking the second Harsen prize of \$300 for general proficiency. He was resident physician in the Nursery and Child's Hospital for six months and spent the year 1890 studying in Berlin, Munich, Vienna, Paris, and London. On returning to New York, in 1891, he was appointed resident obstetrician in the Sloane Maternity Hospital, which position he held until 1900, when he resigned on account of pressure of his private practice. In 1890 he was appointed instructor in practical obstetrics in the College of Physicians and Surgeons.

Although a comparatively young man, Dr. Tucker had built up a very large practice as an obstetrician, his private engagements having become so numerous as to cause him to resign all his appointments two years ago. At the time of his death he was engaged in the preparation of a work on obstetrics.

Pith of Current Literature.

Medical News, March 1, 1902.

Suturing the Head of the Humerus to the Acromion in Old Subcoracoid Dislocation. By Dr. Carl Beck.—The author gives a case in which a good result was secured with no reaction, by fastening the head of the humerus in the cavity, by suturing it to the acromion after having drilled a hole through the acromion as well as through the head of the humerus. He believes this procedure preferable to resection of the head of the humerus, as advised by so many surgeons. No force being required, laceration of muscles, blood-vessels, and nerves is easily avoided.

Diphtheria, with Special Reference to the Symptoms and Treatment. By Dr. Lawrence T. Royster.—As to the relative merits of tracheotomy and intubation, the author is inclined to prefer the latter, for there is only one condition in which the cutting operation is superior to intubation, and that is when the membrane has extended lower than the intubation tube will reach, and often in these cases it has also extended beyond the reach of the tracheotomy tube. When other methods have been tried and have failed to give relief to the breathing, and the pulse becomes rapid and weak, intubation should be performed immediately. Continued cyanosis without an indication of improvement calls for immediate relief. In private practice it is best to insert a tube before it is actually needed.

Acute Pelvic Suppuration; Its Conservative Treatment. By Dr. John O. Polak.—According to the author early diagnosis in pelvic suppuration is imperative. When the diagnosis is made, a vaginal operation should be performed; done early and with strict asepsis it is curative and may preserve the functions of the woman's organs. It also improves the patient's condition, makes subsequent operation easy, and prevents, rather than causes, adhesions. It may be used for diagnosis in obscure cases without shock or injury to the patient, if aseptically performed.

Ventrofixation: A Suggestion. By Dr. Victor C. Pederson.—The author records two ventrofixations recently done by him, on the principle of Dr. McBurney's intramuscular method of opening the abdomen for excision of the appendix. The result of the author's operation is that the uterus is suspended in the median line, while the scar is lateral to the point of fixation and is itself protected by the healthy rectus muscle.

A Case of Leucæmia, Preceded by Mucosanguinolent Colitis and Physiological Leucocytosis. By Dr. G. W. McCaskey.

*Journal of the American Medical Association,
March 1, 1902.*

The History of the Invention and of the Development of the Ophthalmoscope. By Dr. Harry Friedenwald.

Hermann von Helmholtz, the Inventor of the Ophthalmoscope. By Dr. Casey A. Wood.

A Few Personal Recollections of Helmholtz. By Dr. Hermann Knapp.

The Contributions of Helmholtz to Physiology and Psychology. By Dr. Winfield Hall.—The author asserts that, up to the present time, the psychologists have not seemed to accord to Helmholtz the credit due to him for the initial impulses which he undoubtedly gave to their department of physiology. Perhaps the physiologist tends to overestimate the work of their confrère, Helmholtz; but it seems impossible that work such as his, lying on the border line of pure psychology, should not have exerted a profound and far-reaching influence on all subsequent work in psychology.

The Debt of Otology to Helmholtz. By Dr. B. Alexander Randall.

Contributions of Helmholtz to Physical Science, Especially with Reference to Physiological Optics, Including the Dynamics of Eyeball-movements and of Accommodation. By Dr. Arthur W. Goodspeed.

Examination of a Genito-urinary Patient by the General Practitioner. By Dr. Ferd. C. Valentine.—All genito-urinary examinations should be painless; the operator's arms should be bared to above the elbows, his clothing protected by a gown and apron, and his eyes with spectacles. Examinations are best made in the morning, before the patient has passed his first urine. The meatus should be cleaned before passing urine for examination. The manner of urinating is often pathognomonic. The locality of the lesion may be indicated by the epithelia found in the urine. Examination of the urethral annexa should not be omitted. Urethral asepsis should be attained. The *bougie-à-boule* should alone be used for diagnosis, the rigid sound for therapeutics. The general practitioner is perfectly competent to examine the vast majority of patients.

The Unveiling of the Cell. By Lewellys F. Barker, M. B.

Gastro-jejunoscopy for Stenosis of Pylorus; Postmortem Six Years Later. By Dr. A. H. Cordier.

Boston Medical and Surgical Journal, February 27, 1902.

Five Maine "Murders." By Dr. Addison S. Thayer.—Persistent inquiry by the author has failed to bring knowledge of a single instance in which the verdict "not guilty by reason of insanity" has been rendered in Maine in a case of homicide. The author records five cases in which it is obvious that such a verdict should have been rendered.

The Significance, Pathological and Clinical, of Abdominal Pain. By Dr. Maurice H. Richardson (*concluded*).—When a patient has been seized with sudden severe abdominal pains: (1) The pain should not be masked by opiates before the surgeon has an opportunity to see the case. (2) The previous history, accompanying symptoms, and physical signs, must be carefully considered. (3) Careful examinations of the thorax and abdomen in all cases of pain should never be omitted. (4) When hæmorrhage is suspected, the abdomen should al-

ways be explored. If the patient is in collapse and the pulse apparently too weak to allow the patient to undergo exploration, preliminary infusion of salt solutions should be made into the veins or under the skin. (5) Excruciating pain and signs of infection indicate immediate exploration. (6) The seat of the initial pain is a good guide to the incision when the surgeon is in doubt. (7) The history and signs, other than pain, must be relied upon for exact or reasonably positive diagnosis. (8) When some of the rarer abdominal lesions are suspected, exploration should nevertheless be made. (9) When there is the least question, the genuineness of the pain should be tested as thoroughly as possible. (10) The pain of an atypical typhoid, of a pleurisy, or of a pneumonia, must be guarded against. (11) The pain of simple functional disturbances must not be confused with that of organic disease. (12) When there is doubt as to the significance of pain and other symptoms, the benefit of the doubt should be given the patient by surgical exploration. (13) When no exploration is regarded as justifiable, pain should be controlled by morphine, by hypnotics, or, if necessary, by general anæsthesia. With very few exceptions, however, chiefly cases of renal and biliary colic, the pain that demands general anæsthesia demands operation.

Some Points of Value in the Diagnosis of Diseases of the Abdominal Organs. By Dr. Henry Jackson.—To distinguish between small pleural effusions and enlargement of the liver, or some inflammatory process between the liver and the diaphragm, subdiaphragmatic abscess, the author determines by percussion the upper line of dulness on the chest wall, and then has the patient take a full inspiration and hold the breath. If the dulness is due to fluid in the pleural sac there will be but little change in the upper area of dulness, whereas, if the mass is beneath the diaphragm, good pulmonary resonance will be found at the point previously dull.

Acute Perforation of a Malignant Ulcer of the Pylorus Resembling a Case of Acute Appendicitis. By Dr. E. A. Codman.

Bronchopneumonia in Epidemic Form. By Dr. William Watson McKibben.

Medical Record, March 1, 1902.

Some Varieties, Complications, and Sequelæ of Small-pox as Noted in the Norfolk Epidemic of 1898-'99. By Dr. Lemuel C. Shepherd.—The author particularly enforces the view that the various varieties he describes are merely modifications of one and the same disease, and that variola in all its forms is an entirely separate and distinct disease from varicella. The fact is also emphasized that malignant attacks may be contracted from those of the lightest form. Two cases are also reported in which the disease occurred the second time in the same individual. Both patients alleged that they had had it in childhood, and showed pittings in evidence. The cases were well-marked, though discrete, the second time.

Follicular Tonsillitis. By Dr. Robert Curtis-Brown.—The author asserts: (1) That follicular amygdalitis is not caused by a single microbe, but that many well-known micro-organisms are capable of causing it. (2) That the symptoms of amygdali-

tis are probably caused by an exaggeration of its function. (3) That, under the stimulus of infection, the lymph corpuscles in the adenoid structure of the tonsil produce an antitoxine that is antagonistic to invading germs. (4) That the characteristic symptom is a textureless and non-adhering exudate. (5) That the presence of the Klebs-Löffler bacillus is not positive evidence that the disease is not a simple follicular amygdalitis. (6) That there seems to be some relation between follicular amygdalitis and the infectious diseases, which is not yet properly understood; that whatever the function of the tonsil, it seems in disease to endeavor by its activity to assist Nature in eliminating infection.

A Case of Presenile or Angeiosclerotic Gangrene Precipitated by Influenza. By Dr. Theodore B. Barringer, Jr.—This case is worthy of note by reason of the rather exceptional involvement of an upper extremity, and the favorable result of a rather conservative operative procedure, combined with the administration of large doses of potassium iodide.

Discoveries in Pathology. By Dr. Mary Dixon Jones.

Report of Five Cases of Ulcer of the Œsophagus, Diagnosed as Pulmonary Tuberculosis. By Dr. Mark I. Knapp.—The author's experience in these cases moves him to assert that ulcer of the Œsophagus is a comparatively frequent disease, and that the physician must be very careful before he pronounces a hæmorrhage, bright red in appearance and issuing from the mouth, as a hæmorrhage coming from the lungs. In every case of such a hæmorrhage the Œsophagus must be very diligently searched by a competent man. That nasopharyngeal hæmorrhages should be likewise kept in mind at such an occasion, goes without saying.

Lancet, February 22, 1902.

The General Pathology of Tumors. By Dr. C. P. White.—(*The third of the Erasmus Wilson lectures.*)—The author in this, the final article, sums up his conclusions as to the pathology of tumor formation as follows: 1. Tumors are to be classified on a histological basis. The best mode of effecting this is to make use of the threefold basis of cells, tissues, and organs. 2. The rudiment from which a tumor springs may consist (1) of the structures normally present at the point of origin; (2) of an embryonic collection of cells, such as is described by Cohnheim; or (3), of tissues of new formation, the result either of an inflammatory condition or of previous tumor formation. 3. Extrinsic factors play a part in tumor causation, but are not the determining factors—that is, the occurrence or non-occurrence of a tumor does not depend on extrinsic factors. In particular, the parasitic theory is shown not to stand a critical investigation. 4. The determining factor in tumor causation is to be found in the intrinsic factors. 5. This determining factor consists in the existence of a condition of unstable equilibrium between the intercellular forces, so that proliferation, once started, is progressive and is not limited by the resistance of the surrounding tissues. 6. The causes of this instability are many and various and may be either intrinsic or extrinsic. 7. Proliferation having started, the cells acquire the habit of growth—

that is, the power of independent proliferation, which enables them to proliferate in parts of the body in which the condition of equilibrium is stable. 8. Tumors grow by proliferation of their own cells. 9. Tumors do not invariably continue to increase without limit. Under certain circumstances they may cease to grow and may diminish in size, or even disappear completely. 10. Tumor formation is not to be regarded as an isolated process, but is to be considered as one of a group of progressive processes with which it is closely allied. Still less must one form of tumor, such as carcinoma, be considered apart from the others.

The immense improvement which has taken place in the treatment of tuberculosis points the way to a similar procedure in malignant disease. If a patient from whom a malignant tumor has been removed, instead of returning to a sedentary and unhealthy mode of life, were to lead an active outdoor existence in a healthy climate with sufficient exercise and good plain food, leading as natural a life as possible, there would be less tendency for the disease to recur, and it is possible that a tumor, already present, might under these circumstances show a slower rate of growth or might even undergo a diminution.

The Hospital Ships of the Metropolitan Asylums Board and the Dissemination of Small-pox. By Dr. J. C. Thresh.—The author endeavors to show that the prevalence of small-pox in a certain locality on the banks of the Thames, is due to the proximity of the small-pox ships of the Metropolitan Asylums Board. The ships were first anchored in that vicinity about 1884; since then, there has been an unusual incidence of small-pox directly opposite the anchorage (Purfleet) and for several miles in a northeasterly direction. This is explained by the fact that the prevailing wind is from the southwest. It is difficult to ascertain to what distance the infection may be carried in the air, but the author thinks that in the direction of the wind it may be carried two, or possibly three, miles. The enormous volume of infected sewage poured into the river from the ships may explain the incidence of the disease in the parishes adjoining the river.

On Cleft Palate. By W. A. Lane, M. B.

Burns from Celluloid. By Dr. A. Ogston.—The author calls attention to the prevalence of burns from the ignition of celluloid combs, collars, etc., and states that it is due to the celluloid being badly manufactured. Restrictions should be placed upon the sale of all such articles which do not sustain, without ignition, a temperature equal to that sustained by well-manufactured celluloid. It is worthy of consideration whether all celluloid articles of personal wear ought not to be compelled to have the word "ignitable" conspicuously imprinted upon them. If the suggestion of the writer to render celluloid incombustible by the addition of some chemical should be practicable, it would be the best solution of the difficulty.

A Case of Hydatid Disease of the Gall-bladder. By L. H. McGarin, F. R. C. S.

Tetanus Following Revaccination of the Leg. By Dr. W. Findlay and Dr. J. W. Findlay.—The authors report the case of a woman, aged twenty-one years, who was revaccinated upon the leg; all

usual precautions were observed, the area scarified being half a square inch. The vaccination "took," constitutional symptoms being absent. Twelve days later she first complained of pain in the back, with stiffness of the neck and jaws. The vaccination wound, which had been protected with a plaster, was found to be covered with a greyish slough. It was poulticed, converted into a healthy wound, and healed in ten days. But the trismus and other tetanic symptoms grew steadily worse for ten days; treatment consisted solely of chloral hydrate, which was vigorously pushed. The patient then improved slowly, but did not completely recover her health for two months.

Although bacteriological proof was absent, the case was undoubtedly one of classical tetanus. The source of infection was in the patient's own skin, being brought there with the dust and dirt swept up from the street by the patient's skirts.

Notes of Fifteen Cases of Operation for Internal Derangement of the Knee-joint. By J. M. Cotterill, F. R. C. S.—So-called dislocation of the semilunar cartilage of the knee usually happens when the knee is partly flexed by a sudden external twist of the tibia on the femur, or, perhaps, more strictly speaking, an internal twist of the femur on the tibia. Miners and others who habitually kneel at their work are prone to "derangement" of the knee. The internal cartilage is much more commonly at fault than the external. Separation of the anterior attachment of the cartilage to the tibia is of common occurrence. The essential point in diagnosis is the inability *fully* to extend the knee. The knee can be flexed by the surgeon fully and painlessly; but any attempt at full extension is accompanied by severe pain. In old cases backward pressure on the fully extended knee will elicit distinct pain across the front of the knee. In order to reduce the dislocation of the cartilage the leg should be flexed, rotated away from the side of the injury, and then brought into full extension. An anæsthetic is usually necessary. The dislocation being reduced, the patient should spend several weeks in bed so as to keep the knee absolutely at rest. When recurrence has once taken place a permanently good result without operation is unlikely.

Rheumatism as a Cause of Epistaxis in Children. By Dr. S. Phillips.—The author has found epistaxis so frequently associated with evidences of rheumatism in some form, that the association appears to be more than a mere coincidence. He reports ten cases in which well-marked nose-bleed was associated with chorea, rheumatic fever, rheumatic amygdalitis, etc. There was no albuminuria and no local nasal disease. Epistaxis is one of the toxic effects of the salicylates, but none of the patients had received them. There is nothing inherently improbable in the supposition that rheumatism may give rise to epistaxis, for many other blood-states are acknowledged to do so, and rheumatism is a known cause of one variety of purpura, in which hæmorrhages occur from cutaneous and mucous surfaces.

British Medical Journal, February 22, 1902.

The Reorganization of the Army Medical Service. By Dr. C. B. Ball.

The Treatment of Chronic Malarial Fever by Subcutaneous Injections of Quinine Bihydrobromate. By Dr. G. B. Ferguson.—The author strongly recommends the use of subcutaneous injections of quinine bihydrobromate in cases of malaria, where quinine given by the mouth has failed. His own cases and those in which he has advised the treatment amount to nearly one hundred, and among these no tetanus or ulceration has occurred. The treatment is of remarkable efficacy and will often cure malarial joints and malarial rheumatism. Three grains of acid quinine hydrobromide are dissolved in twenty minims of pure warm water, and injected under the skin. Six such injections, one being given on each alternate day, are usually required in a serious case. Some cases recover after three injections. The head is but little affected and the stomach not at all. The acid hydrobromide is perfectly stable and makes a solution (one in six) that is only faintly acid. It is not approached in solubility by any salt of quinine except the acid hydrochloride; the latter would be more irritating. It is the fear of tetanus alone which restrains the more extensive use of quinine subcutaneously.

Should Milk be Boiled? By Dr. W. B. Ransom.—The author's conclusions are as follows: There is no solid evidence to show that milk raised to its boiling point ($110^{\circ}\text{C.} = 233^{\circ}\text{F.}$), or to the temperature of boiling water for ten minutes or a quarter of an hour, suffers any diminution of its nutrient qualities. Neither is it probable that, if consumed within twenty-four hours of the heating, it will cause infantile scurvy. The same is true of pasteurized milk heated to 80° or 85°C. None of these methods render the milk absolutely sterile, but they do kill most pathogenic microbes (for example those of tuberculosis, cholera, diphtheria, and typhoid), and if the milk is kept cool and drunk within twelve hours of the heating, few or no spores will have developed into bacilli. Pasteurization is probably less reliable than heating to 212°F. for ten minutes, and is also more difficult to carry out. In times of epidemic summer diarrhoea, the heating should be prolonged for at least half an hour, and the milk drunk within a few hours, or subjected again to the process, as the spores of the *Bacillus sporogenes enteritidis* are very resistant. Infants who live wholly or mainly on milk as at present supplied to us should never be exposed to the dangers lurking in the raw fluid.

Remarks on the Relations of Human and Bovine Tuberculosis. By Dr. C. H. Cattle.—After speaking of the similarity of the human and bovine tubercle bacillus and of the communicability of human tuberculosis to bovines and *vice versa*, the author considers the question of abdominal tuberculosis in children. The possibility of infection by milk cannot be denied, but the assumption that the frequency of tuberculosis in early life is chiefly due to tuberculous milk is in one direction too narrow, and in another erroneous. An exclusive milk theory, while it ignores the greater incidence of tuberculosis on the lungs than on the bowels in young children, fails also to take account of other sources of infection. There can be no doubt that certain infantile diseases—measles, whooping-cough, bronchitis, bronchopneumonia—serve as powerful predisposing causes to tuberculosis mortality. They

leave behind them constitutional weakness, catarrh of the respiratory passages, and often of the intestinal as well. Under these conditions the widely disseminated bacilli of human tuberculosis gain a footing, attaching themselves to the most susceptible organs—in a majority of cases the lungs or their related glands, in other cases to the intestine, ear, or neck glands. Milk may be responsible for some cases, but the fact that thoracic tuberculosis is so common at an early age suggests the conclusion that the human bacillus (in the one case inhaled, in the other swallowed) mixed with the bodily secretions or with food, is the cause of chest trouble in one case and of abdominal trouble in another.

The evidence goes to show that tuberculous milk is not highly infective when diluted with the milk of healthy cows, and that some persons are likely to show a much higher degree of susceptibility than others. Just as we have slowly come round to the idea that tuberculosis in adults arises from case-to-case infection, so in the last few years the belief has become general that the tuberculosis of childhood is mainly caused by infection derived directly or indirectly from a person affected by the disease.

General Hospitals and Pulmonary Consumption. By Dr. A. Robertson.

The Origin of the Modern Treatment of Pulmonary Consumption. By Dr. A. T. T. Wise.

Hydrogen Peroxide in the Treatment of Lupus Vulgaris and Tuberculous Abscess. By C. H. Gunson, M. B.—Hydrogen peroxide is a most efficient germicide, yet practically unirritating and harmless to the delicate tissue cells, if not used in full strength. Its mechanical action is also of value, as by its effervescence when applied to disorganized tissue it aids in removing the *débris* resulting from the destructive action of bacteria or their toxins on the tissue cells. The author has used it in a number of cases of lupus exedens, applying it by means of a fine spray daily to the ulcers, with most encouraging results. The granulations soon assume a healthy appearance, the area of congestion around the ulcer gradually disappears, and the stratum lucidum becomes very active, proliferating over the granulation tissue when it reaches its level. The resulting cicatrix is firm, and has not the usual tendency to break down from any slight irritation. In the healing of chronic or tuberculous abscesses, after evacuating their contents, hydrogen peroxide gives excellent results. The cavities are soon filled with healthy granulations and the process of repair is completed with greater rapidity than under the usual treatment. It is also of much value when sprayed daily on ulcers and purulent wounds.

On the Effects of Forced Feeding in Cases of Pulmonary Tuberculosis and in Normal Individuals. By Dr. N. D. Bardswell, Dr. F. W. Goodbody, and J. E. Chapman, M. R. C. S.—(Reports to the Scientific Grants Committee of the British Medical Association, No. lxvii). The authors conclude as follows: 1. That, since large diets gave worse results than those of moderate amount, the indiscriminate stuffing of all tuberculous patients should be replaced by systematic dieting. The diet with respect to amount and constitution should be determined in each case after due consideration has been given to the respective con-

ditions as regards: (a) The activity and extent of disease; (b) amount below normal weight; (c) digestive capability; and (d), personal dietetic likes and dislikes. 2. That in view of the bad effects which over-feeding gave rise to in the normal individuals, great care should be taken in the selection of a diet for patients who, as the result of treatment, have reached or passed their highest known weights. When this regain of weight is associated with arrested disease, the original diet found suitable for a person very considerably under weight and with active lesions, should be reconstructed more upon the lines of what would be suitable for the same person in active health. There is no doubt that anorexia, dyspeptic symptoms, and vomiting are much more frequently met with when working with large diets than when more moderate amounts of food are given.

Presse médicale, January 25, 1902.

Prochownik's Prophylactic Diet against Dystocia.—M. R. Romnee says that under this régime, which harms neither mother or child, a mother can go to term and deliver herself of a healthy, small infant, which thereafter thrives well. It is especially applicable to uses of contracted pelvis, and to those in which the fœtus has, at previous labors, been too large for easy, unassisted birth. In women over thirty years of age, to be confined for the first time, the diminished size of the fœtus renders their usually difficult labors, safe and easier.

Prochownik's diet consists in allowing the woman during the last three months of her pregnancy, wasted and boiled meats, without sauces, fish, green vegetables, salads, cheese, butter if desired, and a very small quantity of bread. Water, soups, potatoes, the farinaceous foods and beer, are proscribed, and sugar is to be replaced by saccharin.

Lyon médical, February 2, 1902.

New Treatment of Continuous Vomiting of Pregnancy.—M. R. Condamin advises absolute rest of the stomach with complete suppression of all liquid and solid nourishment for from eight to ten days. During this time, three or four quarts of artificial serum are injected daily, preferably into the rectum. If intolerance should appear on the part of the rectum, a few drops of laudanum may be added to the serum, or it may be administered subcutaneously. About the tenth or twelfth day, a few swallows of fluids may be allowed, and the ordinary diet may be gradually resumed. The author reports one typical case, and believes that many cases may be carried to term in this way, in which, otherwise, abortion would result or would have to be induced.

Collective Accidental Lead Poisoning. By M. P. Lacour.

February 9, 1902.

Bottini's Operation.—M. Rafin, in a résumé of his operation cases and of the literature, records fifty per cent. of cures, twenty-six per cent. of ameliorations, and thirteen per cent. in which no result was shown.

Therapeutic Use of Brewer's Yeast.—M. Durand recommends brewer's yeast in the treatment of furuncles, anthrax, and all suppurative dermatoses of internal origin, such as impetigo and follicular

sycosis. In these cases it acts as a powerful internal antiseptic. It acts favorably in cases of infectious gastro-intestinal disorders, such as infantile gastro-enteritis and typhoid fever, by attenuating the virulence of the secretions almost in a topical manner. In local applications, it has powerful healing properties, as in burns, vaginal ulcers, anginas, and cases of cutaneous suppurations. A teaspoonful of the dried powder may be given internally three times daily in water, carbonated water, or cachets.

Treatment of Incipient Cataract by Iodine Solution.—M. Étiévault has followed Baval by using collyria of iodine in a solution of distilled water, of a strength of one to forty, in cases of beginning cataract, or rather, in cases of symptomatic cataract in which arteriosclerosis of the retinal vessels begins to appear. The result in the four cases reported was a continuance or improvement of the vision present at the beginning of the treatment.

Centralblatt für Gynäkologie, February 8, 1902.

Two Cases of Fœtus Papyraceus. By Dr. Theodor von Lichem.

Case of Vagitus Uterinus.—Dr. L. Reidhaar reports such a case occurring while he was obliged to dilate the cervix uteri artificially, to induce labor, on account of a severe complicated typhoid fever. As the uterus contracted, seven distinct cries were heard, which were repeated as the cervix was again seized. The author accounts of the intra-uterine cries of the child by the increased vascosity of the child induced by the feeble circulation of the mother. Air had entered the uterus with the dilating metureur, and several attempts had to be made before the second dilator could be placed within the cervix. Both mother and child survived.

Treatment of Sepsis.—Dr. J. Wernitz reports four cases of cure of acute sepsis by Hegar's irrigation method. One was a case of acute peritonitis from a salpingitis, one of acute sepsis after labor, two of acute sepsis after abortion. The method consists in almost constant irrigation of the rectum with a saline solution (one half to one per cent.). A rectal tube is connected with an irrigator, which is lowered or raised according to the intra-rectal temperature. If the latter rises, the irrigator is lowered, and *vice versa*. About one half of the fluid is absorbed, and to this fact much of the value of the treatment is due, although the constant cleansing of the rectum and the continuous passage of flatus are important aids. This can be kept up for hours at a time with no disagreeable result to the patient. The absorption is made evident by the increased secretion of urine, the disappearance of the thirst and of the dryness of the mucous membranes, and the appearance of sweating, which is not dangerous, as collapse is impossible. Theoretically, all that is desired, therefore, in systemic intoxication, is accomplished without overloading the blood-vessels suddenly as is the case when an intravenous infusion is done. The sweating is distinguished from that of collapse by a continued good and improving pulse, even as the temperature sinks to the normal. The temperature is likely to rise if the irrigation is discontinued, but this is never accompanied by a chill. The subjective sensations of the patient are

improved at once. The author recommends the measure for the treatment of eclampsia, although he has never tried it for the relief of this condition.

Berliner klinische Wochenschrift, January 20, 1902.

Opothotherapy for Fatty Stools in Pancreatic Disease. By Dr. H. Salomon.

Methods of Infection in Syphilis.—Dr. W. Friedländer reports the case of a man who, when his wife was five months pregnant, became infected with syphilis. He did not, however, infect his wife, as he was not at this time living with her. He was immediately placed under treatment, which was continued to the end of his wife's pregnancy. The child was born healthy, but developed syphilis in its third year. Two years later the husband was being treated for a recurrence of his luetic symptoms, and at the same time his wife conceived again. She was not immune to the disease nor did she show any effects of it until a year and a half later, when she appeared with mucous patches, cervical, cubital, and inguinal adenitis. Simultaneously, the second child showed a primary lesion, proving that it was born free from syphilis.

Psoriasis and Glycosuria.—Dr. Walther Pick says that alimentary glycosuria is rare in patients with psoriasis, and that it is certainly not more frequent than in other disorders of the skin. Psoriasis cannot, therefore, be placed in the list of diseases due to katabolic anomalies.

Treatment of Tuberculosis in Sanatoria. By Dr. H. Gebhard.

Simple Method for the Determination of Urea. By Dr. I. Ruhemann.

January 27, 1902.

Detachment of the Retina in Nephritis of Pregnancy. By Dr. Josef Helbron.—(*Continued article.*)

Prognosis of Glaucoma Operations.—Dr. Fritz Mendel says that iridectomy is the principal treatment in glaucoma, although not the only measure. In acute glaucoma treated in Hirschberg's clinic, 82.2 per cent. of the patients recovered, and in chronic inflammatory glaucoma 77.1 per cent. yielded the best results from iridectomy. In cases of simple increased intra-ocular pressure, in the majority of cases vision was retained by the performance of iridectomy, and in some of the cases improvement followed the operation.

Remarkable Attempts at Self-injury.—Dr. Max Edel narrates the case of a woman suffering from paresis, who attempted to strangle herself by means of her own hair. When she was found, she was deeply cyanotic, the eyes protruded, and respiration had ceased. By means of artificial respiration and cardiac massage, she was gradually resuscitated. He tells of another case of a young man suffering from mania who attempted strangulation by tearing his shirt into long pieces, tying it about his neck, twisting it, and, through a loop, inserting his leg, by the pulling of which he expected to strangle himself, but he was discovered in time.

Comparison of Sanatorium and Tuberculin Treatment.—Dr. Weicker says that the perma-

nent results reported, thus far, from sanatoria cannot be regarded as permanent cures, since they exclude the fatal cases. All measures which can aid in the treatment of tuberculosis should therefore be welcomed, and among these he assigns a high place to tuberculin.

Symptomatology and Treatment of Chronic Emphysema. By Dr. F. Riegel.

Centralblatt für Chirurgie, February 8, 1902.

Suprapubic Cystoscopy.—Professor P. Kraske had occasion to pass an ordinary cystoscope into the bladders of two men, one suffering from a suprapubic vesical fistula, the other from a suprapubic opening for the relief of an enormous prostatic hypertrophy. The excellent view of the bladder and its urethral opening, especially of the prostatic portion, thus obtained, has led him and his assistant, Meisel, to devise a trochar-cystoscope for suprapubic cystoscopy. The Bottini operation is much facilitated by this method of cystoscopy as the exact nature of the hypertrophy of the prostate can be made out, and the operation itself can be done under the eye. It is practical, as well, for all necessary intra-uterine inspection.

Münchener medizinische Wochenschrift, February 4, 1902.

The Abolition of Taxis.—Professor Otto Lanz records a number of cases of damage to hernial sacs and their contents by prolonged and incorrect methods of taxis in cases of incarcerated hernia, and protests against its use in the face of the high development of surgical technics and of comparative safety from surgical intervention, at the present day.

Renal Injury or Renal Inflammation Following Subcutaneous Injury to the Kidney? By Professor G. Edlefsen.

Injuries by High Voltage Electric Currents.—Dr. F. Jessen agrees with other writers that the best treatment for high voltage injuries is artificial respiration.

Treatment of Pulmonary Hæmorrhage by Gelatin Injections. By Dr. L. Thieme.

Air Embolus in the Puerperal Uterus; Death. By Dr. F. Sengler.

Pneumatic Cabinet in the Treatment of Chronic Dry Otitis Media. By Dr. Hamm.

Gazzetta degli Ospedali e delle Cliniche, December 29, 1901.

Tenosynovitis with Rice Grains. By Dr. Giovanni Tomaselli.—Two forms of tuberculous synovitis are distinguished, the fungous, and the type characterized by the formation of rice bodies or grains. Until now, the researches of various pathologists have not established the exact histogenesis of these rice bodies, and the author contributes his own investigations on the subject. The tuberculous nature of these rice bodies and the presence therein of the tubercle bacillus have been sufficiently well shown. The origin of the rice bodies has also been found to be a mechanical one by detachment of necrosed fragments of the tendon sheath. A his-

tological study of the rice bodies has convinced the author that the rice-grain form of tenosynovitis is not a separate variety of tuberculous tenosynovitis, but simply a sub-type of the fungous variety. He found that there was a distinct connection between the two types, and that their pathogenesis was the same, and he concludes that the rice bodies are nothing else but fungosities that have become detached and float free in the synovial sheath. The pedicle of the fungosities is broken off by the mechanical action of the tendon moving in its sheath. In this way the fungosities lose all their nutritive support, and the degenerative processes therein go on much more rapidly than before. Coagulation-necrosis advances, and the rice body finally presents nothing but a mass of coagulated amorphous or granular fibrinous tissue. In this way the variations in the structure of the various rice grains found in the same patient can be explained, the grains that have recently fallen off presenting almost the same structure as the fungosities.

The Amount of Glycogen in the Muscles of Cadavers and in Those of Living Subjects. By Dr. C. Curini Galetti.—Lacassagne and Martin, basing their work upon the well-known researches of Bernard, attempted to show that, by estimating quantitatively the amount of glycogen in the liver of dead bodies, one could determine whether death had of glycogen and glucose was a certain sign of violent death without agony, while its absence indicated a slow, lingering death. Various observers since then have worked on the same line of research, but the results have been contradictory. The author, using Butte's method of quantitative estimation for glucose in the muscles and liver, experimented with this method on rabbits that had been killed suddenly, and on other rabbits that had been killed slowly. He found: (1) That glycogen occurred both in muscles and liver in larger quantities in animals that had been killed violently than in those of animals that had suffered a slow death. This also applied, though in a less marked degree, to glucose in the liver and in the muscles. Hence quantitative determinations of glycogen serve better for this purpose than those of glucose. (2) That the difference in the amount of glycogen and of glucose was better apparent on examining the liver than on analyzing the muscle tissue, but if the result was doubtful, the muscular tissue might also be examined in order to distinguish the two varieties of death.

Riforma medica, November 30, 1901.

A Contribution to the Study of Laryngo-tracheal Fistulæ. By Dr. P. L. Pellegrino.—The author reports a case of crico-thyroid fistula in a man who attempted suicide by cutting his throat. The operation consisted of exposing the anterior portion of the thyroid and cricoid cartilages, of freshening the edges of the fistula, of performing tracheotomy and inserting a tube in order to secure proper access of air during the operation, and of suturing a flap of mucous membrane and of conoid ligament, so as to close the fistula. The wound in the skin was then closed, leaving a small opening for drainage. The cannula was removed on the third day and the patient was discharged cured on the fifteenth.

December 2, 3, and 4, 1902.

A New Hypnotic in Mental Diseases: Chloratone. By Dr. Luigi Cappelletti.

Jaundice and the Hepatic Congestion of the Newly Born. By Dr. Angelo Lisanti.—The presence of biliary salts and acids in the blood following attacks of jaundice predisposes the newly born child to so many diseases, that something must be done to overcome this tendency. The materials which accumulate in the intestine in such cases are not removed spontaneously under the stimulus of the maternal colostrum, and it is necessary to intervene with appropriate treatment, in order to prevent the absorption of bile, and to combat the intestinal distention resulting from the stagnation of the contents. Hepatic congestion in infants, though it cannot be considered as a true pathologic entity, because it may disappear completely without leaving any traces, may be the starting point of other hepatic disorders. It is true that these are rare in early infancy, but not so rare as is commonly believed; for, since the attention of clinicians has been called to cases of hepatic disease in infancy, such cases have been appearing more frequently in literature.

Herpes Zoster as a Complication of Traumatic Tetanus. By Dr. C. Mastri.—But one case of this kind has been recorded before. A young woman, aged eighteen years, was attacked with lockjaw, a week after having received a punctured wound in the sole of the foot with a rusty nail. The carbolic-acid treatment recommended by Baccelli was employed. A few days after admission the patient complained of a severe pain along the course of the seventh intercostal nerve on the left side, and some days later she developed the typical grouped, vesicular eruption of zoster along this nerve. The author believes that this dermatosis developed as a sequel of the tetanic infection, and regards its appearance as an unfavorable sign, inasmuch as the eruption was coincident with an exacerbation of the symptoms of tetanus.

December 5, 1901.

A Case of Inflammation of the Gland of Rosenmueller Simulating a Strangulated Crural Hernia. By Dr. August Zaccharia.—In this case the symptoms corresponded to those of a strangulated hernia, but upon investigation it was found that the trouble lay in an inflamed gland in the depths of the crural canal—the gland of Rosenmueller. Such cases are termed by the author, false strangulations. In the majority of cases the history of the case, as well as the examination, will determine whether the case is one of true strangulated hernia or of false strangulation. In either case an operation is necessary, consisting in the exposure of the tumor and in dealing with the same according to its nature.

Roussky Vrach, January 26, 1902.

On the Treatment of Urethral Strictures by Electrolysis. By Dr. B. N. Choltzoff.—None of the existing methods of treatment of urethral stricture, besides electrolysis, give permanent results and a security against recurrence. In all the methods, including the surgical operations, the treatment must be continued for a long time. In spite of the

fact that electrolysis of strictures was described forty years ago, it is used but very little. The author believes that the reason of this unpopularity of the electrolytic treatment is the imperfect state of the instruments now used for this purpose. The author has used this method in fifty-three cases, employing the electrode of Newmann in a slightly modified form. This apparatus consists of an insulated stem, which is passed into the urethra. To the end of this stem olivary bougies of various sizes are screwed. The constant current is passed through the stem into the bougie end. Before applying the electric current, if the strictures are narrow, simple sounds are passed and left in place for twenty-four hours. When the size of the canal has reached at least 10 or 12 French, the author begins the electrical treatment. He considers this method the best of all those introduced into practice, thus far, for the treatment of urethral strictures. A rounded electrode is to be preferred to a linear one. Weak currents should be employed, and gradual dilatation by means of sounds need not be used in addition to electricity. The canal may be considerably dilated by electrolysis during the first *séance*, and this result may be obtained in both gonorrhœal and traumatic strictures of the urethra. No recurrence was noted in the cases in which the treatment was carried to completion.

Courtesy between Patient and Physician. By Dr. B. Th. Bouschouyeff.—The author advocates the introduction of the customary address "you" in conversation between physicians and patients belonging to the peasant or laboring classes. Heretofore it has been the custom in Russia to use the pronoun "thou" in such cases.

A New Reaction for Some Substances Eliminated from the Organism. By Dr. G. N. Gabritchevsky.—A four-per-cent. solution of hydriodic acid diluted with an equal amount of a one-per-cent. solution of starch, was found to give a blue color with a number of products of metabolism, such as peptone, urine, uric acid, alloxanthin, alloxan and also with hydroquinone, guaiacol, morphine, hydroxylamine, and other substances. To the liquid to be tested the author added a small quantity of the reagent in such a manner as to allow the formation of a ring of reagent on the surface. At the point of contact of the two liquids, a blue or violet ring then appeared, indicating the liberation of free iodine. The conduct of this reaction in the urine of various diseases should be further studied, for it was found that it was absent in diabetes, and very marked in anæmia. It is probable that in some pathological conditions the urine contains substances which hinder the liberation of iodine. Of these substances, diacetic acid may be mentioned as the most important one. Further investigations are necessary to establish the significance of this test.

The Relation of the Pulse-curve to Color Sensations. By Dr. M. M. Riesnikoff.—This experimental study is intended to show whether a continuous sensation of a certain color, prolonged for an hour or two by enclosing an animal in a room with colored light, produces any changes in the pulse curve. Experiments conducted by the author showed that neither the frequency nor the amplitude of the pulse-wave was altered by a sojourn in colored light,

and therefore the theory that a connection existed between the centres of color-sensation (in the fusiform and lingual gyri) and the motor centres of the cortex had no foundation. The predicrotic wave was also found to be unaffected by the influence of color-sensation. Certain well-marked variations in the size, shape, and frequency of the waves were, however, observed in the experiments, but they were entirely independent of color-sensation. They depended, on the contrary, upon the state of mind of the subject and upon the relative activity or inactivity of his body. The predicrotic wave is so easily affected by various conditions of the mind that it has no significance in diagnosis, as some writers would have it. It is increased especially in cases of mental confusion; for example, in certain forms of insanity. This shows that the condition of the circulation of the brain is a factor in the production of the variations in the predicrotic wave. Whitwell examined the pulse waves of persons in state of stupor, and found a predicrotic pulse in such cases. He attributed this to contraction of the carotid arteries and of the basilar artery of the brain.

The Prevention of Gonorrhœal Infection. By Dr. L. J. Jacobson.—The author says, basing his statement upon a study of the literature of the question, that a twenty-per-cent. solution of protargol in glycerin, introduced into the urethra as soon as possible after the act of copulation, prevents the occurrence of gonorrhœal infection. A number of appliances have been devised for the convenient employment of this method, but the great disadvantage of all of them lies in the fact that they are intended to be used again after returning the syringe or injection-tube into the bottle of solution in which it is carried. A procedure that involves the use of an instrument that had been in contact with a supposedly infected surface is certainly dirty, if not faulty. The only rational method, according to the author, is one which provides for a single use of the appliance. With this purpose in view he constructed a tube made of thick "thermometric" glass, which was dilated at one end in the form of a bulb, the latter holding about four drops of a twenty-per-cent. solution of protargol in glycerin. The upper end of the tube was provided with a flange over which was fitted a rubber cap. The olivary end of the appliance was also closed with a rubber cap, which was removed just before using. Pressure upon the upper end through the rubber cap drove the fluid into the meatus and the solution thus penetrated into the fossa navicularis. A number of these tubes, charged with solution, may be carried in a case. The size of this tube is such that not more than four drops of the solution can be injected at one time, and so the patient is not tempted to increase the amount of the injection in his zeal. The dilatation at the end of the tube is so constructed that the olivary end cannot be introduced further than is necessary, even by an inexperienced person. The author also recommends for women a method of preventing gonorrhœal infection that may give good results. It consists in the use of gelatin capsules containing the solution of protargol in glycerin, which should be introduced into the vagina after, or better before, coitus, and in the use of antiseptic irrigations in order to remove any gonococci from the external genitals.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows]

X.—How do you treat puerperal convulsions? (Answers due not later than March 10, 1902.)

XI.—How do you treat pneumonia in children? (Answers due not later than April 10, 1902.)

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. George S. Eveleth, of Little Falls, N. Y., whose paper appears below.

PRIZE QUESTION NO. IX.

THE TREATMENT OF GALL-STONE COLIC.

By GEORGE S. EVELETH, M. D.,

LITTLE FALLS, N. Y.

The indications to be met in the treatment of gall-stone colic are two: 1. The speedy relief of the pain during the acuteness of the attack. 2. The Prevention of subsequent attacks.

The first indication is best met by the subcutaneous injection of morphine in sufficient doses. It should be given in quarter-grain doses repeated every half-hour till the pain ceases. A hundredth of a grain of atropine should be given with the first dose of morphine. While we are waiting for the anodyne effect of the morphine, the patient may be relieved of some unnecessary suffering by the inhalation of a little chloroform, by hot external local applications, or by a hot bath. In administering morphine one should bear in mind the possibility of a rapid discharge of the stone and the speedy relief of the pain. A purgative should be administered after the pain of the colic has ceased.

The prevention of subsequent attacks may be considered under three heads: 1. Attention to hygienic and dietetic conditions. 2. Medicinal agents. 3. Surgical intervention.

The patient should wear constantly a light, tightly fitting woolen bandage extending from the lower border of the sternum to the crest of the ilium. Very active exercise, like lifting, sweeping, dancing, and horseback riding, should be avoided if possible. Moderate exercise in the open air should be encouraged to the fullest degree. The diet should be simple and easily digested, fats of all kinds and all dishes fried or cooked in fat should be avoided, also pies, cake, rich pastries, fresh pork, preserved fish or meats, sugar, all forms of hot bread and biscuit, coffee, and malt liquors. Sweet wines and champagne should not be indulged in, and tea only very weak and very sparingly. The patient should take a tablespoonful of the following mixture in water after meals:

R Tincture of nux vomica..... 3 drachms;
Sodium salicylate..... 6 “
Fluid extract of xanthoxylum..... 2 ounces;
Elixir of orange, enough to make.... 6 “
M.

The nux vomica is a good general tonic, increasing the respiratory and circulatory acts and thus favoring increased and complete metabolism. The salicylate of sodium increases the flow of bile and makes it more watery, and the xanthoxylum, by its tonic action on the mucous membrane of the gastrointestinal canal, has a beneficial effect on the catarrhal condition of the bile passages, a condition always associated with gall-stone colic. Xanthoxylum also promotes increased glandular action of the mucous membranes.

Mineral waters taken in large quantities render the bile more alkaline and fluid and cause the number of stones to diminish and the calculi to be passed with less pain. A continued use of the alkaline mineral waters is the best preventive of the formation of stones. They are best taken at the springs if possible. Next to the natural water come the artificial salts; the Carlsbad Sprudel and Vichy are the best. They should be taken in sufficient quantities to keep the bowels open without the aid of other laxatives.

After a long-continued use of the mixture and the alkaline waters, together with careful attention to diet and abundant outdoor exercise, if the attacks still continue with such frequency and violence as to seriously interfere with the patient's enjoyment of life or the performance of its duties, or if the cholæmia is persistent, even without pain, and other causes for its existence can be excluded, or if the attacks are accompanied by chills and fever, showing that the gall-bladder has become infected, the surgeon should be asked to operate.

SODIUM SALICYLATE.

Dr. Francis W. Davis, of Cincinnati, says:

The treatment of gall-stone colic may be considered under two headings, medical and surgical. The medical treatment is prophylactic and symptomatic. While not a great deal can be expected in the way of preventive treatment, we are not justified in neglecting it. Among the drugs which are classed as cholagogues, there seems to be some ground for believing that salicylate of sodium aids in liquefying the bile. The writer believes he has seen benefit from its use in some cases. He administers the drug in doses of about ten grains three times daily for about ten days, and preferably about two hours after meals. This treatment may be repeated every three or four weeks. When the constipation is marked, rather large rectal injections of cold water also aid in producing a free flow of bile. Of course, the patient must take them while in the recumbent position.

During an attack of the colic, if the pain is bearable by the patient, a poultice as hot as can be borne should be placed over the liver, and the heat maintained by frequent changing. In some cases the heat and moisture will ease the pain and keep the patient fairly comfortable until the attack terminates. If the above-mentioned measures fail to relieve the pain, the writer knows of nothing so effective as morphine given in relatively large doses by the hypodermic method. One fourth or one third of a grain may be injected, and repeated in an hour or two if necessary. If the attacks are frequent, or if from the constant pain and tenderness we are sure of an impacted stone or an infection of the gall-bladder or duct (which, by the way, causes colic as well as gall-stones), we should advise the patient to undergo an operation for the removal of the offending material.

DIOSCOREA, PODOPHYLLUM, AND LOBELIA.

Dr. William L. Hecce, of Brooklyn, writes:

In the treatment of biliary colic we must be positive of our diagnosis, whether we are dealing with an inflammation of septic origin or non-septic inflammation. The former is purely surgical, the latter medical.

We must further ascertain, if possible, where the obstruction has taken place, whether in the cystic duct, which generally occurs at the valve of Heister, or in the common duct, or at the "diverticulum of Vater." Our treatment therefore must vary according to the location of the obstruction, the severity of the symptoms, and the duration of the attack.

Of the many drugs recommended for the treatment of biliary colic, few are of much service in expelling the stone.

Biliary colic of a mild form can always be relieved by giving five-minim doses of a reliable fluid extract of *Dioscorea villosa* every half-hour, in hot water.

The intermittent sharp, stabbing-like pains of short duration, denoting the progressive onward passage of small stones, can most positively be overcome by the following:

R Ext. podophylli fl. M xxiv;
Ext. dioscoreæ vil. fl. f5 iii;
Tinct. lobeliæ. f5 ii;
Aquæ chloroformi, ad. f5 iv.
M. Signa: A teaspoonful every half-hour.

Severe forms of colic demand morphine, and our foremost thought must be to relieve pain. Morphine sulphate, $\frac{1}{2}$ a grain, and atropine sulphate, $\frac{1}{100}$ of a grain, hypodermically, relieve the pain and relax the duct, allowing the stone to pass onward.

Chloroform inhalations and chloroform oil (a mixture of chloroform and olive oil in equal parts), applied externally in conjunction with a hypodermic of morphine and atropine, act most charmingly in cases where the stone is of large size.

Olive oil, so highly extolled, is not a specific, as some authors would have us believe, and it is certainly a nauseating medicine to most persons suffering the tortures of colic, with its reflex nausea and vomiting. Its action may be relied upon only when the obstruction is at the diverticulum of Vater. If it is combined with aromatics, it is more likely to be retained. The following has been successful in my hands:

R Oil of cinnamon. 5 minims;
Methyl salicylate. 6 "
Menthol. $\frac{1}{2}$ grain;
Saccharin. I "
Essence of anise. 15 minims.
Olive oil, O i.

M. Signa: At one dose.

When the obstruction lies in the cystic duct or at the valve of Heister, the internal administration of podophyllin in quarter-grain doses, until one grain has been taken, also an injection of morphine and atropine, often dislodge the stone, but if success is not obtained, the continued inhalation of chloroform will complete the expulsion.

How the podophyllin accomplishes the result I do not know; perhaps by increasing the contractions of the gall-bladder and stimulating the flow of bile.

When the obstruction occurs in the common duct, morphine and atropine to relieve the pain, podophyllin given as above stated to favor expulsion, and fluid extract of lobelia every half-hour in one- or three-minim doses until nausea is produced will often dislodge the stone when inhalations of chloroform fail.

In two cases of severe colic due to obstruction in the common duct, when all the indicated medication had failed, lobelia, given internally until vomiting was produced, expelled the stones. Never have I witnessed dangerous after-effects from lobelia given in biliary colic, but always a thoroughly relaxed condition.

Flexing the right thigh upon the region of the gall-bladder, with massage in the direction of the ducts, greatly aids the expulsion of stones. Hot compresses of diluted vinegar are also of service. A hot bath, as hot as can be borne, is of great service in some cases and is well worth the trial. The alternating application of large quantities of hot and cold water to the region of the gall-bladder acts most charmingly.

SODIUM PHOSPHATE.

Dr. George L. Alexander, of Forsyth, Ga., says:

We have in this disease different grades of suffering, from slight pain and nausea to pain that is severe and agonizing. It is the duty of every physician to relieve pain as quickly and as safely as possible. For this agonizing suffering there is no agent we have at our command that will act so certainly as morphine. It is my custom to administer hypodermically a quarter of a grain of morphine sulphate, combined with $\frac{1}{150}$ of a grain of atropine sulphate, every half-hour until the pain is relieved. Should the pain be unbearable, administer a few whiffs of chloroform, at the same time using hot fomentations over the region of the liver, until the morphine has time to take effect.

Now, after the patient is relieved and falls asleep, I wait six or eight hours, then order the following prescription:

℞ Calomel. gr. 10;
Podophyllin. gr. $\frac{1}{2}$;
Sodium bicarbonate. gr. 10.

M. Fnt. caps. No. iv.

Sig.: One every two hours.

After all the capsules are taken, I follow with a full dose of a saline cathartic.

After the patient has had the full effect of the foregoing prescription, I have him take phosphate of sodium, a drachm in a cup of hot water, night and morning, for ten days. This is given with the hope of its dissolving and eliminating the calculi.

Should attacks recur and require ascending doses of morphine, as they frequently do, and we observe no benefit from the phosphate of sodium as a solvent, all other things being favorable, I advise an operation for the removal of the calculi.

LOBELIA AND PODOPHYLLIN.

Dr. Samuel A. Hardy, of New York, says:

On being called to a case of gall-stone colic, I

order applied over the gall-duct and gall-bladder cloths wrung out of as hot water as the patient can bear. This gives slight temporary relief and satisfies the patient that something is being done to alleviate the pain. I then prescribe the following:

℞ Fluid extract of lobelia inflata. . . 3 drachms;
Syrup of prunus virginiana. . . . 1 ounce;
Water, to. 3 ounces.

M. Sig.: A teaspoonful every five or ten minutes until nausea or vomiting is produced, and then as often as is necessary to keep up the nausea.

This treatment gives prompt relief by producing complete relaxation of the gall-duct, thereby facilitating the passage of the gall-stones. If the colic should return, the medicine should be given again in repeated doses every five or ten minutes until it is relieved.

When the colic has ceased, the medicine should be continued, but at greater intervals, for several days until the gall-stones have probably passed from the gall-duct and gall-bladder.

The bowels should be kept free by giving a tenth of a grain of podophyllin four times a day.

This treatment has been used for several years with uniform success, and is all that is needed in these cases, except in rare instances where the gall-stone is too large to pass through the gall-duct, when chloroform or morphine should be given to control the pain until an operation can be performed.

As persons who have suffered from gall-stone colic are liable to have a recurrence of the disease, the prophylactic treatment is very important and should be as follows:

The patient's diet should consist of plain nutritious food, such as lean meat, skimmed milk, eggs, fruit, and green vegetables. He should abstain from all fatty foods, starches, sugars, pastries, and alcoholic liquors. He should take at least two or three hours' exercise in the open air every day.

The New York Academy of Medicine.—The Section in Otology will meet at the academy on Thursday, March 15th, at 8.15 p. m. Dr. Arthur B. Duel will present a case of plastic operation for atresia of the external auditory canal. A paper will be presented by Dr. Charles John Blake, of Boston, on the Tension Anomalies in the Sound Transmitting Apparatus of the Middle Ear. Various specimens and instruments will also be shown during the evening. The Section in Pædiatrics will convene on March 13th, at 8.15 p. m. Dr. T. Halsted Myers will present Some Notes on Acute Joint Diseases of Infancy, and Dr. Henry Ling Taylor will read a paper on Chronic Joint Diseases of Children.

New Inventions.

AN ANTISEPTIC THERMOMETER CASE.

The accompanying cut shows an ingenious device that has lately been put upon the market by the Norwich Pharmacal Company. It consists of a



test-tube intended to hold an antiseptic solution into which the thermometer is to be plunged, and kept there when not in use. A centrally perforated soft-rubber diaphragm fixed near the mouth of the tube holds the thermometer securely in place and prevents spilling of the solution. The whole is intended to be attached to the nurse's clothing.

Miscellany.

Diseases of Stenson's Duct, and the Treatment.

—At the last annual meeting of the American Laryngological, Rhinological, and Otological Society Dr. Carl E. Munger, of Waterbury, Conn., read a paper on this subject. Acute and primary inflammation of this duct, he said, might follow exposure to cold and retention of secretion. Stenosis might result from ulceration or impaction of calculi and other foreign bodies. Fistulæ might form and open either externally or internally. Simple chemical tests would show whether or not the fluid was really saliva. Injuries to the duct, whether the result of operation or of other traumatism, should be attended to at once to prevent the formation of fistula. A stricture could only be overcome with difficulty by dilatation. If it was near the buccal orifice, dilatation with forceps would probably be satisfactory, but if the obstruction was near the gland an operation would be demanded. Where the parotid gland was the seat of an abscess or contained broken-down tissue, an incision was imperative, but it must be remembered that, as this resulted in a parotid fistula, the operation was only the beginning of treatment.

Toxic Rhinitis.—At the same meeting Dr. Charles P. Grayson, of Philadelphia, read a paper on this subject. He expressed the belief that nine tenths of the cases of rhinitis were the result, not of exposure to cold, as was often stated, but rather to a toxæmia—in other words, that rarely, if ever, could it be said that a person whose metabolic processes were normal could “take cold.” He was in-

clined to believe that “wet” dinners rather than wet feet were responsible for many cases of acute rhinitis. The people who were the greatest sufferers from periodical rhinitis were those who were indulgent at the table or who would not take that amount of exercise which might make amends for errors at the table. The local treatment of such attacks must be but palliative, and was of small moment. For these reasons he strongly condemned the now very prevalent custom of prescribing “rhinitis” tablets composed of opium, belladonna, and aconite. It was far better to prescribe horseback or other exercises, followed by a cool bath and a rub-down, than the usual coddling treatment for colds.

Immunization in Hay-fever.—At the same meeting Dr. H. Holbrook Curtis, of New York, read a paper thus entitled, which was a supplementary report on what he had presented on this subject before the last meeting of the American Medical Association. He had begun his experiments in this field by administering hypodermically a sterilized infusion of roses. After two weeks of this treatment, a lady had been able to stand the effect of the odor of roses. He had then treated this neurotic individual by similar preparations of violets and lilies, and with equally good results. He had next noted that other flowers than these could be included in a bouquet without causing the distress formerly experienced. He had then determined to apply this therapeutic principle to hay fever, and as a result there had been placed on the market a preparation of the fluid extract of ragweed with aromatics. With each bottle a printed blank had been sent out with a request for the cooperation of those using the remedy in systematically studying it. At the end of four weeks after sending it out, reports had been received of eighteen complete recoveries, of four cases showing considerable improvement, and of twelve cases in which the result had been negative. About 3,000 bottles had been sent out. Many letters were read to show what had been the results, both favorable and otherwise. After studying these reports, and considering his own experience with about 100 cases, he had come to the conclusion that in cases of hay fever due entirely to the ragweed immunization could be secured in about 60 per cent., but that in cases of mixed infection, with a preponderance of asthmatic symptoms, a nasal spray of suprarenal extract should be employed.

Dr. H. L. Wagner said that of late the studies of immunization had become most interesting. Having heard of Dr. Curtis's experiments, he had undertaken the analysis of various extracts of flowers with the object of ascertaining what effect they might have on the serum of the blood. It seemed that the so-called glucosides of the vegetable kingdom formed certain chemical combinations with the albuminoid products of the blood. He did not refer to the serum albumin or the serum globulin. He fully agreed with Dr. Grayson that cases of toxic rhinitis often resulted from the formation of certain acid products of fermentation. Just as some individuals were peculiarly sensitive to such toxins in the blood, and exhibited this idiosyncrasy by the development of rhinitis, some persons might be peculiarly sensitive to the glucosides of flowers. He intended to continue his study of this subject,

and hoped to report upon it in a year or two. He had had patients seized with symptoms of hay-fever after riding behind a horse, whether or not the animal had been well groomed. The peculiar smell of the horse was due to hippuric acid, and hence it had occurred to him to try injections of horse urine. Instead of this, however, he had decided for various reasons to employ pure hippuric acid. He had used a solution of hippuric acid of the strength of from 3 to 3.5 per cent. One or two cubic centimetres were injected every third or fourth day. One of the individuals thus experimented on, after eight or ten weeks of the treatment, was able to drive without having the symptoms formerly observed. The speaker said it had occurred to him that this result might possibly have been dependent upon suggestion, yet it was not inconceivable that the glucosides of flowers might combine with the side chains of substances in the blood. He thought the subject was worthy of thoughtful and extended study.

Dr. E. L. Vansant, of Philadelphia, said that this subject of immunization was certainly most fascinating. The use of cow-pox against small-pox and that of antitoxine against diphtheria were notable examples of achievements in this field. Hay-fever was certainly more or less of a neurosis, and he was inclined to think that the idea of being made immune to a disease from which one had been suffering from year to year would have a profound effect on the nervous system, and this would account for some of the beneficial results reported. The nearest approach to the action of a remedy similar to that recommended by Dr. Curtis would be that of quinine in malarial fever. That had a certain power to make one immune to malarial infection, but there the infection was a specific one, and the action of quinine appeared to be a specific one upon the malarial plasmodium in the blood. He was of the opinion that numerous examinations of the blood in cases of hay-fever might bring out valuable information.

Dr. Pierce Brown said that Dr. Curtis deserved the thanks of the members for having so persistently followed out one line of investigation, but apparently he had taken no cognizance of the effect of hay. Dr. Brown said that he had known men to have attacks of hay-fever after having been engaged in throwing pure timothy hay. Mention was made of a man who had sneezed more than a hundred times simply because he had thrown out one load of hay.

Dr. F. H. Koyle, of Hornellsville, N. Y., said that he had had one case of a woman who had never suffered from symptoms of hay-fever except when riding behind a horse.

Dr. L. F. Page said that the reported results from treatment with the tincture of ragweed were certainly encouraging. He had several patients who had been unpleasantly affected by driving behind a horse, and he had come to the conclusion that this was due to the hair of the animal having become saturated with the pollen of various plants, rather than to any peculiar emanation from the animal. For several years he had secured good results in the treatment of hay-fever by restoring proper drainage and as nearly as possible normal conditions of the mucous membrane, together with proper at-

tention to the eliminating action of the skin and bowels. Various abnormalities of the nose, by causing pressure irritation in persons predisposed to hay-fever, were often responsible for the occurrence of this disorder. He knew of several persons who had been entirely relieved years after all the abnormalities of the nasal cavities had been removed; the disturbed nerve centres had had time to regain normal resistance.

Dr. N. L. Wilson said that from the letters read by Dr. Curtis he had been persuaded to give the remedy another trial. He had used it in eight cases last year, and the only results noted had been the production of nausea and an increase of discomfort. He had been disposed to discard this treatment, not only because of these clinical results, but because one of his patients always had an attack after driving behind a horse, and another patient had hay-fever after riding a bicycle on a dusty road.

Dr. C. F. McGahan said that his summer practice for many years had been in the home of hay-fever victims. Formerly those who came there were immune to the disease; in later years they had had light attacks, usually after the prevailing wind had been from the northwest. Several years ago, when he was assistant to Dr. Geddings, five thousand letters had been sent out to the laity with the idea of securing information about hay-fever, but the result was of but little value. In his locality these hay-fever patients did not drive except after a rain, for they always had symptoms of hay-fever. He also knew of a gentleman who had a stable about as clean as one's kitchen, and whose horses were beautifully groomed, and yet he also had hay-fever after driving in the hay-fever season. It used to be said that the ragweed did not grow in the mountains, and hence persons were exempt from hay-fever there, but this was not true, because the ragweed had been found in these regions. Even the planting of corn had been deprecated by some hay-fever sufferers, lest it might ruin this region as a haven for sufferers from this disease.

Dr. J. A. Stucky, of Lexington, Ky., said that he had tried Dr. Curtis's preparation, and had forwarded to him the results. In three cases the patients thought they were benefited, but they remarked that the ragweed was less virulent last season. In eight cases he had been unable to see any appreciable result.

Dr. T. J. Harris said that only that very day he had been talking with a patient who always had a rose cold on May 20th, which disappeared on July 3d. He had given this woman no treatment directed to the nose, but had endeavored to correct the high acidity of the urine and improve the condition of her stomach. Under such treatment at one time she had gone the whole year without any rose cold. The latter was now five days overdue, so that it was possible that the treatment mentioned would again secure for her immunity this year.

Dr. E. E. Holt said that a classmate of his had been unable to ride behind a horse at any time in the year, although he had tried various methods of grooming and cleaning the horse.

Dr. Curtis said that in a previous communication he had cited a case in which a man had been unable to live in London since he had been twelve years of age. He could not pass a horse in the street with-

out having a dreadful coryza. Many specialists in London had experimented with him. It had been found that he could ride behind a horse that had been vaselined, and would not have any symptoms until after about an hour. Persons who were sensitive to the emanations from the horse had the symptoms when riding in a sleigh, thus eliminating the question of dust. Some persons were sensitive to emanations from elephants, cats, and mice. A rose cold occurred even when there were no roses about, and was the result of an erectile tumefaction. In the later stages a true oedema supervened. He believed the most important thing in the treatment of hay-fever was the elimination of uric acid, and this was proved by the effect of low diet. He knew several opera singers whose vocal cords were so sensitive to the emanations that if exposed to such emanations in a room they would be unable to sing.

The Bath Treatment of Tuberculous Bone.—

Dr. H. Alapz (*Balneogische Centralzeitung*, July 22, 1901; *Treatment*, November, 1901) refers to the operations on diseased bones and joints, which have been undertaken with the view of removing tuberculous accumulations, and which at a later date may possibly become a source of danger of general infection. He points out that in many such cases post-mortem examination has disproved the presence of tuberculous foci in the form of caseous bronchial and mesenteric glands, which could have given origin to the tuberculous bone disease. Further, he remarks that operative intervention may bring about that very dissemination of the tubercle bacillus which it was the intention of the operator to avoid. In these points the whole question of the treatment of tuberculous bones and joints is in urgent need of revision. The author points out that the successful treatment of tuberculous bone and joint lesions depends less upon operative intervention than upon fixation of the diseased members, the application of anti-tuberculous remedies, and the fullest possible use of proper hygienic means. Among the latter the author places the use of the bath. Dr. Alapz gives his own experience of cases in which the use of a warm bath, of one hour's duration daily, caused the most striking improvement in a case of tuberculous bone disease in which all other modes of treatment had proved abortive. He has arrived at the conviction that the influence of warm baths upon the progress of tuberculous bone lesions, after operation, is most favorable, and whatever the explanation may be of the fact, there can be no doubt that the treatment recommended, which is simple and easily applied, is the only one that gives similar results.

To Aid the Blind to Write.—Javal (*Ophthalmic Record*, August, 1901; *Quarterly Medical Journal for Yorkshire*, etc., November, 1901), who became blind not long ago, has invented a simple apparatus which enables blind persons to write with pen or pencil on ordinary paper without any danger of writing one line on top of another. Javal submitted his invention to the Paris Academy of Medicine at a recent meeting. The contrivance consists, in the main, of a light board, upon which the arm of the blind writer rests. At one end of the board there is a metallic pocket in which the elbow of the

writer is placed. The board rests on a pivot near the elbow and is turned from left to right in writing, while the paper remains in the same position. The lines of writing are slightly curved, forming sections of a circle, the radius of which is equal to the distance between the pivot and the pen of the writer. When the writer has reached the end of the line he presses upon a spring, which causes the paper to move up a distance equal to the distance between two lines. Knowing that the point of a pencil soon wears off, and the lines written with it become indistinct and sometimes illegible, Javal advocated the use of American fountain pens. Sometimes the ink reservoir of those pens becomes exhausted, or the pen refuses for some other reason to function properly. In such cases it would be possible that a blind person using such a pen might go through the movements of writing without leaving any record of the writing upon the paper. To avoid that, Javal suggested that after every line the writer should draw a line with his pen across a narrow strip of paper; if the pen is dry the line will have no effect upon the paper; if the ink, however, makes a mark upon the paper the latter will easily tear where it has become softened by the ink.

The Neglect of Clinical Medicine.—Dr. F. R.

Burnham (*Southern California Practitioner*, January) in some very interesting and suggestive Observations in Johns Hopkins, calls attention to the fact that surgery is the fad of the day; everybody from the new graduate without experience but tremendous ambitions and unbounded confidence, to the accomplished surgeon would carve his way to glory and renown by means of the scalpel. In no place has he been so impressed with this fact as at Johns Hopkins Hospital where, to a far greater extent than any other place he has visited, the grandest opportunities in all lines of medical thought and research are within the reach of the student, and yet, he says, nine out of ten of the post-graduates neglect everything else for surgery. "From early in the morning until late at night both Dr. Kelly's and Dr. Halsted's operating rooms were crowded to the utmost limit of observation, and then only a few of the fortunate ones were able to see the details of the operation.

"These men seemed utterly oblivious of the fact that, at the same time, Dr. Osler, one of the most accomplished teachers of clinical medicine in the world, was going through the hospital wards giving the most helpful practical clinical lectures that it was ever my good fortune to listen to. Dr. Osler's lectures at the bedside were perfect diagnostic gems, concise, full of well-ordered thought from a large and long experience. Nineteen out of twenty of the doctors doing post-graduate work need diagnostic skill far more than a better technique in surgery. Instruction in diagnosis is not gained, at least to only a very limited degree, in witnessing surgical operations in the presence of a crowd. We cannot all be great surgeons, neither is there need that we should be, but we ought all to be able to summon to our aid, in every case, all of the helps that modern scientific medicine has so bountifully put within our reach. The crying need of the profession to-day is not surgeons, but great diagnosticians."

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Special Articles.

THE MEDICAL HISTORY OF DR. SAMUEL JOHNSON.

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No man's life, physical, mental, and moral, has ever been so fully and truthfully revealed to us as the life of Samuel Johnson. We can figure to ourselves his appearance, manner of speech, gestures, and behavior as accurately as if we had seen him with our own eyes; indeed, even more accurately, because more comprehensively. Throughout many years of his life he was attended, at every moment possible, by a man, with ever ready notebook and pencil, who jotted down particulars so minute as to cause even himself to apologize for recording them. This man Boswell would constitute a most interesting psychological study. Probably no man ever swallowed so many insults and continued to worship at the shrine of the man who insulted him. He tells how it pleased Johnson to humiliate him in company, how the great lexicographer would tell him he was a coward or that he talked foolishly, or cut him off short in conversation with the remark "let us have no more of this." He must have possessed the most truly sycophantic disposition, and though Carlyle dignified it by the term "hero-worship," it is not a pleasing trait. His relations were ashamed of it. The petty measures with which in his book he revenges himself on the other persons whom Johnson numbered as his friends are remarkable. He loses no opportunity to vent his spleen on Sir John Hawkins, Oliver Goldsmith, and Mrs. Piozzi. Macaulay says: "To a man of Johnson's strong understanding and irritable temper, the silly egotism and adulation of Boswell must have been as teasing as the constant buzz of a fly."

My purpose, however, is to study what we may call the pathology of Dr. Johnson. It presents points of interest from the medical and the literary points of view and is of interest also to the student of the history of medicine from the fact that he was attended by some of the best-known medical men of his day.

Samuel Johnson was the son of Michael Johnson, a bookseller of Lichfield, and some of his peculiarities are easily traceable to inheritance from his father. Boswell says: "Mr. Michael Johnson was a man of large and robust body, and of a strong, active mind; yet, as in the most solid rocks veins of unsound substance are often discovered, there was in him a mixture of that disease the nature of which eludes the most minute inquiry, though the efforts are well known to be a weariness of life, an unconcern about those things which agitate the greater part of mankind, and a general sensation of gloomy wretchedness. From him, then, his son inherited, with some other qualities, 'a vile melancholy,' which in his too strong expression of any disturbance of the mind 'made him mad all his life, at least not sober.'"

Michael Johnson was a man of considerable learning, but seems to have been a poor business man, as he died in poverty, although he had had a large business and was at one time a magistrate in his native city.

From his earliest infancy Samuel Johnson was burdened with the most disheartening physical infirmities. He is said to have had scrofula, which so disfigured his face as to make what was originally a handsome countenance a very ugly one. To this disease was also attributed his very defective vision, he being totally blind in one eye and not able to see very well with the other. Ultimately in adult life his eyesight improved very greatly and among his manuscript prayers there was found one inscribed "*When my EYE was restored to its use.*"

Probably the disfigurement of his countenance was the result of suppurating glands, but from what eye trouble he suffered can only be conjectural. He always, while reading, held his book close to his eyes, yet his vision at a distance seems, at any rate in his later years, to have been very acute. Boswell attributes this acuity to the power of his attention and his perceptive quickness. Dr. Swinfen, who attended the child, thought he contracted the disease from a wet-nurse with whom he was left for the first ten weeks of his life. The doctor cut an issue in his left arm in an effort to remedy his eyesight. No medical or surgical measures proving of avail, his mother, acting on the advice of Sir John Floyer, a well-known physician then living in Lichfield, took the child to London, where he was touched by

Queen Anne. He ever after retained "a confused, but somehow a sort of solemn recollection of a lady in diamonds, and a long black hood." Unfortunately, as in many other cases, the royal touch was of no medicinal value. His vision remained so bad that he was cut off from the usual plays of childhood. It is said his only amusement was in winter, when he would get some barefoot boy to pull him over the ice "by a garter fixed around him."

Johnson's appearance was never prepossessing. In 1734, when twenty-five years old, he married a widow, Mrs. Porter, who was twice his age. Miss Porter, this lady's daughter, told Boswell, "that when he was first introduced to her mother, his appearance was very forbidding; he was then lean and lank, so that his immense structure of bones was hideously striking to the eye, and the scars of the scrofula were deeply visible. He also wore his hair, which was straight and stiff, separated behind; and he often had seemingly, convulsive starts and odd gesticulations, which tended to excite at once surprise and ridicule."

These convulsive movements were most noticeable and remained with him throughout life. Pope refers to them in a letter, and Boswell says they were of the same nature as those seen in St. Vitus's dance, and quotes Sydenham's description of that malady in support of his view. He gives, however, a copy of a paper written by Sir Joshua Reynolds, who was of a different opinion. Sir Joshua wrote: "These motions or tricks of Dr. Johnson are improperly called convulsions. He could sit motionless when he was told so to do, as well as any other man. My opinion is, that it proceeded from a habit which he had indulged himself in, of accompanying his thoughts with certain untoward actions, and those actions always appeared to me as if they were meant to reprobate some part of his past conduct. Whenever he was not engaged in conversation, such thoughts were sure to rush into his mind; and, for this reason, any company, any employment whatever, he preferred to being left alone. The great business of his life, he said, was to escape from himself; this disposition he considered as the disease of his mind, which nothing cured but company. One instance of his absence of mind and particularly, as it is characteristic of the man, may be worth relating. When he and I took a journey together into the West, we visited the late Mr. Banks, of Dorsetshire; the conversation turning upon pictures, which Johnson could not well see, he retired to a corner of the room, stretching out his right leg as far as he could reach before him, then bringing up his left leg, and stretching his right still farther on. The old gentleman, observing him, went up to him and in a very courteous manner assured him, though it was not a new house, the flooring was perfectly safe.

The doctor started from his reveries, like a person waked out of his sleep, but spoke not a word." Sir Joshua's word is worthy of great respect in this matter, as he painted Johnson's portrait, and, of course, his eyes were well-skilled in the study of features and actions. Johnson himself said of him: "I know no man who has passed through life with more observation than Reynolds." It is probable that these convulsive movements of Johnson's were what we should now call a "habit chorea," and that he really did have more or less control of them. Johnson himself attributes them to habit, for when Miss Hunter, a very young girl, asked why he made such strange gestures, he replied "From bad habit," and added, "Do you, my dear, take care to guard against bad habits."

Boswell tells a good story in this connection of the first encounter between Hogarth and Johnson, which occurred at the home of Richardson. Hogarth was defending the policy of George the Second toward those who had been concerned in the Rebellion of 1745. "While he was talking he perceived a person standing at a window in the room, shaking his head, and rolling himself about in a strange, ridiculous manner. He concluded that he was an idiot, whom his relations had put under the care of Mr. Richardson, as a very good man. To his great surprise, however, this figure stalked forward to where he and Mr. Richardson were sitting, and all at once took up the argument, and burst out into an invective against George the Second, as one, who, upon all occasions, was unrelenting and barbarous; mentioning many instances," etc.

He seems to have been a precocious infant, for at the age of three he insisted upon being taken to hear the preaching of Dr. Sacheverel, the famous Tory preacher. His mother in after years recalled instances of his wonderful memory when a mere child.

Boswell quotes Johnson's words, from his *Life of Sydenham*, as bearing upon the moralist's own life: "That the strength of his understanding, the accuracy of his discernment, and the ardor of his curiosity, might have been remarked from his infancy, by a diligent observer, there is no reason to doubt; for there is no instance of any man, whose history has been minutely related, that did not in every part of life discover the same proportion of intellectual vigor."

In the year 1729, when Johnson was twenty years old, he first manifested the morbid tendencies which were to prove so great an affliction to him in after years. He had always had a rather melancholy disposition, but at this time he became seriously alarmed at the morbid thoughts which beset him. He tried to escape them by taking long, hard walks, but without avail. He finally was so much distressed about his condition that he wrote a state-

ment of his case in Latin and applied with it to Dr. Swinfen, a well-known physician of Lichfield, and one of his godfathers, for relief. The doctor, unfortunately, was so struck by the acuteness and elegance of this composition that he showed it to several persons and thereby incurred, very justly, the lasting enmity of Johnson.

That Johnson possessed a wonderfully vigorous and acute intellect no one can deny, but that his views of men and things were terribly warped and prejudiced is equally plain. He himself frequently expressed a fear that his intellect was at times clouded and that his mind was in danger of becoming unhinged. This fear of insanity was almost as great as his dread of death, and that was a constant terror to him.

Boswell says: "To Johnson, whose supreme enjoyment was the exercise of his reason, the disturbance or obscuration of that faculty was the evil most to be dreaded. Insanity, therefore, was the object of his most gloomy apprehension; and he fancied himself seized by it, or approaching to it, at the very time when he was giving proofs of a more than ordinary soundness and vigor of judgment."

Though really a man of great self-control, he frequently behaved in a manner which went far to prove the contrary. Boswell offers the following explanation:

"Everything about his character and manners was forcible and violent; there never was any moderation; many a year did he fast, many a year did he refrain from wine; but when he did eat, it was voraciously; when he did drink wine, it was copiously. He could practise abstinence, but not temperance." We know that for some years he abstained altogether from alcohol in any form.

His peculiarities were sadly patent to all. His trick of touching with his stick every post as he walked along the streets is a familiar tale. He continually talked or ejaculated to himself; thus, at Thrale's he would be overheard mumbling and talking, and that wretched little eavesdropper Boswell would listen and report that sometimes he repeated lines from Horace and at other times fragments of prayer.

Yet no man moved in better society than Johnson. He had many humble friends, but he likewise was on intimate terms with many noblemen of the highest rank, as well as numbering among his closest companions one of the most brilliant groups of intellects ever gathered together.

Boswell tells us that whenever Johnson had occasion to communicate with the famous Dr. Lawrence, who attended him, he was accustomed to use the Latin language, and he gives us the following sample of one of these letters:

"T. LAWRENCIO, MEDICO, S.

"MAHIS CALENDIS, 1782.

"Novum frigus, nova tussis, nova spirandi difficultas, novam sanguinis missionem suadent, quam tamen te inconsulto nolim fieri. Ad te venire vix possum, nec est cur ad me venias. Licere vel non licere uno verbo dicendum est: cætera mici et Holdero (the apothecary, Mr. Holder) reliqueris. Si per te licet, imperatur nuncio Holderum ad me deducere. Postquam tu discesseris, quo me vertam?"

On June 17, 1783, when seventy-four years old, Johnson suffered an apoplectic stroke, which deprived him temporarily of the power of speech, although he was able to write several letters on the same day, telling his friends of his condition. One of these, to the Reverend Dr. John Taylor, is most pathetic.

"June 17, 1783.

"DEAR SIR:

"It has pleased God, by a paralytic stroke in the night, to deprive me of speech. I am very desirous of Dr. Heberden's assistance, as I think my case is not past remedy. Let me see you as soon as it is possible. Bring Dr. Heberden with you, if you can; but come yourself at all events. I am glad you are so well, when I am so dreadfully attacked.

"I think that by a speedy application of stimulants much may be done. I question if a vomit, vigorous and rough, would not rouse the organs of speech to action. As it is too early to send, I will try to recollect what I can, that could be suspected to have brought on this dreadful distress.

"I have been accustomed to bleed frequently for an asthmatic complaint, but have forborne for some time by Dr. Pepy's persuasion, who perceived my legs beginning to swell. I sometimes alleviate a painful, or, more properly, an oppressive, constriction of my chest, by opiates; and have lately taken opium frequently, but the last, or two last times, in smaller quantities. My largest dose is three grains, and last night I took but two. You will suggest these things (and they are all that I can call to mind) to Dr. Heberden.

"I am, &c.,

"SAM JOHNSON."

Two days later he wrote the following account of his seizure to Mrs. Thrale: "On Monday, the 16th, I sat for my picture (to Miss Reynolds), and walked a considerable way with little inconvenience. In the afternoon and evening I felt myself light and easy, and began to plan schemes of life. Thus I went to bed, and in a short time waked and sat up, as has been long my custom, when I felt a confusion and indistinctness in my head, which lasted I suppose about half a minute. I was alarmed, and prayed God that, however he might afflict my body,

he would spare my understanding. This prayer, that I might try the integrity of my faculties, I made in Latin verse. The lines were not very good, but I knew them not to be very good; I made them easily, and concluded myself to be unimpaired in my faculties.

"Soon after I perceived that I had suffered a paralytic stroke, and that my speech was taken from me. I had no pain, and so little dejection in this dreadful state, I that I wondered at my own apathy, and considered that perhaps death itself, when it should come, would excite less horror than seems now to attend it.

"In order to rouse the vocal organs, I took two drams. Wine has been celebrated for the production of eloquence. I put myself into violent motion, and I think repeated it, but all was vain. I then went to bed, and, strange as it may seem, I think slept. When I saw light, it was time to contrive what I should do. Though God stopped my speech, he left me my hand; I enjoyed a mercy which was not granted to my dear friend Lawrence, who now perhaps overlooks me as I am writing, and rejoices that I have what he wanted. My first note was necessarily to my servant, who came in talking, and could not immediately comprehend why he should read what I put into his hands.

"I then wrote a card to Mr. Allen, that I might have a discreet friend at hand, to act as occasion should require. In penning this note, I had some difficulty; my hand, I knew not how nor why, made wrong letters. I then wrote to Dr. Taylor to come to me, and bring Dr. Heberden, and I sent to Dr. Brocklesby, who is my neighbor. My physicians are very friendly, and give me great hopes; but you may imagine my situation. I have so far recovered my vocal powers as to repeat the Lord's Prayer with no very imperfect articulation. My memory, I hope, yet remains as it was; but such an attack produces solicitude for the safety of every faculty."

I think this letter of Dr. Johnson's fully justifies its quotation. It is probably one of the few cases in which a patient has been able to accurately record the personal experiences undergone during an apoplectic attack, and it displays his wonderful powers of mind and beautiful Christian fortitude to a high degree. It may be pronounced unique in the annals of epistolary correspondence.

From this attack he seems to have completely recovered within three or four weeks. His speech returned, and he was able to articulate as distinctly as ever before.

During this same year, 1783, he was much annoyed with gout, and suffered from a sarcocele. For the latter complaint he was attended by Mr. Pott and Mr. Cruikshank. For some time it was supposed it would be necessary to excise the growth,

but it gradually disappeared without recourse to the knife. His asthma increased greatly and he became very dropsical.

In 1784 Johnson's illnesses gained on him and he began to gradually sink. Dr. Heberden and Dr. Brocklesby were in continuous attendance upon him, but he seems to have grasped at the least hope that something might be done to restore his health, and so we find him writing to Boswell to obtain for him the opinion of some of the Scotch physicians upon his case. The Edinburgh school was at the zenith of its glory, containing a famous group of names in its faculty. Boswell got Sir Alexander Dick, the president of the College of Physicians of Edinburgh, to write out his opinion, and he forwarded it to Johnson. He then wrote to Dr. Munro, Dr. Cullen, and Dr. Hope, of the Edinburgh faculty, the following letter:

"DEAR SIR:

"Dr. Johnson has been very ill for some time; and in a letter of anxious apprehension he writes to me: 'Ask your physicians about my case.' This, you see, is not authority for a regular consultation; but I have no doubt of your readiness to give your advice to a man so eminent, and who, in his *Life of Garth*, has paid your profession a just and elegant compliment: 'I believe every man has found in physicians great liberality and dignity of sentiment, very prompt effusions of beneficence, and willingness to exert a lucrative art, where there is no hope of lucre.'

"Dr. Johnson is aged seventy-four. Last summer he had a stroke of the palsy, from which he recovered almost entirely. He had, before that, been troubled with a catarrhus cough. This winter he was seized with a spasmodic asthma, by which he has been confined to his house for about three months. Dr. Brocklesby writes to me that upon the least admission of cold, there is such a consternation upon his breast that he cannot lie down in his bed, but is obliged to sit up all night, and gets rest and sometimes sleep only by means of laudanum and syrup of poppies; and that there are œdematous tumors in his legs and thighs. Dr. Brocklesby trusts a good deal to the return of mild weather. Dr. Johnson says that a dropsy gains ground upon him; and he seems to think that a warmer climate would do him good. I understand he is now rather better, and is using vinegar of squills. I am, with great esteem, dear sir,

"Your most obedient humble servant,

"JAMES BOSWELL."

All three physicians responded most cordially. Dr. Hope sent his opinion to Dr. Brocklesby, but Dr. Cullen and Dr. Munro sent theirs to Boswell.

As Johnson's death drew near, he was attended

by Dr. Heberden, Dr. Brocklesby, Dr. Warren, and Dr. Butler, and by Mr. Cruikshank, none of whom would accept any fee for their professional services. It is recorded that he bore his sufferings toward the last with the utmost bravery. When incisions were made in order to evacuate the dropsical effusion, he thought the surgeon did not make them deep enough from fear of giving him pain, and taking the knife he himself made them deeper. He asked Dr. Brocklesby whether, in his opinion, there was any possibility of his recovery. The doctor replied that he could not, without a miracle. Johnson upon this said: "I will take no more physic, not even my opiates; for I have prayed that I may render up my soul to God unclouded." To this resolve he rigidly adhered. His last words were spoken to a young woman who, on the day of his death, insisted upon being admitted to his room, that she might receive his blessing. The doctor turned in his bed and said: "God bless you, my dear." During the day previous to this he had been frequently propped up in bed that he might pray with those who surrounded him. Few death beds have been attended by a group of mourners so famous, and such sincere friends. Burke, Windham, Reynolds, and Langton were among those who soothed his last hours. It is curious that Boswell was absent in Scotland, and yet more strange that, though Johnson directed various tokens of remembrance to be given to his friends in his will, he made no mention of Boswell. The latter tries to explain this omission by the rather lame excuse that several others were omitted also, and that the will was made at a period so near Dr. Johnson's death that he could only include the few whose names might occur to him. The will was written four days before his death.

Lectures and Addresses.

THE PRESIDENT'S INAUGURAL ADDRESS,
DELIVERED AT THE NINETY-SIXTH ANNUAL MEETING
OF THE MEDICAL SOCIETY OF THE STATE OF
NEW YORK, HELD IN ALBANY
JANUARY 28, 29, AND
30, 1902.

By HENRY L. ELSNER, M. D.,
SYRACUSE, N. Y.

The material assistance, support, and encouragement received from the loyal members and delegates of the Medical Society of the State of New York have lightened the cares of your presiding officer during the past year. Work which seemed monumental at the beginning of the year has been accomplished, and it is with great satisfaction that I report to you on this occasion the condition of the society over which I have the great honor to preside

as promising and healthy, with every prospect for the future in keeping with the achievements of the past.

1. *The Semi-annual Meeting.*—Shortly after my election, preparation was commenced for the semi-annual meeting which was held in New York city on the 16th and 17th of October of last year. In connection with the committee of arrangements, I found it necessary to relegate to an auxiliary committee, composed of Dr. Phelps, Dr. Jacobi, Dr. Roosa, Dr. Fisher, and Dr. Van Fleet, many of the details which needed attention in order to make the meeting successful. By concerted action of these gentlemen, the business committee, and your presiding officer, the meeting proved successful beyond all expectation. The programme was rich in contributions to scientific medicine, while the social features of the meeting were sufficiently manifest to demonstrate the kindly feeling existing within the profession. The reception given our society by the Medical Society of the County of New York was a brilliant affair and was a fitting ending of two days of faithful application to scientific medicine.

I wish at this time to express to the auxiliary committee, to my business committee, and to the committee of arrangements my appreciation of their earnest and successful efforts. To the Medical Society of the County of New York we are indebted for the cordial reception and their many attentions. I would suggest that the society at this meeting extend a vote of thanks to the Medical Society of the County of New York.

The scientific papers, with their discussion, were of such high order that it would prove a great loss to us if they failed to be published. I would suggest that this society by vote request the secretary to gather the necessary manuscripts, and that he be directed and empowered to publish these papers; that he enter into contract with the publisher of the *Transactions* of this the annual meeting, with that end in view. Matters of detail in connection with this scheme should be left to the judgment of the secretary and publishing committee.

2. *Future Semi-annual Meetings.*—The success of this first semi-annual meeting warrants me in suggesting that a semi-annual meeting, devoted to scientific medicine only, be held in the city of New York in 1903, and that the question of holding a second meeting during this year in some city of the State other than New York or Albany (preferably Buffalo) be referred to the incoming president and the comitia minora, which, as you know, includes the chairmen of the standing committees. Such committee will be able to pass upon the advisability of holding a second scientific meeting this year after a thorough consideration of existing conditions. There is certainly sufficient material available to

make two meetings yearly profitable and inviting, and one of our leading medical journals suggested that the Medical Society of the State of New York could easily secure enough contributions for quarterly meetings.

Medical Legislation.—The committee on legislation has been alert and has been forced to battle against more pernicious activity than ever before. Never during any session of the legislature were so many bills introduced with the object of lowering the standard, which has been elevated as the result of the continued and persistent efforts of the profession as represented by this society. It is surprising to find that all of these malevolent schemes have some advocates in the legislature against whom the profession, through its legislative committee, must band itself. It is depressing and at times discouraging to note the persistent apathy of a large and influential party in the profession in matters of legislation which affect the interests of all. The report of the committee will convince the profession of the necessity of eternal vigilance against an element ready to weaken us in our efforts to protect the profession and the public.

A case of great importance to the profession of this State was recently tried and decided in the Court of Special Sessions of the first division of the city of New York, known as "The People of the State of New York (upon complaint of the Medical Society of the County of New York) against Louis L. Marvin, defendant, for practising medicine without registration." It was shown that the defendant in this case gave no drugs, nor did he use the title of doctor. He professed to cure, applied "magnetism," and made a diagnosis, charging money therefor. In finding him guilty, the court refused to make the giving of drugs and medicine an essential element in the crime of practising medicine without registration, and in passing sentence inflicted a fine of \$250 and in default of payment, ninety days in the city prison. Judge Hinsdale remarked: "You belong to a class of men who infest this city and by false pretences get a pretty good living out of the poor and credulous people. It is the duty of this court to arrest their career when opportunity offers." This decision has not been reversed, and opens the way for the various county societies of the State to enforce more vigorously than ever before the present medical practice act, without waiting for further legislation.

The so-called Osteopath bill now before the legislature, legalizing a fad which has neither reason for existence nor scientific foundation, deserves the condemnation of the profession and the public. The legislative committee will strenuously oppose its passage.

I do not consider it expedient to recommend at

this time further action looking to the legislature for the enactment of a bill defining the practice of medicine in this State. Our recent experience convinces me that we must be content at present with existing laws, which in reality have purged the profession of many noxious elements. Possibly St. Clair McKelway expresses the public sentiment when he says: "For my own part, I want to be cured or killed *secundum artem*, but I deny the right of any legislature to tell me who are *secundum artem*."

Suppression of Quackery.—A communication addressed to this society by the secretary of the Medical Association of the Greater City of New York gives the report of a committee on the suppression of quackery. This committee seeks to punish by law regularly graduated physicians who depart from the regular and honorable practice of their profession. I quote from this report: "It is a lamentable fact that the most difficult cases to prosecute are those wherein a lawful practitioner abandons the teachings of his Alma Mater and becomes a recreant and renegade, not for the purpose of establishing a new and better system of treatment, but under the guise of such seeks only personal enrichment." I fully agree that such deflections from the ranks of the profession are unfortunate, but I am thoroughly convinced that no law placed on the statute books can prevent dishonorable or unprofessional action of individual members of the profession. There will always be moral perverts; there will always be those to whom professional probity continues to mean nothing, whose acts are beyond legal control. Our only redress remains in the disciplining of the guilty by the county societies after trial, and final expulsion from our ranks. However, I shall ask the secretary to read the communication to you during the business session, when you will give this question the consideration it deserves.

State Board of Medical Examiners and Consideration of Separate Examinations in Internal Medicine.—Many who are interested in teaching medicine have for a long time been dissatisfied with the failure of the State Board of Medical Examiners to provide a separate examination in internal medicine. Examinations as now grouped make it possible for the candidate to graduate without giving proof of a knowledge of the natural history of disease. I would recommend that this matter be referred to the members of the State Board of Medical Examiners representing the Medical Society of the State of New York for consideration and action. You will hear from another source the report of the State Board of Medical Examiners. This is encouraging and deserves thorough consideration.

As a result of the advanced stand taken by our society, the laws governing the practice of medicine

in this State stand as a model for all other States. No greater compliment could have been paid us than that which was included in the eloquent address of Dr. Reed, president of the American Medical Association, when he said: "The laws of the different States are of varying efficiency, the one procured by the Medical Society of the State of New York, at the price of yet-maintained excommunication from this body, standing to-day as the model of excellence for the entire country." It is our duty to cautiously guard against the designing, who are year after year exerting themselves to weaken this system by legislative action.

State Hospital for Tuberculous Sick.—After many months of unfortunate disagreement, the commissioners appointed by the State to select a site and build a hospital for the tuberculous sick have, with the assistance of a special commission headed by the governor of this State, finally selected Raybrook as the best location for such an institution. This decision meets with the approval of the profession generally, so far as I have been able to learn.

This is a large and important undertaking. It means much to the profession and to the State. The governor in his recent message accentuates the fact that the project is deserving of thorough consideration and study, and wisely suggests that the maintenance of the sick be chargeable to the respective counties from which the patients are sent. The material benefits to the State and municipalities resulting from the treatment of individuals in this institution, if properly constructed and managed, will soon convince the public that the expense was justified and that a liberal policy on the part of the State will ultimately succeed in saving many whose lives under the present system are lost, and who finally become city or county charges during many months before death. This society will continue to take an active interest in the treatment by the State of these unfortunates, and will at the proper time offer assistance to the authorities which shall have for its object the selection of such cases as are best suited for sanatorium and climatic treatment.

Tuberculosis Congress.—Both the medical and lay world have been much agitated by the utterances of Koch at the Tuberculosis Congress held in London during the past summer. Sanitarians all over the world have continued to recommend to the public the rigid use of the same methods against pollution of milk which were in existence before the reading of Koch's paper. To the scientific world the conclusions of Koch were not a complete surprise, for in this country bacteriologists of note had aroused a suspicion in our minds that *Perlsucht*, or bovine tuberculosis, and human tuberculosis were not identical. It has been wisely assumed, however, that milk contaminated with tubercle bacilli, particu-

larly milk coming from cows with diseased udders, was injurious, and it is still believed by the majority of the profession that some forms of tuberculosis, particularly those having their origin in the intestinal tract and in the peritonæum, have been provoked by the drinking of tuberculous milk. The weight of medical authority still favors the conclusion that bovine tuberculosis may be communicated from animals to man with fatal results. Certain it is that at this time we have no right to become lax in our methods of milk inspection, and until this question is still further investigated the public must be safeguarded by methods which are now universally used all over the civilized world.

If the conclusions which Koch reached and which he presented in his memorable paper had been brought to the notice of the medical and lay world by a less brilliant light, they would have received no attention. Coming from Koch, however, they must stimulate the scientific world to renewed experiment and bacteriological research, that this subject may be finally and fully decided.

The tuberculin test remains as before, a positive means of recognizing bovine tuberculosis, and we must insist upon its use. I would suggest that the society express itself by resolution in favor of continuing the present rigid methods of milk inspection and in favor of systematic investigation and renewed experimentation in order that this all-important subject may be thoroughly studied. I would also suggest that this society commend the thorough work accomplished by the commission of the Medical Society of the County of New York appointed for the purpose of improving its milk supply, and that we suggest the appointment of similar commissions in the other counties of the State, for the further protection of the public against contaminated and unwholesome milk.

Reorganization of the New York Pathological Institute.—It is a source of congratulation that the New York Pathological Institute, organized a number of years ago, and for a time discontinued, has been reorganized with every promise of great usefulness. The newly chosen director, Dr. Myer, comes to us with a reputation established by original research in the field to which he dedicates his activities. With the large material at his command in the various State hospitals and with the assistance and encouragement which he is to receive from the well-selected advisory board, representing the various asylums and most of the medical colleges of the State, much telling original work will be completed. No college west of Albany is represented in the advisory board; there is, so far as I know, no good reason why the Buffalo and Syracuse medical colleges, both provided with excellent laboratory facili-

ties, should not be represented, and I sincerely trust that this probable oversight will be remedied.

Governmental and Professional Organization of the Public Health Control; National Bureau of Health.—The profession is practically unanimous in its opinion concerning governmental and professional organization of the public health control. For years we have labored in vain to establish a national bureau of health from which, if established under proper control, would radiate influences far-reaching for the public good. Such department needs representation in the President's cabinet, where matters of grave importance relating to the public health may be considered and where the importance of the reciprocal relations of the various departments as represented in the cabinet would soon be recognized and would receive prompt and proper attention.

The crying need of the centralization of control of many of the infectious diseases was never more apparent. This question demands the earnest attention of the united medical profession, the cooperation of the various State medical societies, and all national associations of standing, when the common voice of a profession eager to prevent disease, to make its own existence unnecessary, and to disseminate knowledge among the masses shall be heard and its warnings heeded.

Your president recommends that action be taken at this meeting of the society empowering the president-elect and the secretaries to take such steps as are needed to further the establishing of a national bureau of health, with representation in the President's cabinet, and for this purpose these, our officers, be instructed to enter into correspondence with such medical societies, both State and national, and individuals, as shall to them appear necessary, and that they be further requested to report the results of their efforts at the next meeting of the Medical Society of the State of New York.

Reciprocal Relations of the State and County Societies.—During the year now ended, I have been anxious to impress upon the county societies of the State more forcibly than has been done before the importance of the closest union with the parent-body, the State society. For this purpose I have visited many of the county organizations while in session and have encouraged in every possible way a professional and scientific spirit. This work I could not have accomplished without assistance, which was cheerfully given by many of our most influential and talented members. As a result, the social and scientific spirit has received substantial stimulation throughout the State, and in many sections organizations before apathetic and indolent have been awakened to renewed energy and activity. The increased representation in the State society

made possible by the action taken at the last meeting of the society will prove an important factor in extending our influence and will do much toward convincing our dependencies that our interests are identical and that they are but the component parts of an organization whose sole objects are the upholding of the medical profession in a firm brotherhood and the protection of the public. It is the duty of the State society to strengthen so far as lies in its power the local societies here represented. Nothing is appreciated more, I find, than the assistance which we have been able to give in the scientific work of the meeting. Colleagues coming from outside have considerable influence in stimulating individual members to healthy work while the social element is thereby fostered.

After thorough investigation of the conditions existing in many of the county societies of this State, I am prompted to commend to the State society at this time the growing importance of adopting some method by which the relations between the branches and our central body shall be strengthened for the good of all concerned. These various bodies struggling to arrange their programmes, to incite the individual workers to scientific effort, to prevent deflections from their ranks, due to the glittering and alluring promises of those who are anxious to organize rival associations, have nobly withstood the test. The time is ripe for assistance. Your president therefore recommends that at this meeting a committee of two from each judicial district of the State be appointed to act in concert with the officers of the county societies within the separate districts, for the purpose of assisting in all matters relating to the growth, the social activity, and the scientific work of the included societies. These various committees, representing the judicial districts of the State, should report the results of their labor with such other information acquired in the discharge of their duties at the next meeting of this society. Let this committee, still further, learn whether the profession of the State demands the abolition of the delegate system in this society and the substitution of a more democratic method of electing permanent members. This is an important matter and demands the thoughtful consideration of a sentiment which is abroad in favor of greater liberality in the admission of members to the State society.

The State recognizes all who have complied with the laws regulating the practice of medicine as legally qualified practitioners, and does not discriminate in favor of or against any one school. We know no "pathy"; dogmas have long since faded from our memories. Let us continue to exert our influence in favor of the unification of the profession, not only of this State, but of the entire country. The advantages of unification we need

not now consider. Our doors are open to all who practise rational and natural medicine; all who are willing to discard dogma and who have given the State proof of proficiency and are of good moral character. Let us remind the societies throughout the State that only by encouraging a liberal spirit and by receiving into their ranks those whom the law has recognized as qualified to practise physic can we gain the influence which we ought to wield.

The Relations of the Medical Society of the State of New York to the National Profession.—At this time it seems expedient that I call your attention to the fact that at the last meeting of the American Medical Association this national and representative body made important changes in its organic laws and has been practically reorganized upon a broad and liberal basis. The prime factor in the disorganization of the regular profession of this State, a disagreement upon a point of ethics, has become a dead issue, and the code to which many true and tried practitioners have consistently clung has, because of changed conditions and the liberal spirit of the profession, been practically relegated to oblivion.

Dr. Reed, in his address before the American Medical Association, said: "The committee on reorganization, under the restrictions of the resolution creating it, has very properly left undisturbed the existing rules of conduct. These, if construed to have a fundamental importance and if vigorously enforced as they now stand, would disintegrate the association in a single day. This reason and others already given confirm me in the conviction that such rules should be either amended or abrogated. Or, if reaffirmed, it should be by general resolution and endorsing their underlying principles, but disclaiming the present applicability of their details."

A further extract from Dr. Reed's paper expresses, I believe, the sentiments of the profession of the entire country: "This action (the opprobrious excommunication for the time being of the entire profession of the great Empire State), viewed impartially after the lapse of twenty years, becomes the more extraordinary when it is observed that similar action was never taken with regard to Massachusetts, or Rhode Island, or Mississippi, the societies of neither of which had ever adopted prescribed rules of conduct; nor with regard to California or Illinois or Colorado, each of which had by overt act, if not by open declaration, so far as this rule is concerned, at least, taken an equally nonconformist position."

The committee to whom was referred the duty of reporting upon a plan of reorganization of the American Medical Association, in an appended argument says: "No successful organization of the profession is possible without the mutual cooperation of the national and State societies." In the

light of these candid and official declarations, it would seem that the American Medical Association appreciates the fact at this time that the Medical Society of the State of New York is, as it always has been, an important factor in medical matters in this State and country; that without the unification of the medical profession of this great Empire State, in a beneficent and catholic union, serious impediments are placed in the way of its influence and progress. It is equally true that no further advance in laws directly affecting the medical profession of this State can be made without unity in the ranks of the profession.

A thorough study of this subject leads me to the conclusion that the unification of the regular profession is demanded, not only by the profession, but by the thinking public, and that a reorganization can readily be brought about if reason shall prevail. This must be accomplished without the loss of identity or individuality of this time-honored society, with dignity, and without the sacrifice of principle. There being no vital principle upon which the profession is at present divided, all these conditions can be satisfied. Let us remember that in the harmonizing of all elements we must be guided by the same breadth of action which has characterized this society for almost a century.

The time has come for a final effort, which shall have for its object the gathering of the profession of this State under a single banner, upon a liberal platform, and with representation in the American Medical Association. Believing this to be true, after due consideration and consultation, it was decided to recommend at the meeting of the Medical Society of the County of New York the appointment of a committee of five to confer with a committee of equal number representing the New York County Medical Association for the purpose of arranging, if possible, the details of some method by which a union of the two societies might be accomplished. It was thought expedient to do this because the State association has its greatest strength in the county of New York, and it was hoped that some plan might be there suggested from which would follow the ultimate amalgamation of the regular profession of the State included in the membership of the society and the association. The organic law of the State association makes it impossible for county societies to act independently in such matters. The county association passed a resolution expressing itself in favor of a union of the State profession, and recommended to the State association the appointment of a committee on conference in case the Medical Society of the State of New York should appoint a similar committee.

The recommendations which I am about to make seem justified at this time because of the encourage-

ment received by the reorganization upon a broad platform of the American Medical Association; because it has become evident that the national body appreciates the injustice done to the Medical Society of the State of New York by its excommunication during so many years; because of a growing desire for amalgamation by individual and influential members of the profession in this State, representing over thirteen thousand consistent and conscientious workers, who fail to find any underlying principle of sufficient importance to justify the existing division; because of the influence which would be gained in the settlement of vital questions affecting the public welfare; and, finally, because of the undignified and hopeless position of a noble profession divided against itself without reason and justice. If failure results, let the responsibility rest where it belongs; we shall continue as before in the ascendancy, full of our original spirit.

Therefore, I recommend that the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association for the purpose of formulating a plan which shall have for its object the reorganization of the regular profession of this State, which body shall be in affiliation with the American Medical Association, and that the committee report the result of its labors at the next meeting of the Medical Society of the State of New York. In the event of the failure of the New York State Medical Association to appoint such a committee, or if the committees should fail to agree upon a plan of reorganization, the committee appointed by the Medical Society of the State of New York shall have full power, if it deems it expedient, to represent this society before the American Medical Association, and the secretary of this society shall, if the majority of the committee desires, provide the individual members with credentials of delegates to the American Medical Association. The method of election or appointment of the committee representing this society shall be decided by the committee to which the president's inaugural address shall be referred, and shall be ratified, as are all recommendations, by a vote of the society.

The Virchow Celebration.—In 1872 this society honored itself by electing to honorary membership Rudolph Virchow, one of the greatest and most active workers of modern times. Virchow's benign influence in medicine during the past fifty years has been felt in all corners of the earth. He has lived to enjoy the fruit of his labors. Time has dealt kindly with this wonderful student. At eighty he is still bright and active. During the year just ended, the scientific world celebrated in a fitting manner his eightieth birthday. Envoys from all parts of the world gathered in Berlin to convey to

this modest man congratulations and express the appreciation of the lay and professional world of his great achievements.

At this, the first meeting of the society since the celebration of Virchow's eightieth birthday, I would suggest that we tender this honored member, through the secretary, the congratulations of this society and express to him our appreciation of his work.

The Rockefeller Institute.—During the past year, through the generosity of Mr. John D. Rockefeller, an institute has been established for the purpose of furnishing facilities for original investigation under the guidance of a number of men eminent in medicine. The work has been commenced in an unpretentious way; the funds are expended in directions that seem to offer the best prospects of telling results in elucidating problems of the greatest importance to the profession. It is to be hoped that all the medical schools of this State will be represented among the workers to whom are referred questions for investigation by the governing board.

It is also encouraging that the medical profession is represented by two of its noted members on the board of trustees of the Carnegie Institute, which is to be richly endowed by the philanthropist whose name has been carried to all corners of the civilized world by his boundless charity. We shall look to this source for the solution of many problems which shall result in the saving and prolongation of human life.

Deaths During the Past Year.—Our membership has suffered the following losses by death during the year just closed:

		Died.	Aged.
James Chapman,	Medina,	Jan. 27, 1901,	77
J. H. Hobart Burge,	Brooklyn,	Mar. 24, 1901,	78
James V. Kendall,	Baldwinsville,	Aug. 4, 1901,	83
Wm. Platt McLaury,	Catskill,	Aug. 30, 1901,	55
J. Mortimer Crowe,	Watertown,	Oct. 29, 1901,	71
Jarvis S. Wight,	Brooklyn,	Nov. 17, 1901,	60
Peter Faling,	Gasport,	Nov. 23, 1901,	62
Peter R. Furbeck,	Gloversville,	Jan. 17, 1902,	66

Dr. Kendall and Dr. Crowe were among our oldest members. Dr. Kendall entered the society in 1856, and at the time of his death was its oldest member. He was a sincere friend and an honest practitioner. Dr. J. Mortimer Crowe, who died in Watertown, was considered by all who knew him a type of the sturdy family physician with excellent judgment, determined, with an honesty of purpose that was never questioned. He was mourned by a large circle of friends in and out of the profession.

Dr. Albery Leary Gihon, a distinguished surgeon of the United States navy, died in New York city on November 17th of last year, at the age of sixty-nine years. Dr. Gihon was interested in our society; many of us will remember him with pleasure as he

appeared at our semi-annual meeting in October, full of his native wit and to all appearances in the enjoyment of good health. In 1893 he was senior medical officer of the navy, and in 1895 was placed on the retired list with the rank of commodore. The last years of his life he spent in New York. He was a genial gentleman, a ready and favorite speaker, and a loyal friend.

I now declare this, the ninety-sixth annual meeting of the Medical Society of the State of New York, open for the reception and consideration of scientific contributions and the transaction of business.

Original Communications.

URIC ACID: ITS SOURCES AND EFFECTS.

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There are few subjects in clinical pathology in which the carelessness, to say nothing of the ignorance, of physicians has led to more erroneous ideas in the minds of the laity than that of uric acid, and perhaps no single word has done more to sustain these notions than the word *uricacidæmia*, although it is needless to say that the eminent physician whose name is most associated with the term, if he did not originate it, never intended its application in the literal sense. Any one who thinks knows that Dr. Haig did not intend to convey the idea that uric acid ever exists as such in the blood, yet many thousands of the laity believe it does, and ascribe many actual as well as imaginary ills to it. I fear, too, not a few physicians have been misled by the term, and that among medical men who speak of uric-acid storms, uric-acid headaches, uric-acid sore throat, uric-acid meningitis, uric-acid asthma, there are some who believe in a certain toxic effect exerted by uric acid circulating as such in the blood.

The only way in which uric acid can exist in the blood is in the shape of a quadriurate.¹ A quadriurate is a very soluble, unstable combination in which the monomental sodium has taken the place of one fourth of the displaceable hydrogen of two molecules of uric acid. It is in the shape of this very soluble and unstable compound that uric acid exists in solution in the blood and fluids of the body. So unstable is it that it reacts readily with the sodium carbonates of the blood, forming a

biurate which, though stable, is not easily soluble. Whence it is sometimes deposited in needlelike crystals in cartilages, ligaments and fibrous tissues of the joints and elsewhere. Thus compounded, uric acid has been found especially abundant in the blood during gouty seizures, in chronic nephritis, in chronic lead poisoning and secondary anæmia, in many diseases attended by leucocytosis, including especially leucæmia, and in diseases of the heart and lungs associated with dyspnoea.

Preliminary to a discussion of the origin of uric acid should be mentioned the fact that modern studies have completely overthrown the view so long held that uric acid represents a stage in the formation of urea. Urea is still acknowledged to be the ultimate product of nitrogenous metabolism in mammals, but uric acid is no longer regarded as a stage in its formation. It will be remembered that it used to be taught that uric acid represents a stage of oxidation short of that represented by urea. And a very pretty theory it was. How often have I endeavored to impress this idea upon patients by comparing the human organism to a steam engine, the fuel for which stands for the food ingested, both having for their object the generation of force by combustion, the urea of the human machine representing the ashes of the engine fire, while the uric acid stands for the klinker and partially consumed coal. The remote source of urea is still believed to be the albumins, chiefly the circulating albumins ingested as food, and to a less extent the fixed albumins of the tissues. It is conceded that the formation of urea out of uric acid is possible, but it is an insignificant source.

On the other hand, several observers, notably Sir Alfred Garrod, P. W. Latham, and Arthur P. Luff, consider that uric acid is normally formed out of urea, and that this formation takes place in the kidney by the union of urea with other principles, conspicuously glycocin. This, it will be seen, is a reversal of the original view. Latham considers that glycocin and the other amido bodies, tannin, leucine, and tyrosine, are normally converted into urea, but that if from any cause the metabolism of glycocin is interrupted, glycocin with urea passes on to the kidneys, where uric acid is formed out of them. Among others who regard the kidneys as important uric-acid forming organs are Zalesky of the older observers, and more recently Levison, of Copenhagen, and Kolisch, of Vienna.

There are several sources for the formation of urea. One of these is the amido-acids into which albumins are converted during tryptic digestion and putrefaction, and by the action of acids and alkalies. The amido-acids include, among other less important bodies, glyocol, leucine, tyrosine, asparaginic acid, and glutaminic acid. Out of the amido-acids

¹This statement is based upon the commonly accepted view of Sir William Roberts, as announced in his Croonian lectures in 1892. It should be stated, however, that it has been questioned by some recent observers, although adopted by several standard text-books, including Neubauer and Vogel, edition of 1898. Among those questioning this view are Pfeiffer (*Berliner klinische Wochenschrift*, 1894, pp. 913, 914), Minkowski (*Leyden's Handbuch der Ernährungstherapie* Band ii), Schreiber (*Ueber die Harnsäure*, Stuttgart, 1899, pp. 107, 108), and Tunnecliffe and Rosenheim (*Contributions to Our Knowledge of Uric-acid Salts*, *Lancet*, June 16, 1900). On the other hand, A. P. Luff's (*Pathology and Treatment of Gout*, London, 1898) recent studies go to confirm entirely those of Sir William Roberts.

are formed ammonium carbonates, then the ammonium salt of carbamic acid, and finally urea. But even this source furnishes a small part of the urea excreted, since only traces of the amido-acids are found in the tissues in health. By far the larger part is supposed to arise from the ammonium salt of paralactic acid in which form most of the albumin nitrogen is set free. The paralactate, too, is converted first into ammonium carbonate and that into carbamate, whence the urea results by a synthetic process set up by a ferment. Finally, it is thought that urea may arise from the albumins by hydrolysis from kreatinin, oxaluric acid and other substances. By hydrolysis is meant the splitting up of a complex molecule into simpler compounds by the addition of an element of water. As much as ten per cent. of the urea formed in the body may thus arise according to Drechsel.

Thus we have several ways in which urea may arise, the principal source being paralactic acid. The liver is regarded as the chief seat of this formation, but that the synthesis may also take place in other organs is shown by the fact that even when there is extensive destructive disease of the liver, the formation of urea, though greatly reduced, still goes on.

Whence comes uric acid? It is interesting to note, first, that in birds and reptiles the formation of uric acid is exactly analogous to that of urea in the mammal. In birds and reptiles most of the uric acid is formed synthetically in the liver, only a small amount resulting by oxidation from the xanthin bases. The possible formation of uric acid from urea as contrasted with urea from uric acid has been alluded to. The tendency of most modern studies is, however, to derive uric acid in man and most mammals from the nucleins of the ingested food, and of the body cells, especially leucocytes, the change taking place in all organs of the body, most abundantly in those which are rich in nuclei, viz., the spleen and lymphatic glands. Alongside of uric acid are formed everywhere the so-called xanthin bases, also known as purin bases, alloxur bases, and nucleinic bases. The following xanthin bases have been found in the urine of man, viz., xanthin, hypoxanthin or sarcin, episarcin, guanain, carnin, paroxanthin, heteroxanthin, and under certain pathological conditions, adenin.

This view is based largely on the observations of Horbaczewski, who showed that uric acid and xanthin bases can be produced from the nuclein of the nuclei of leucocytes and tissue cells. He warmed a mixture of spleen pulp and blood to body temperature for several hours in the presence of air and obtained uric acid. He found that when nuclein was heated while air was excluded there resulted xanthin bases, but not uric acid, while in the presence

of oxygen, uric acid was obtained. By different degrees of oxidation he was able to produce both uric acid and the alloxuric bases. When he heated nuclein under the same conditions he converted it completely into uric acid. As has already been stated, there is no single organ in which alone uric acid is formed. Some who accept the nucleinic origin hold that the chief seat of oxidation is the liver, admitting that it takes place in other organs also, including the kidneys, though to a less degree. It is more than likely that everywhere in the body where cells disintegrate there uric acid is formed, but as such disintegration is most active in the glands and lymphoid apparatus, there uric acid is formed most abundantly.

I have referred to the views of Garrod, Luff, and others, who hold that uric acid is formed in health solely in the kidneys, not from the nucleins but from urea and glycocine, whence the uric acid passes directly into the urine. Accordingly, they claim that uric acid is not normally present in the blood in any shape. But while Luff holds that in health uric acid is formed only in the kidneys and that the uric acid found in the blood in gout is absorbed from the kidneys after being formed in these organs, he also believes that in blood diseases, like leucæmia, the uric acid in the blood is probably derived from the nuclein of leucocytes, and as the kidneys are in a sound condition it is readily excreted by them.

The quantity of uric acid and xanthin is normally small, the latter being about one tenth of the former, so that if uric acid be put down at .2 gramme to 1 gramme in the twenty-four hours the amount of xanthin bases would be .02 to .1 gramme.² Under normal conditions the greater part of the xanthin bases is oxidized into uric acid, the remnant unoxidized appearing in the urine. The more active the oxidation the larger the proportion of uric acid and the less that of the xanthins, and vice versa. Again, both substances may be increased or diminished together. The most marked increase in formation and elimination is found in leucæmia, when both uric acid and the alloxuric bases are increased and adenin is also found.

The relation of xanthins and uric acid to the nucleins has been referred to. What are nucleins? Technically, they are a subdivision of the extensive group of nitrogenous food stuffs, known as albumins or proteins, a group further subdivided into (1) albumins proper, (2) globulins, (3) vitellins, (4) proteids, (5) albuminoids, and (6) derived albumins. In the subdivision proteids are included the nucleins, for which we are seeking. They differ from the true albumins in containing phosphorus

²Von Noorden, *Pathologie des St. Wechsels* 1893, places the normal excretion of uric acid for an adult on ordinary diet at 0.7 to 1.2 gramme per day.

and sometimes iron in addition to carbon, hydrogen, nitrogen, oxygen, and sulphur. They are essentially albumins closely combined with a phosphoric acid radicle. The nucleins are abundant in all animal and vegetable foods, and it is from the vegetable nucleins that the herbivora obtain the iron in their blood. The nucleins possess the characters of strong acids, and as such may unite with the xanthin bases constituting the nuclear nucleins proper, while the term paranuclein or pseudo-nuclein is applied to the combination of the albuminous groups with phosphoric acid only.

Uric acid, then, is one of the end products of animal metabolism just as much as urea, and not an intermediate product as once supposed. It is remotely derived from the food ingested, and in this respect is also analogous to urea.

Turning now to modern studies of the clinical and pathological significance of uric acid we are met at once with experimental observations which tend to show that it is without poisonous effect and that its mischievous consequences are mainly local. Thus, animals have been fed with it, and it has been introduced into the body by injections continuously carried out—all without poisonous effect, or even local irritation. In addition, there are certain clinical facts concerning it which are undoubted and which must be considered in determining its exact place in pathology. First, uric acid is deposited in the kidney and urinary passages, forming calculus and gravel. Second, uric acid is demonstrably deposited in the joints in the shape of the biurate. Third, whether uric acid in the combination referred to is normally present in the blood or not, it does undoubtedly accumulate there under abnormal conditions, in such quantity as to be easily demonstrable. Among these conditions are gout, chronic lead poisoning, chronic nephritis, leucæmia, and pernicious anæmia. Admitting such accumulation, three questions naturally suggest themselves, How does uric acid get into the situations named? Is it harmless? And, if it is harmless, what agent produces the harmful symptoms commonly associated with it?

First, as to calculus and gravel. This is the simplest and easiest explained of all the clinical facts. There can be no doubt that it comes directly from the kidney and is precipitated from the urine as it percolates down the urinary passages. The impulse to such precipitation is an over-saturation of the urine with the uric acid and its salts, especially the biurate. The evidence of this is seen in the scantiness and high specific gravity of the urine associated with such deposits. It is not necessary to suppose there is an increased production of uric acid anywhere. We may suppose that there is simply

not enough water to hold it in solution, as the quantity of water is commonly much reduced.

It is not necessary to dilate upon the symptoms of calculus and gravel, as they are well known.

What of uric acid which is deposited in the joints and fibrous tissues elsewhere, the most striking products of which are the so-called gouty tophi? What are the conditions of its deposit, and what are its effects? Two reasonable conditions suggest themselves: First, an abnormal quantity of the biurate in the blood; second, a stasis of the lymph current which favors precipitation. Ebstein suggested, in addition, a primary necrotic degeneration of the tissues, itself the result of an irritant effect of the neutral sodium urate in solution, favored by a stasis of the lymph stream. Such necrosis, he maintains, results in the formation of a free acid, which converts the neutral urate into an acid biurate, which is then precipitated because of its difficult solubility in the crystallized form. He makes no allusion to the nature or name of this hypothetical acid. Previous degenerative changes are also considered by Dr. Ord, Sir Dyce Duckworth, and others as a necessary preliminary to uratic deposits. Duckworth ascribes the preliminary conditions of the tissues to the influence of the nervous system regarding gout as a neuro-humoral disease.

If uric acid is formed from nucleins circulating in the blood it is evident how it gets there. If formed in the kidneys, it must be absorbed from these organs into the blood. The older view that over-accumulation is due to diminished elimination rather than over-production is still held by many. The studies of Luff are the most recent I have met which have for their object the settlement of this question, and they seem to point conclusively to diminished elimination. He adduces first the observations of Pfeiffer,³ who estimated the uric acid eliminated at various ages by gouty patients in whom gout had not become chronic compared with uric acid in the urine of healthy persons of the same age. Calculating the uric acid in grammes per 100 kilograms, he found that: At from 30 to 40, gouty subjects excreted .885 gramme, healthy subjects .965; from 40 to 50, gouty subjects excreted .818 gramme, healthy subjects .882; from 50 to 60, gouty subjects excreted .701 gramme; from 60 to 70, gouty subjects excreted .661 gramme, healthy subjects .752.

These results were confirmed by Dr. John Fawcett⁴ on various gouty patients. Dr. Luff⁵ himself made successive daily estimations by the Gowland-Hopkins process of the uric acid excreted in the urine of three persons, a male patient with an attack of subacute gout supervening on chronic gout and a

³*Berliner klinische Wochenschrift*, 1892, p. 413.

⁴*Guy's Hospital Reports*, 1895.

⁵*Gout: Its Pathology and Treatment*, London, 1898, pp. 18, 20.

healthy patient with the average result in subacute gout of .398 gramme per 100 kilogrammes of body weight, .572 in chronic gout, and 1.148 in the healthy subject. Among the most reputable supporters of this view are Sir Alfred Garrod, Sir William Roberts, and Levison, of Copenhagen.

The cause of such defective elimination in gout is believed to be some functional or organic defect of the kidney, in proof of which are adduced numerous observations by von Jaksch, Klemperer, Levison, and Luff, going to show that the elimination of uric acid is diminished in all forms of renal disease, and concurrently increased in the blood or deposited in the tissues—any one or all of these; also the observations of Levison⁶ to the effect that post-mortem examination of gouty patients has, with few exceptions, shown renal lesions. Levison goes so far as to say that a contracted kidney always precedes gout and becomes its cause through impaired function. My own experience goes to show that sooner or later every gouty subject acquires symptoms of a contracted kidney, even if they are not present at first.

It is this over-accumulated uric acid which, according to the commonly accepted view, is the cause of gout. According to this view it is the uratic deposits in the tissues which produce the inflammatory symptoms, while like deposits in the fibrous tissues of different organs cause the symptoms of the various forms of irregular gout. The chief obstacle to its complete acceptance is the fact already mentioned, that uric acid has been introduced into the tissues and into the blood without harmful effect. Such evidence cannot, however, be admitted as conclusive. Every one knows how painful and irritating is the presence of uric acid in the urinary passages, yet it sometimes happens that a not inconsiderable stone passes without producing pain. The same is true of hepatic calculus.

But while the uratic deposits may be quite sufficient to explain the inflammatory symptoms of gout, it is much more difficult to determine the rôle played by urates in the blood. Many who hold that uric acid is the *fons et origo mali* of gout do not allege for it any toxic or irritant effect when thus circulating. In addition to the experiments alluded to in favor of the non-toxic effect of uric acid, we know that there are other morbid states in which the presence of an excess of uric acid is demonstrable and yet no symptoms comparable to those of gout are produced. Witness especially leucæmia, where there is a large excess of uric acid in the blood and yet no gout. This may be because the kidneys, being functionally active, rapidly remove the uric acid before it can become noxious.

Such facts as these have led observers to look for

some other cause of the toxic symptoms of gout. Nor is it necessary to make any forced demands on uric acid to explain these symptoms. As far back as 1884 Gaucher showed that degenerate changes in the kidney followed the injection into the blood of animals of xanthin and hypoxanthin. More recently, Kolisch and Tandler in 1895, Weintraud in 1895, and Croftan in 1899 confirmed these results. Rachford's studies go to show that these same alloxuric bases produced also increased arterial tension and sclerosis, although the reliability of his observations has been questioned. Other observers have controverted these views, notably Schmoll, His, Laquer, and Malfatti, all whose papers were published in 1896. There seems, however, to be sufficient evidence to justify the belief that these bases play the rôle formerly ascribed to uric acid in causing other than the arthritic symptoms in gout, and we have seen that they are invariably associated with uric acid.

The newer views, then, as to the rôle played by uric acid limit its harmfulness to the formation of concretions and ascribe to the alloxuric bases the harmful phenomena of the so-called uric-acid lesions, including gout. Indeed, they proclaim that the formation of uric acid, so far from being a process of intoxication, is one of disintoxication; that a decrease in the excretion of uric acid observed in certain morbid states is not due to retention but non-formation; indeed, that an overformation of uric acid alone scarcely occurs, but that the so-called uric-acid lesions consist in an excess of the sum of uric acid and the alloxuric bases, and that this is due to a perversion of nuclein metabolism; that this perversion may be brought about by excessive or deficient oxygenation, the former resulting in excessive production of both uric acid and the alloxur bases, the latter in an excess of alloxur bases only.⁷ The ready solubility of the alloxur bases facilitates their circulation in the blood and the resulting toxic effect may be manifested by high arterial tension, arterial sclerosis, renal degeneration, and nephritis with albuminuria, as well as various nervous phenomena. Finally, I should not omit to say that the advocates of the extremest views hold that a true decrease in the excretion of uric acid is never found except where the most destructive changes have taken place in the kidneys, such as occurs in the last stages of Bright's disease and destructive surgical disease of the kidney.

At this point it may be well to say a few words on that much hackneyed term—uric-acid diathesis. In

⁶See Croftan's paper on Uric Acid Theories, *Journal of the American Medical Association*, July 8, 1899; also that of A. E. Taylor, on The Influence of Various Diets upon the Elimination of the Urinary Nitrogen, Urea, Uric Acid, and the Purin Bases, in the *American Journal of the Medical Sciences*, August, 1890.

⁷*Zeitschrift für klinische Medizin*, xxxi, 1894, p. 293.

contrast to the exaggerated importance alleged by some for a condition thus named, there are those who declare there is no such thing as a uric-acid diathesis. It is true that the term may be a misnomer, but I shall continue, at present at least, to apply it to a condition which may be thus described: Given a person whose habitual daily output of urine is less than the average, say twenty to thirty ounces, urine of high specific gravity and tendency to the precipitation of a copious sediment of urates and uric acid, such person is the subject of the uric-acid diathesis. It will be noted that nothing is said about the quantity of uric acid excreted. A tendency to its deposition alone is mentioned. The quantity excreted may be actually less than normal if that of the solvent is insufficient to keep it in solution. And this seems to be an essential condition of the uric-acid diathesis, that the quantity of water secreted by its subjects is less than sufficient to hold the solids in solution. The reaction of the urine may have some effect also, as these urines are intensely acid. More exacting conditions than these, such as actual determination of the uric acid in the twenty-four hours' urine, are impracticable, because, in the first place, very few practising physicians have the time to carry out a process so difficult and tedious as that for uric acid, while studies thus far made do not show that quantitative determination of uric acid have been of much diagnostic value. In such persons uric-acid gravel is common. Such persons are also prone to gout.

As to the responsibility of uric acid and its congeners, the xanthin bases, for other symptoms, our knowledge is even less definite, but I am convinced that a large number of ills that are charged to uric acid and gout are not thus caused. I do not deny that other symptoms may be due to the same causes—be they xanthin bases or uric acid. Among these symptoms may be rheumatic pains, headache, and even sore throat, and if the physician has carefully investigated his case and determined the actual presence of the conditions above named, it may be right to ascribe the symptoms to such cause, but without investigation it is careless and unscientific to say they are due to "uric acid in the blood," or, what is worse, "acid in the blood." Twice in one week recently it has happened that patients have consulted me whose physicians said their "blood was full of acid." Such questions cannot be decided without a careful study of the urine.

As to the cause of the uric-acid diathesis. There can be no doubt that heredity plays an important rôle, and it is surprising through how many generations this tendency may be transmitted and how early in life it may make its appearance. I have seen it in children of seven and eight years of age. In fact, it may be

said that all children, more or less, are born with the uric-acid diathesis. Every practising physician knows how frequent it is for the urine of the newborn to be loaded with uric-acid sediment and of the suffering which it sometimes occasions the infant. It is simply a matter of insufficient water to hold the uric acid in solution, and, happily, the free ingestion of liquid in the shape of the mother's milk soon dissipates it in the majority of instances. But the uric-acid diathesis is also acquired, and is often easily traceable to over-eating and drinking, especially over-eating of proteid foods and wine drinking. Some of you have doubtless noticed that after a dinner of many courses, washed down by liberal potations of hock, sherry, champagne, and port, you have arisen toward morning and passed a small quantity of dark-colored urine in which later has appeared a copious sediment of uric acid and urates. Now, it is easy to understand what will be the consequences of a habit of this kind. As frequently, perhaps, the same tendency is produced by over-eating without the alcoholic accompaniment. And this is not to be wondered at if note is taken of the quantity of meat some persons eat—two or three large slices of roast beef in addition to entrées of the same composition, being not unusual. Happily, this danger is beginning to be understood by medical men and an opposite course more generally advised.

Gout is also favored by lead poisoning, a fact explained by Haig on the supposition that lead diminishes the alkalinity of the blood and thus favors the precipitation of insoluble urates. On the other hand, Luff, holding that diminished alkalinity of the blood does not tend to increase the precipitation of the biurate, says that lead acts by damaging the structure of the kidney thereby interfering with its excreting function, and causing uric acid accumulation in the blood. The newer views would have it that lead, like alcohol, produces the tendency to disintegrate a larger quantity of nuclein than is the rule in health, whence results gradually an over-production of alloxur bases with its consequences represented by gout, changes in the structure of the kidney and the like.

Akin to the uric-acid fad, in fact, identical with it, is ascribing to gout the thousand and one ills which we cannot otherwise explain. There are certain well-defined conditions essential to the diagnosis of the so-called irregular gout, that is, gout which does not furnish the distinctive symptoms of podagra or gout of the big toe. As intimated, the ills thus accounted for are too numerous to mention, but among them are inflammation of the joints superficially in no way distinguishable from rheumatic inflammations, the so-called gout of the stomach, gouty sore throat, gouty asthma, gouty iritis

and keratitis, and the like. To justify the diagnosis of gout for these cases the conditions of the uric-acid diathesis as defined must be present or the patient must have had an undoubted inherited tendency to gout, an undoubted attack of podagra, or there must be a demonstrable deposit of sodium urate in the part affected. It matters not whether the small joints or the large joints are affected; there is no certain way by which we can recognize the relation of the inflammation to gout, except by the presence of one or more of these conditions. A very common error is to consider as gouty the tender nodules going to make up the deformed small joints of the hands which come on usually after forty years of age, especially in women. The nodular swellings are known as Heberden's nodosities, and they have no necessary relation to gout, though they may be associated with it. They are more often rheumatic and constitute a form of rheumatoid arthritis. On the other hand, the little vesicles over the nodosities, known as "crab's eye cysts," are quite distinctive of gout. I am very doubtful whether such a disease as gout of the stomach exists, as doubtful of the existence of gouty asthma, and still more doubtful as to epilepsy due to uric acid.

This paper is not intended to cover the treatment of uric-acid conditions, but it may be said in brief that the newer views of the origin of uric acid have not influenced it as yet materially. There are, however, one or two points in which my experience is not in accord with conclusions which are put forth as more or less natural consequences of these views. Thus, it is held that the administration of alkaline remedies can no longer be considered as rationally helpful in the treatment of these conditions. This is so contrary to my own experience that I am loth to accept it. If there is any one thing which has seemed to be useful in the treatment of gout or the uric-acid diathesis as manifested by gravel, it is the use of alkaline liquids. It is true free dilution has been one of the associated conditions of success, and it may be that I have placed too much value upon the alkaline and too little upon the diluent factor in this treatment. Certain it is that diluents alone have been beneficial in clearing up the urine of sediments, and few have been more emphatic than myself on this point; but I have always thought that I could produce an alkaline reaction almost whenever I willed in a urine previously acid by alkaline remedies. Urines thus altered are characterized by an increased tendency to decomposition and secondary changes which are strikingly absent in the scanty high-colored urines of the uric-acid diathesis.

My experience seems to have been quite different from that of many English clinicians, notably Sir Dyce Duckworth, as to the efficiency of the sali-

cylates in the treatment of gout. In an able and attractive lecture by Duckworth entitled *Rheumatic Fever and Its Counterfeits*, published in the *Philadelphia Medical Journal* for January 4, 1892, he says: "Polyarthritis uratica, that is to say, a generalized gout occurring in many joints may simulate rheumatic fever very closely, but it yields to different treatment, to the treatment for gout and not for rheumatic fever." Again, "You know that the results of the treatment for rheumatic fever by means of salicylates are extremely satisfactory, and you seldom nowadays meet with the extraordinary high temperatures which were frequent thirty years ago." Whence, of course, we infer that the author does not consider the salicylates of much service in gout. Whereas, in my experience in acute gout, and when I say acute gout I mean podagra, about which there can be no mistake, it is very decidedly benefited by the salicylates. This is the experience of Haig also who, however, considers rheumatism and gout identical. In point of fact, in this country, at least, the difficulty of diagnosis is not so much between acute gout and acute rheumatism as between the chronic conditions, which require careful investigation and which, in my opinion, are more frequently relegated to gout when they should be accredited to rheumatism.

An abundance of alkaline water, especially between meals, or, in the absence of alkaline waters, of plain water, and the exclusion of proteid foods to a degree sufficient to eliminate uric acid from the urine, accompanied by a liberal amount of outdoor exercise, is to-day, as for some time past, the treatment of the uric-acid diathesis in whatever form it manifests itself. Moreover, as the condition constitutes, as it were, a peculiarity of the individual which, while capable of being held in check, is scarcely eradicable—especially in hereditary cases—the treatment must be kept up for a long time, indeed, in certain cases never interrupted except for a short time, for the condition is almost sure to reassert itself.

For articular deposits and swellings, massage is the most valuable treatment, especially when taken in connection with warm baths, either at home or such as are obtainable at the various hot springs throughout America and Europe. It is in these affections, too, that the Zander's exercises and the mud baths at Marienbad and Carlsbad have seemed to be of special value.

From the standpoint that uric acid is solely the product of excessive leucocytosis and that its accumulation in the blood arises from this cause rather than defective renal function the following outline of treatment recommended by Croftan in the paper referred to may be regarded as representative: There are two indications: (1) A reduction in

nuclein catabolism; (2) a raising of the processes of oxygenation. To attain the first object everything should be avoided that will produce a leucocytosis. To this end a number of drugs, such as quinine, pilocarpine, and atropine, should never be administered, and certain articles of diet that we know produce leucocytosis—notably proteids—should be reduced. Nuclein-containing foods, such as sweetbreads and other internal organs and yolk of egg, should be avoided. Over-eating should be forbidden. "In a true uric-acid case there will be excessive nuclein-catabolism despite all we may be able to do, in the very nature of the taint, and restrictions in diet will not be of permanent benefit; the chief point of attack will be in the direction of raising oxidation. A uric-acid case should be treated as an anæmic case in all measures employed to promote the oxygenation powers of the blood, *i. e.*, the production of an increase in the red blood-corpuscles and of the hæmoglobin and its chief oxygen carrier—iron." Iron should be administered in the forms and on the same rational principles as it would be to a chlorotic patient. Arsenic should therefore be combined with it. Whatever medicinal and hygienic measures tend to a successful aeration of the blood should be employed. Accordingly, Dr. Croftan says, the most striking results have been obtained in acute cases by inhalations of oxygen gas. On six occasions he claims to have aborted an attack of gout by inhalations of oxygen repeated at short intervals. He believes, too, that he can invariably relieve, if not cure, a uric-acid headache, a migraine, in short, lithæmic attacks, by oxygen inhalations.

CHANCROID OF THE EYELID.*

By MATTHIAS LANCKTON FOSTER, M. D.,

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ASSISTANT SURGEON, MANHATTAN EYE AND EAR HOSPITAL.

Venereal ulcers of the eyelids are by no means common, but the non-syphilitic sore is met with so very rarely that I have been unable to find a single case reported in which chancroid of the eyelid was even the probable diagnosis after an extensive examination of medical literature. Therefore I think the following case possessed sufficient interest to be worthy of record:

A man, thirty-six years of age, came under my observation in the service of Dr. Pomeroy and Dr. Hepburn at the Manhattan Eye and Ear Hospital, March 29, 1901. About a month before he had contracted a sore on his penis, followed by suppurating buboes in the groin, which up to that time had not healed. Ten days before I saw him a sore appeared on the edge of his right upper lid and had slowly grown worse. There was no history of

traumatism and the general condition of the patient was by no means enfeebled.

When first seen the entire lid was red, swollen, and drooping over the eyeball. In the middle of the intermarginal space was an ulcer 6 or 7 mm. long by 2 mm. wide, its floor excavated and covered with a purulent detritus, its edges abrupt and elevated, but not indurated. The preauricular and lymphatic glands of the neck were not enlarged, and there were no symptoms of syphilis present. Frequent cleansing of the eye with a solution of corrosive sublimate, 1 to 5,000, produced immediate improvement and the ulcer was healed on April 10th. The patient was kept under observation and no symptoms of syphilis had appeared on May 28th, three months after the supposed date of his exposure and two months after coming under my observation.

A positive diagnosis in such a case as this is by no means easy. A sore on a reddened swollen lid may be an irritated epithelioma, a tuberculous ulcer, a vaccinal pustule, a simple septic ulcer, a chancre, a gumma, a chancroid, or an ordinary hordeolum, or sty. The history, the general condition of the patient, and the microscope may be relied upon for the recognition of the first three conditions; the history and the presence of other manifestations of syphilis may lead to the detection of a gumma; and the diagnosis of a chancre will be determined by the appearance in due time of the secondary symptoms, but I know of no way in which a positive diagnosis can be made between a chancroid and a simple septic ulcer of the lid. In the case here reported the diagnosis was narrowed by exclusion to one of the two last mentioned conditions; in favor of the idea that the sore was a chancroid were its general appearance, the excavated base covered with detritus, and the abruptly elevated, but not indurated, edge, together with the opportunity for and probability of an auto-infection from the suppurating buboes, or from the chancroid itself; in opposition to the idea were the exceeding rarity of the lesion, the fact that the ulcer was elliptical instead of round, and the absence of swelling and suppuration of the neighboring lymphatic glands. Of these three points in opposition, the last one alone is of much weight, and the preponderance of evidence seems to me to be distinctly in favor of the diagnosis of chancroid.

The venereal sore of the eyelids most frequently met with is the hard chancre, the initial lesion of syphilis. Dr. L. D. Bulkley refers in his book, *Syphilis in the Innocent*, to 107 authors from whose writings he has collated 372 cases of this nature, and he has added five more which have come under his personal observation. I can add to this number

*Read before the Ophthalmic Section of the New York Academy of Medicine, December 16, 1901.

¹Blickhahn, *American Journal of Ophthalm.*, July, Aug., 1891. Snell, Jessop, *Trans. of the Ophth. Soc. of the Unit. Kingd.*, 1895. Velhagen, *Klinische Monatsbl.*, February, 1896. Gatzow, *Deutsche Wochenschr.*, February 10, 1898. Gruber, *Wiener med. Wochenschr.*, February 8, 1898. Helborn, *Münch. med. Wochenschr.*, May 24, 1898. Mohr, *Ung. med. Presse*, February 9, 1899. Norris, *New York Medical Journal*, December 23, 1899.

from my own reading eight authors¹ and fifteen cases, and, although I cannot cite a single case similar to that which forms the subject of this paper, it may not be amiss to call attention to a few of these cases which portray the difficulties attendant upon the diagnosis of these conditions.

In many cases it is impossible to distinguish a chancre of the lid from a sty until after the appearance of the secondary symptoms, as is well shown by the histories of the cases reported by Mohr, Blickhahn, and others. Blickhahn's case is peculiarly interesting because the lesion was mistaken first for a sty and then for a chancroid. The patient was a man who had had several sores on his penis at various times and was under treatment for a phagedænic chancroid which had nearly destroyed the glans, but was not accompanied by suppurating buboes at the time he came under observation. He had what appeared to be a sty on his right upper lid, which, after a week of treatment, was opened. This operation aggravated the trouble, the tissues began to slough, and a sore was formed which was diagnosed as a chancroid. The preauricular and cervical glands became enlarged, but did not suppurate. Finally a cutaneous syphilide demonstrated the true character of the sore on the lid to have been that of a primary syphilitic chancre.

Ring² reported a case in which the history leaves a doubt whether the lesion was a primary chancre, as alleged, or a broken-down gumma. The patient stated that the ulcer was of three or four months' duration, would gather and break occasionally, and was painless. During a subsequent visit she admitted that her cervical glands had been swollen before, and a week later was found to have mucous patches in her mouth. The beneficial effect of the treatment, by inunctions of oleate of mercury, together with increasing doses of potassic iodide, is of no value from the diagnostic point of view, on account of its shotgun nature; if the lesion was a chancre, the inunctions were indicated and the potassic iodide might well have been omitted, but if it was a gumma, the benefit was obtained from the potassic iodide, and the utility of the mercurial inunctions was at least questionable. Consideration of the history alone would incline one to think the lesion a gumma, but the statement of the writer, an experienced observer, that it was a chancre must be held sufficient, because it is not easy to place on paper a balance of symptomatic evidence upon which a surgeon must clinically rely for his diagnosis in obscure cases.

In 1899 Dr. Norris related an interesting case to the Section in Ophthalmology of the College of Physicians of Philadelphia. A synopsis of the case, not by Dr. Norris, is the only account available by me, a

fact which I regret because it was reported as a chancre of the lid, while the description here transcribed leaves the diagnosis seriously in doubt.

"Dr. W. F. Norris related the case of a man, forty-five years old, who had presented himself at the dispensary of the hospital of the University of Pennsylvania and stated that the disease had started two days before as a little white blister about a quarter of an inch from the external canthus of the right eye. There was marked swelling of the lids, with an indurated lump in the margin of the lower lid near the external canthus, about a third of an inch in diameter and yellowish. The bulbar conjunctiva was highly chemosed and there was a slight conjunctival secretion. The patient had severe nocturnal pain in the forehead and temple. There were no posterior synechiæ or other evidences of inflammation of the iris. He was ordered a solution of atropine and ten grains of potassium iodide, the dose to be increased two grains daily. Four days later the face, the lids, and the glands of the neck were much indurated and swollen; the yellow lump on the lower lid had broken down, leaving an irregular open sore and ectropion of the lower lid. The severe symptoms gradually subsided, and seven days later there was no pain and the swelling of the lids and the chemosis had decreased. The upper margin of the cornea was the seat of several small superficial ulcers. Holocaine was applied to the ulcers, and the sore on the lid was touched with five-per-cent. solution of protargol, later with mercuric bichloride, 1 to 500. Five days later there was an indurated sore with a sharp-cut excavation. The patient had progressed steadily, and at the time of the meeting, three weeks later, the inflammation had subsided, the ulcer was nearly filled, and there were three minute elevations on the margin of the lid just beyond the outer edge of the ulcer. There was no history of infection to be obtained, no lesion or scar on the penis, and there were no symptoms of secondary or tertiary syphilis. The patient attributed the lesion to traumatism, and said that some days before the symptoms appeared the lid was penetrated by a splinter of glass that was removed by a fellow workman."

Unfortunately, this case was reported at too early a date for a positive diagnosis to have been made. The patient had been under observation only a month, and there is no reason to suppose that the infection was many days antecedent to the date on which he appeared at the dispensary, therefore sufficient time had not elapsed for the appearance of the secondary symptoms, which alone could determine the character of the lesion to be that of a chancre, the primary lesion of syphilis. If it was not a chancre, it may have been a chancroid, but the absence of a history or probability of direct infection renders it extremely difficult, if not impossible, to distinguish between a simple septic ulcer, a chancroid, and a chancre prior to the appearance of the secondary eruption.

542 FIFTH AVENUE.

¹*Medical Record*, November 5, 1892.

TRIFACIAL NEURALGIA AND ITS TREATMENT.

By HENRY TRÈVE BARBER, M. D.,

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OLOGY, UNIVERSITY OF GENEVA.

Trifacial neuralgia has, up to now, proved to be one of the most obstinate diseases as regards treatment, at the same time being one of the most painful manifestations of a group of affections known under the name of neuralgia.

The terrible tenacity and severity of the pains and the excruciating agony to which the poor sufferer is exposed have often called forth various attempts to check and alleviate the sufferings caused by it. Up to now, little has been done for it, for, as is the case with most diseases which are beyond the reach of medical aid, a numerous and considerable list of drugs has been advocated and used, for example: Aconite, aconitine, butyl-chloral hydrate, phosphoric acid, iron, etc., all of which seem to be more or less efficacious and certain in their action; but, more often than not, the effect, if there be any, is only for a short period and quickly passes off, so that the patient finds himself in the same condition after as before the treatment. Some of these drugs are called "specifics," and it is to one of these that I wish to draw attention.

The case that I have been able to observe for some time was one of the pure *tic douloureux*, of the most intense nature and one which had passed, I may say, to a chronic stage, having lasted for three years and a half from its onset, during which time the patient has *never* been free from pain except at night, when it passed off so that she could sleep, but only to begin again in the morning and continue throughout the day. Sometimes the pains were very bad; on a cold day with a north wind, in the middle of summer, without any apparent cause the pain would get so bad that it was with the greatest difficulty that she could eat or talk.

CASE.—On December 19, 1900, I was asked to see Miss S., eighteen years of age, a lady of independent means, who was suffering from an intense paroxysm on the left side of the face that had already lasted over a week before I saw her.

The onset, which began three years and a half ago, she attributes to exposure to a draught. Two or three days later, the patient complained of a sense of numbness and, soon after, shooting pains came on now and then along the course of the third branch of the trigeminus nerve. These pains gradually grew worse until they were continuous, and were greatly aggravated by eating or opening the mouth, and by the contact of the tongue against the gums, a condition which she likened to "a red hot cent placed on the gums."

She consulted a doctor, who diagnosed *tic*

douloureux, and gave her at different times phenacetine, phosphoric acid, cod-liver oil, iron, etc., but without obtaining any definite change, except that every time the medicine was changed the pains lessened for a short time, to begin again after she had taken the fresh remedy for a few days.

After a year of this treatment her medical adviser told her to go to Switzerland, in the hope that a change of air would do her good, and she went for six weeks to Ragatz. While she was there the pains got very much better and almost left her, and she had only slight twinges, which she says were quite supportable. She then returned to England and had been there only a couple of weeks before the pains grew worse again.

She consulted various medical men, but with no success, and finally entertained the idea of undergoing an operation for the removal of the Gasserian ganglion, so intense were her sufferings.

For five days before I saw her for the first time, Miss S. had not been able to sleep, which was a very rare state with her, for previously, no matter how bad the pains were during the day, she was always free during the night; and this want of sleep had pulled her down a lot. She was pale and had an expression of intense suffering. The skin at the left angle of the mouth was covered with herpes and slight twitchings could be seen. From the angle of the mouth a faint redness was visible, extending up to the external meatus, shading off all around into the normal skin, which was neither indurated nor atrophied. The gums looked normal, perhaps slightly redder than normal. Palpation, which was very painful, could only be endured when practised with the greatest care (even a veil on the face caused great pain); there were painful areas along the course of the nerve, and especially at the emergence of the inferior dental nerve. It was impossible to touch the gums because of the excessive hyperæsthesia, for, even when the tongue came in contact with them, the patient would wince. Eating was impossible, and the mere swallowing of fluids was exceedingly painful. There was not an excessive flow of saliva as noticed in some cases.

Being convinced that I had to do with a very severe case of *tic douloureux*, I ordered her to take one granule containing $\frac{1}{10}$ of a milligramme of *aconitine* every four hours, and I was rather surprised to see that, after she had taken five, the pains were less than they had been for some time. In three days she had taken ten granules and was very much better and able to sleep. I then stopped the aconitine and gave her:

R Ferri sulphatis exsiccati, } aa 7½ grains;
Extr. anthemidis,

M. pro pil. No. ii;

I Fiat;

of which she took two a day, one after each meal.

After ten days of this treatment the pains had almost left her and the patient declared that the medicine was acting; for at night she would suddenly wake with a very acute, sharp, stabbing pain, which she said always came on whenever the pains were about to get better. These twinges would pass off in a few seconds and she would then sleep till morning, and during the day the pain was very much better. In two or three weeks she was entirely free

from pain and still continued to take the pills.

After she had taken the forty pills I had ordered, she failed, contrary to my directions, to continue them, with the result that, two weeks after taking the last, she got bad again, though this time the attack was not so severe. I gave her another ten granules of aconitine, and then the iron pills, with the result that the pain disappeared for good, and since then she is absolutely free and feels, as she says, "like a new woman."

She has now been ten months free from suffering, and can rub her face as hard as she likes, without feeling the slightest inconvenience from it. The herpes has disappeared, and she goes out in all weathers with the greatest impunity.

The conclusions that I draw from this case are: (1) That aconitine does really seem to be a "specific"; and (2), that its action must be maintained by a restorative, the best, in my experience, being

I should be glad to know if any similar observations have been made as regards this combined mode of treatment; I, for my part, believe it to be original, for, in the literature that I have looked up on the subject, I have seen no mention of it. Perhaps further trials may prove it really useful in the treatment of this terrible affliction.

ÉCOLE DE MÉDECINE.

A CASE OF ANKYLOSTOMIASIS (UNCINARIASIS) OCCURRING IN A SAILOR.

By JOSEPH B. GREENE, M. A., M. D.,

PASSED ASSISTANT SURGEON, U. S. MARINE-HOSPITAL SERVICE.

The increasing frequency of ankylostomiasis in this country—probably on account of our closer relation to the tropical islands—and the importance of being on the lookout for this disease prompt me to report a case at this time. It was formerly supposed to be confined to certain geographical areas, such as portions of Continental Europe, Egypt, the West Indies, and Brazil; but, so far as climatic conditions are concerned, there would seem to be no reason why the United States should continue to enjoy immunity from the effects of this parasite. Most of the cases reported have been in patients who work in soil, such as tunnel-diggers, agricultural laborers, and such like. The infection was supposed to take place through the hands. This case is, so far as I can learn, the first occurring in a sailor:

G. K., aged twenty-three, a native of Finland, was admitted into the U. S. Marine Hospital, Staten Island, N. Y., on October 30th. The patient's family history was good—both parents living and healthy. He had never had any serious illness, though three months previously he had been sick in Jacksonville, Fla., with an illness that was probably

malarial. Six months prior to his admittance into this hospital, the patient was on the coast of Brazil. He then returned to Florida, and since July, three months before coming to this hospital, has been making frequent trips between the Maine coast and New York city.

On admission, he complained of considerable pain in the epigastric region, especially on the left side. The bowels were loose. The patient presented the appearance of one suffering from severe anæmia. The mucous membranes were pale, the skin was of a yellowish hue, and there was apparently no diminution of adipose tissue.

Blood examination showed red corpuscles 3,440,000; white, 45,000, and hæmoglobin, 44. Physical examination showed a weak first sound of heart, though no murmur was detected. The spleen was palpable.

The patient's temperature ranged in the region of 38° C. (100.4° F.), irregularly during the first week in the hospital, although he was receiving full doses of quinine. His bowels continued loose and apparently uninfluenced by a diarrhoea mixture containing opium. There was noted, too, an increased tendency to movements of the bowels during the night. The discharges contained mucus and colored areas resembling altered blood.

An examination of the fæces revealed at once a large quantity of elliptical ova, typical in appearance of the eggs of *Ankylostomum duodenale*. The patient was next placed on a restricted liquid diet, and given a saline purge followed by two doses of thymol, 1.5 grammes (22½ grains) each. An examination of the fæces failed to reveal any signs of the parasite. After waiting a few days, male fern was given with the same precaution, and no worm was discovered. Shortly an examination of the fæces failed to reveal ova, so it is probable the patient, contrary to instructions, evacuated his bowels in the water-closet, and the worm thus escaped our detection. The patient began to improve, and insisted on leaving the hospital, though not fully recovered, on December 3d, about five weeks after his admittance. His blood count showed red corpuscles, 3,999,500, white corpuscles, 11,000, and hæmoglobin, 55. His general condition was much improved, and he had no fever or intestinal disturbance.

Correspondence.

LETTER FROM TORONTO.

The New Building for the Medical Department of Toronto University.—The Death of Dr. Bucke.—The Ontario Hospitals Association.—The Ontario Medical Council.—A Patented Treatment of Consumption.—The National Sanitarium Association.—A Successful Operation for Typhoid Perforation.

TORONTO, March 9, 1902

The financial problem in connection with the proposed new medical building for the Medical Department of Toronto University has at last been definitely settled, and apparently to the entire satisfac-

tion of the medical faculty. The Ontario government will set aside out of the funds of the university \$125,000, and the new building will be situated between the library and the biological building in the Queen's Park. Its construction is to be gone on with at once and it will be on the same plan as the new medical buildings in connection with Harvard University. The laboratories will be on the "unit system," each one being normally twenty-three by thirty feet, capable of being enlarged or decreased in size to suit large or small classes. The arts department of physiology will occupy part of the building.

There died in London, Ontario, on the 19th of February a prominent international alienist, Dr. Richard Maurice Bucke, the superintendent of the asylum for the insane and the lifelong friend and literary executor of Walt Whitman. About 11 o'clock that evening, before retiring for the night, Dr. Bucke, as was his custom, took a stroll on the veranda of his residence. Slipping on some ice, he fell heavily to the floor, and instant death resulted. Dr. Bucke was born in 1837 at Methwold, Norfolk, England, and came to Canada at an early age. He entered McGill University and was graduated M. D., C. M., in 1862, gold medallist of his class. He was appointed to the Ontario Asylum service in 1876 as superintendent of the asylum at Hamilton, and was transferred to the London asylum in the following year, a position which he held up to the time of the unfortunate accident which resulted in his death. He is said to have had the largest and best Whitman collection in the world. He was an advanced exponent of gynæcology as applied to the insane.

The hospitals of Ontario have formed an association to be known as the Ontario Hospitals Association. A short time ago representatives from the leading hospitals of the Province met in Toronto, their object being to form an association for the purpose of united action in guarding the interests of these institutions in the Province. For some time the funds of the hospitals have been gradually falling off. It is charged that this is the result of the Ontario government's cutting down the hospital grant of thirty cents per diem as originally promised. Then it is alleged that, on account of the Succession Duties Act, wealthy citizens dying do not leave the hospitals so much as formerly, as they expect that the government should hand over to the hospitals at least ten per cent. of the succession duties. The meetings of the new association will be held annually in Toronto at the same time as the meeting of the legislature. The officers will be a president, five vice-presidents, a secretary-treasurer, and an executive committee of seven. Dr. John Ferguson,

of the Western Hospital, Toronto, was elected secretary-treasurer.

Before the special committee of the Ontario legislature appointed to deliberate on the proposed amendment to the Ontario Medical Act to do away with the homœopathic and college representation on the Ontario Medical Council, delegations appeared recently from the colleges, and this piece of legislation is not going to be allowed to be enacted without a strenuous effort on their part to retain their representation. An elaborate memorandum has been prepared by the Senate of Toronto University and submitted to the honorable, the Minister of Education. It enters four strong protests against Dr. Jessop's bill becoming law: 1. It excludes from the body entrusted with fixing and determining the standard of medical education and prescribing the curriculum of studies those who, by reason of their vocation, as well as training and experience, are, if not best fitted, at least specially qualified for performing these duties. 2. It hands over to a practically irresponsible body the entire and absolute control of medical education, and creates a close corporation or guild. 3. It imposes on the universities and colleges engaged in the work of medical education the obligation of following the curriculum of studies prescribed by the council without having any voice in the framing of it. 4. It violates the compact entered into with the universities and teaching bodies by which they were given representation on the council in consideration of their giving up their right to confer degrees or diplomas in medicine and surgery entitling the possessor of them, without further examination, to practise upon obtaining his license or becoming registered.

Under the heading Professional Degeneracy, the *Dominion Medical Monthly* becomes stirred up over the proposal of two well-known practitioners of Toronto to embark in a commercial enterprise which proposes to treat consumptives by the "ramage," or "electrified ozone," treatment. It is understood that this process has been patented, that a company has been formed in this city, and that the two practitioners aforesaid propose to treat people in the private hospital of one of them. The announcement in the public press with regard to the floating of the enterprise states that the two practitioners in question have cured at least fifteen patients of consumption within the past two years, even though the process had not been fully perfected until within the past few months. The *Dominion Medical Monthly* points out that this number equals the total cures for the last hospital year at the Gravenhurst Sanitarium, and asks that proofs of the alleged fifteen cures be produced. If the "ramage" process proves to be the long-sought-for cure for consumption, it

cannot see why the great discovery should be confined to the patients of the two Toronto practitioners. It should be given to the world.

Owing to the fact that the Free Hospital for Consumptives at Gravenhurst is now nearly ready for the occupation of patients and the possibility of another institution being soon erected by the National Sanitarium Association near Toronto, the association has recently appointed twenty-five resident physicians of Toronto on the visiting staff of the association as follows: Dr. W. B. Geike, Dr. H. J. Hamilton, Dr. Gilbert Gordon, Dr. C. J. O. Hastings, Dr. W. T. Stewart, Dr. Allen Baines, Dr. J. T. Fotheringham, Dr. George A. Bingham, Dr. C. M. Foster, Dr. B. Z. Milner, Dr. F. N. G. Starr, Dr. William Oldright, Dr. T. F. MacMahon, Dr. A. McPhedran, Dr. W. B. Thistle, Dr. R. J. Dwyer, Dr. G. A. Peters, Dr. Graham Chambers, Dr. Andrew Gordon, Dr. Charles O'Reilly, Dr. D. W. McPherson, Dr. R. A. Stevenson, Dr. John Caven, Dr. A. J. McKenzie, and Dr. H. B. Anderson.

At the Toronto Clinical Society, on the evening of the 5th of March, Dr. Herbert A. Bruce reported a very interesting case of typhoid fever, perforation, operation, and recovery followed by subphrenic abscess, operation, and recovery. While engaged in his professional duties in a western Ontario town, a young medical practitioner twenty-eight years of age contracted typhoid fever. He was attended by a confrère from a neighboring town. The case took the usual course until, along in the third week, in the middle of one night the patient was seized with excruciating pain in the right iliac fossa. His attendant was summoned, but, as he was away on professional duties in the country, a fellow-practitioner was dispatched in his place. The pain was relieved with one eighth of a grain of morphine hypodermically. The regular attendant arrived the next morning, diagnosticated perforation, and held out for his diagnosis against a conference with three other physicians. Dr. Bruce was summoned from Toronto, confirmed the diagnosis of perforation, and undertook an immediate operation. A perforation was readily found of about the size of the lead in a lead pencil, about eighteen inches from the ileocaecal valve, in the ileum. It was single. This was closed in the usual way and the patient began to make a good recovery toward health. Some days later Dr. Bruce was summoned again from Toronto; a subphrenic abscess was diagnosticated, an operation was performed, and two quarts and a half of pus were evacuated. Although the patient was frightfully collapsed after this second operation, he finally rallied and was present in sound health at the meeting of the Clinical Society of Toronto to express his gratification to and appreciation of the services of both his medical and surgical attendant. As some

one remarked at the meeting, it is not very often that a medical man hears read the report of his own post-mortem examination. This is the first reported recovery in Canada from the operation for perforation in typhoid fever. Dr. Bruce took some exception to the statistics of Dr. Keen, as he did not think that the percentage of recoveries after this operation should be set down as high as Dr. Keen placed them.

Therapeutical Notes.

An Ointment for Inflamed Nipples.—The *Hausdokter* for March recommends this formula:

℞ Silver nitrate. 10 grains;
Bismuth subnitrate. 1 drachm;
Lanolin. ½ ounce.

M.

To be applied morning and evening after washing the nipples.

A Tonic Preparation of Eggs.—The *Presse médicale* for February 26th cites Lemanski, of Tunis, as recommending this preparation:

℞ Raw yolks of eggs. 300 parts;
Water. 60 "

M. Pass through a fine sieve, and add:

Rum. 60 parts;
Glycerin. 300 "
Syrup of lemon. 150 "
Cherry-laurel water. 10 "
Sodium chloride. 5 "

A Nerve Nutrient.—A writer in the *Journal des praticiens* for February 22d gives the following formula:

℞ Calcium glycerophosphate. 6 parts;
Syrup of cherries. 200 "
Extract of kola. 5 "

M. S. A tablespoonful before each meal.

To Prevent Bedsores.—The *Journal de médecine interne* for February 15th gives the following:

℞ Gutta percha. 60 grains;
Balsam of Peru. 15 "
Chloroform. 450 minims.

M.

Twice daily the threatened parts may be painted with this solution.

For Gastralgia.—The *Journal de médecine interne* for February 15th ascribes the following to Dr. Carrière, of Lille:

℞ Chloroform water. 8 ounces;
Cocaine hydrochloride. 6 grains;
Orange flower water. 1 ounce;
Distilled water. 3 ounces.

M.

At the time of the attack, from one to two tablespoonfuls may be taken.

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NEW YORK, SATURDAY, MARCH 15, 1902.

UNIFORMITY IN THE REGISTRATION OF VITAL STATISTICS.

Each State of the Union makes its own laws in regard to the registration of vital statistics, as it does in regard to almost all other matters, but of late years, we are glad to be able to say, there has been a tendency on the part of the various States toward substantial uniformity in legislation, and we trust that this tendency, which is always in a beneficent direction, may grow more and more decided. In particular, we hope that the different State legislatures may come to a virtual agreement upon methods of recording births, marriages, and deaths. The American Public Health Association has done good work in the way of pointing out how uniformity may be secured in mortality registration, through its committee on demography and statistics in their sanitary relations. The committee consists of such representative men as Dr. John S. Fulton, secretary and registrar of vital statistics of the Maryland State Board of Health (chairman); Dr. Samuel W. Abbott, secretary of the Massachusetts State Board of Health; Dr. Charles V. Chapin, superintendent and registrar of vital statistics of the City Health Department of Providence; Dr. Cressy L. Wilbur, chief of the Division of Vital Statistics of the Michigan Department of State; Dr. William C. Woodward, health officer and registrar of vital statistics of the District of Columbia; Dr. Henry M. Bracken, secretary and registrar of vital statistics of the Minnesota State Board of Health; Dr. William H. Welch, president of the Maryland State Board of Health; and Mr. Moses N. Baker, chairman of the committee on uniform municipal statistics and allied subjects of the American Economic Association.

The committee's report is entitled *The Essential*

Requirements of a Law for the Registration of Deaths and the Collection of Mortality Statistics, and we learn that it has the entire approval of Mr. King, the chief statistician for vital statistics of the Census Office, whose purpose it is to compile and publish periodical reports giving statistical results for all effective registration areas in which the data available are sufficient as regards completeness of registration and the amount of detail supplied concerning each death recorded. It is pointed out that all deaths should be registered in the city, village, town, township, or other primary division in which they occur, before the interment or removal of the body; that the primary record of a death should consist of a certificate according to a prescribed form (given in the report) providing, as a minimum requirement, for all the data necessary for the mortality statistics of the census; that no dead body should be removed, interred, cremated, or otherwise disposed of, unless such action is authorized by the local registrar on the strength of a satisfactory certificate; that there should be an efficient local registrar in every city, town, or village, to make returns after a manner expressly designated by law; that the undertaker should be made primarily responsible for the rendering of the certificate, the attending physician, the coroner, the health officer, or some other official being required to certify to the cause of death and, on demand, to furnish any other information in his possession to complete the record of the case; that the central registration office of the State should have direct supervision and control of all matters relating to local registration, and its rules should have the effect of law; and that the transmission and preservation of records should be duly provided for. People in general are slow to realize the importance and the beneficence of such requirements as these, but in not very uncommon individual instances they learn them at the expense of their own interests; it is to be hoped that they will not much longer be left to learn them by sad experience.

SYPHILIS AND THE CEREBROSPINAL FLUID.

The relations between syphilis and the cerebrospinal fluid were recently the subject of three separate communications to the Paris Hospital Medical Society (*Presse médicale*, February 19th). The first was by M. Pierre Marie and M. Georges Guil-

lain, the second was by M. Milian, M. Crouzon, and M. Paris, and the third was by M. F. Widal. Marie and Guillain reported the case of a syphilitic man who had roseola, enlarged glands, erythematous angina, and profound anæmia. His most prominent symptom was persistent and very severe headache. The removal of ten cubic centimetres of cerebrospinal fluid by lumbar puncture brought about several days' cessation of the violent headache. Only a few lymphocytes were found in the fluid withdrawn. The authors thought that when the headache of secondary syphilis was intense, prolonged, and not mitigated by mercurial treatment, it might be due to excessive tension of the cerebrospinal fluid and favorably affected by the removal of a small amount of that fluid.

Milian, Crouzon, and Paris reported that, out of eight syphilitics affected with headache, two showed morphological elements in the cerebrospinal fluid, and they thought that the headache depended upon subacute meningitis, of which it was the symptom *par excellence*. This was attested by excessive tension of the fluid as well as by the accompanying ventricular dropsy, another consequence of the meningitis. This dropsy seemed to play a part in producing the headache, for the latter was alleviated temporarily by lumbar puncture. These patients appeared to be liable to tabes or to general paralysis, although their headache might prove their salvation by inducing them to continue treatment.

Widal reported that in a case of syphilitic hemiplegia with intense headache, coming on in the third month of the disease, in consequence of specific arteritis, he had observed in the cerebrospinal fluid numerous lymphocytes, together with a certain number of large uninuclear and multinuclear cells, and he remarked that in two cases of hemiplegia with the Robertson pupil Babinski and Nageotte had noted lymphocytosis. Such observations, he thought, in the case of a person attacked with hemiplegia, if the lymphocytosis was abundant, should lead us to suspect at once a syphilitic origin of the paralysis. Widal stated further that in only one instance had he had occasion to examine the cerebrospinal fluid in a case in which at first sight headache of a syphilitic nature seemed to be an isolated symptom. In the case of that patient, who had been infected ten years before, the puncture had been followed by a jet of fluid. The lymphocytosis, how-

ever, was very limited, only six or seven elements being observed in some of the immersion objective fields. Moreover, Widal reported that in the cases of two out of four syphilitics in the full bloom of the secondary stage—one having had the disease for three and the other for five months—he had observed moderate but evident meningeal lymphocytosis, although neither of the patients had had headache or any other nervous symptom. The fluid flowed through the cannula in a full stream, showing the exalted pressure in the space between the arachnoid and the pia mater.

It was interesting to note, added M. Widal, that at the beginning of the secondary period, when no nervous symptom was apparent, the syphilitic virus was capable of giving rise to slight meningeal reactions, to be detected only by lumbar puncture, which, even at the very outset of the disease, would give an anatomical demonstration of the susceptibility of the nervous centres to syphilis. He added that in the cases of ten persons long affected with syphilis, but manifesting neither specific symptoms nor any nervous phenomena, he had found the cerebrospinal fluid normal from the cytological point of view. He thought it might be concluded from these facts that, in the case of a person well advanced in syphilis, meningeal lymphocytosis, even if slight, should put the physician on his guard and lead him to observe the patient carefully, so as to detect nervous symptoms which might otherwise pass unperceived.

Evidently we must reckon syphilis among the ever increasing number of morbid conditions in which lumbar puncture may be expected either to give us information otherwise unattainable or to furnish us with extraordinary means of mitigating and perhaps curing our patients' ills. It is to be hoped, however, that the young physician will not be tempted to tap the rhachidian canal as a routine procedure in the management of syphilis; let the operation not degenerate into a fad.

THE PLAGUE IN THE PHILIPPINES.

It appears by the board of health's report for the month of November, 1901, that, as had been expected from the previous history of the epidemic that began in December, 1899, the bubonic plague had subsided for the time being, but Major Maus,

surgeon in the army and commissioner of public health, is quite alive to the need of constant vigilance and activity in rooting out the sources of infection. In over three hundred houses in Manila either persons have been attacked with the disease or rats found affected with it since the outbreak of the epidemic. The board regards these houses as still constituting focal centres of infection and has declared them a menace to the public health and a nuisance to the city. The municipal board has been requested to authorize the closure of all such houses and their cleansing and remodelling to the satisfaction of the board of health before they are again occupied. Major Maus adds that in many instances the cost of repair will practically be equivalent to reconstruction, as many of the houses are old and dilapidated, having only earth for the floor and being really unfit for habitation.

Carvajal Street was being placed in a thoroughly satisfactory condition at the date of the report, and the work of repairing houses which had been vacated in October was duly progressing, although considerable difficulty had been experienced at first by reason of threats of injunctions against the board, but the municipal board sustained the board of health in its course. It is earnestly to be hoped that further obstruction on legal grounds will not be encountered, for in a matter of such ⁹upreme importance as the eradication of pestilence individual interests should give way to the general welfare.

Great credit is deservedly given to the chief health inspector, Major Meacham, for his activity in the inspection of houses and the destruction of rats. During the month 4,688 rats were caught and examined in the bacteriological laboratory. One and a quarter per cent. of these animals were found to be infected with the plague. About five hundred traps had been distributed in the city, and orders for 6,000 more traps had been sent to Tokyo, San Francisco, and Singapore, but the chief means adopted for the destruction of rats consisted in the use of sweet potato food prepared with arsenic.

THE PASSING OF THE CORSET.

Something has happened that physicians had hardly dared to hope for—that is to say, it has virtually happened, for the “Greek girdle” now largely worn is so narrow that it cannot be injuriously tightened without causing the person to bulge so above it as to make the appearance of the individual

ridiculous, and we may trust women to avoid that. We physicians do not flatter ourselves that our arguments have contributed materially to bring about this auspicious change; fashion has done it, and we hope the present fashion will hold sway long enough to convince women that they are more comfortable and more shapely under it than when they were girt with strait stays.

THE CASE OF DR. KERSHNER, FORMERLY OF THE NAVY.

It is apparently to be hoped that Congress will at last do justice to Dr. Edward Kershner, who for more than thirty years was a dutiful, gallant, and popular medical officer of the navy, and then, having had the misfortune to incur the displeasure of the admiral under whom he was serving as fleet surgeon, was most unjustly dismissed from the service on the finding of a court martial. We protested at the time against the dismissal of Surgeon Kershner, and we are exceedingly glad that the House committee on naval affairs has, after an impartial investigation, submitted a bill authorizing the President to appoint Dr. Kershner a medical director in the navy, on the retired list. Such action would be the same as was taken in the case of the late Surgeon-General William A. Hammond, of the army, and it seems to us to be urgently called for in the interest of simple justice. We cannot imagine that this relief bill can fail to be passed by Congress or that, having been passed, it will be ignored by the President.

ELECTRICITY IN CHLOROFORM ASPHYXIA.

Electricity, usually in the form of faradization, has often been resorted to as a restorative in cases of apparent death from chloroform, but generally to no purpose; indeed, it may be questioned if it has not in many instances led to the loss of precious time, even if it has not precipitated the fatal result. However, it is possible that it may be so managed as to answer the purpose of resuscitation quite satisfactorily. At least, something of the sort is to be hoped from certain experiments with the high-tension alternating current by Jellinek (*Wiener klinische Wochenschrift*, 1901, No. 45; *Berliner klinische Wochenschrift*, January 27th). Curiously enough, there seems to be a wholesome antagonism between chloroform and the form of current mentioned, for if it is applied to healthy rabbits, with one electrode in the pharynx and the other in the rectum, either the animals are killed outright or else they show extraordinary functional disturbances, but a deeply chloroformed rabbit thus treated is at once roused and creeps about briskly on all fours, and it manifests no subsequent morbid phenomena.

THE MEETING EXPENSES OF THE AMERICAN MEDICAL ASSOCIATION.

To a great extent if not entirely the expense of the annual meeting of the American Medical Association has of late years been met by the charges for space allotted to exhibitors. These charges have been growing larger and larger, and for this year's meeting in Saratoga, provided all the available space is taken, they will amount to \$7,725. Is there not some danger of killing the goose that lays the golden eggs?

"COEXTENSIVE CONGESTION."

In a murder trial now in progress in New York, one of the medical witnesses felicitously made use of the expression "coextensive congestion," meaning congestion of the entire pulmonary mucous membrane, in other words, congestion coextensive with the lung itself. The alacrity with which the expression was seized upon by the lawyers and the frequency with which they used it in the further examination are somewhat amusing, indicating, as they appear to do, that it was looked upon as a standard descriptive term.

THE RECENT POWER OF "PULL."

In its January issue the *Woman's Medical Journal*, commenting on the recent sad occurrences of tetanus after vaccination and the use of antidiphtheritic serum, makes a statement that, but for its authority, we should be disposed to look upon as incredible. It is to the effect that before the present civil-service system came into play a young domestic servant was actually invested with the office of microscopist, charged with the work of searching for trichinæ and other parasites in the Chicago stock yards. Truly we are slow in ridding ourselves of the incubus of political "pull."

A MODIFICATION OF THE MECHANICAL THEORY OF DYSMENORRHOEA.

There seems to have been a tendency of late years to attach less and less importance to the idea that dysmenorrhœa is due to mechanical obstruction, and, on the whole, we think the tendency has been well founded. One author, Theilhaber (*Münchener medicinische Wochenschrift*, 1901, 22, 23; *Berliner klinische Wochenschrift*, January 27th), has now almost broken away from the theory of permanent obstruction, although he still believes in spasmodic obstruction of the os internum. To remedy it, he removes a thin slice, including mucous membrane and muscular tissue, from the anterior and another from the posterior wall of the uterus at the situation of the internal orifice.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 17th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, March 18th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, March 19th.—Woman's Medical Association (New York Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, March 20th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 21st.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

SATURDAY, March 22d.—New York Medical and Surgical Society (private).

The Rice Murder Case.—The trial of Albert T. Patrick, a lawyer of this city, charged with the murder of W. M. Rice, has several features of interest from a medical point of view. The prosecution contends that Rice was first weakened by the administration of calomel and protoiodide of mercury and was finally killed by the administration of chloroform by inhalation. The valet of Mr. Rice, a man named Jones, has testified that he made a cone of a towel, put a sponge inside the cone, poured two ounces of chloroform on the sponge, placed the cone over the face of the sleeping man, went out of the room immediately, and returning after half an hour, found Rice dead. He then put the cone and sponge in a stove and applied a match, when it "burned up like oil." The post-mortem examination showed that the lungs were congested throughout with a consolidated patch of the size of a quarter of a dollar. There was found about a grain and a half of mercury in the viscera. On the side of the prosecution, Dr. Hamilton Williams, Dr. H. P. Loomis, and Dr. P. J. Donlon testified as experts that their opinion was that the deceased had come to his death by chloroform poisoning, the congested condition of the lungs being evidence of the inhalation of chloroform. The defense maintains that Rice died a natural death, that Jones's testimony was not to be relied upon, that the congestion of the lungs could not be construed as evidence of the inhalation of chloroform, and that the vapor of chloroform is not irritating, and that the general condition of the patient, as shown both by the testimony of the physician in charge of the case and by the results of the autopsy, warrant the belief that he died of natural causes. On behalf of the defense, the following medical experts appeared: Dr. James Ewing, professor of pathology in the Medical School of Cornell University; Dr. Edward Wallace Lee, and Dr. I. N. Love, formerly of St. Louis, Dr. J. H. Girdner, and Dr. Kenneth W. Millican.

The Gregory Testimonial Banquet.—Arrangements are being rapidly made for the Gregory testimonial banquet, to be held in St. Louis on April 17th. The Hon. A. M. Dockery, governor of Missouri, himself a physician and a student of Dr. Gregory's, will preside over the banquet. Every indication points to a large attendance.

The Hospital for Consumptives, on Blackwell's Island, now has about 120 patients who appear to have been benefited by removal to the island and by the special treatment made possible by the removal. There are still about two hundred patients suffering from tuberculosis in the other hospitals of the department, and the commissioner of charities is to ask for an appropriation of \$50,000 so as to fit up other buildings on the island for the accommodation of consumptives.

Damages Awarded against a Surgeon.—Edward Zumbrum, who alleges that Dr. Squires, of Churubusco, and Dr. Moore, of Merriam, Ind., removed his diverticulum instead of his vermiform appendix in an operation to relieve appendicitis, has been awarded \$1,000 damages in the circuit court in his suit for \$5,000 against the physicians. Dr. Squires, on the stand, admitted a mistake was made when the growth was cut from Zumbrum's intestines.

Damages for Performing Autopsy.—Mrs. Annie Botsford, who sued the Presbyterian Hospital for \$25,000 for injuries to her feelings through the alleged unauthorized autopsy on her husband, who died at the hospital, received a verdict recently in the Supreme Court for \$500. Her husband, Albert Kent Botsford, had a large and peculiarly shaped skull, which appealed to the hospital surgeons as worthy of examination, according to the contention of Mrs. Botsford. An appeal will be taken to finally decide the legal points involved, though, it is said, the amount of the verdict will be paid in the meantime.

Proposed Amendment to the Lunacy Bill.—At a meeting of the Medical Association of the Greater City of New York, held on March 10th, the following preamble and resolution were adopted:

Whereas, Lunacy Bill No. 368, recently passed by the legislature, has abolished the positions of the two medical superintendents at Ward's Island, New York, and has placed the two officers under one head, thus putting over 4,00 insane patients under one management; and

Whereas, a supplemental bill amending Bill No. 368 is now before the legislature restoring these positions so that the division of the hospitals, as they formerly existed, one for men and one for women, may be maintained; therefore,

Resolved, that the Medical Association of the Greater City of New York heartily endorses this amendment and advocates its immediate passage.

The New York Academy of Medicine.—A stated meeting of the academy will be held on Thursday evening, March 20th, at 8 o'clock. The special topic selected for discussion is Operations for the Relief of Paralytic Deformities, with Special Reference to Tendon Transplanta-

tion. Dr. Royal Whitman will read a paper on the History and the Indications for Operation. Dr. Wisner R. Townsend will present a paper on Deformities due to Muscular Paralysis, Method of Production, Possibilities in Tendon Transplantation, Combinations that have been made to Correct Deformity. Dr. Virgil P. Gibney will describe the technics of the operation, giving the results of tendon transplantation at the Hospital for Ruptured and Crippled. Dr. Joseph Collins will discuss the Neurological Questions Involved in Tendon Transplantation.

The Section in General Medicine will meet on Tuesday evening, March 18th, at 8.15 o'clock. A symposium on acute articular rheumatism will be presented as follows: The Pathogenesis, by Dr. Heinrich Stern; The Symptomatology and Diagnosis, by Dr. Leonard Weber; The Complications and Sequelæ, by Dr. Frank W. Jackson; The Prognosis and Treatment, by Dr. W. H. Thomson. The discussion will be participated in by Dr. Morris Manges, Dr. Edward G. Janeway, Dr. J. W. Brannan, Dr. S. Baruch, Dr. Abram Meyer, Dr. Andrew H. Smith, Dr. Louis Fischer, Dr. R. van Santvoord, and others.

The American Association of Urologists was organized on February 22d for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the association are specialists in genito-urinary diseases, membership is not limited to those engaged exclusively in this specialty. Thus gynæcologists who embrace renal and vesical surgery in their work are among the founders, as are several gentlemen who devote themselves to the microscopy and chemistry of the urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint. The association consists of active, corresponding, and honorary members, and is in great measure modeled upon the plan of the Société Française d'Urologie, modified to suit American circumstances and conditions. Whenever possible, the branch associations throughout the United States, British possessions, and Spanish America will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the association is principally clinical, for the demonstration of new methods of the technique of examination and treatment. The annual meeting of the American Association of Urologists will be held on the last day of and the day following the meeting of the American Medical Association. The officers of the association are: President, Dr. Ramon Guitéras; vice-president, Dr. William K. Otis; treasurer, Dr. John Van der Poel; secretary, Dr. Ferd. C. Valentine; assistant secretary, Dr. A. D. Mabie.

A New Vaccination Bill has been drawn up to replace the compulsory vaccination bill which has passed the Senate of the New York State Legislature. Dr. Ernst J. Lederle, city commissioner of health; Dr. Daniel Lewis, State commissioner of health, and Dr. E. Eliot Harris, chairman of the committee on legislation of the State Medical Association, after a conference on March 3d, agreed that

the compulsory vaccination bill was an unnecessary measure, and that the present law relating to vaccination practically gave to the health authorities in the State sufficient power in dealing with small-pox cases, except in one or two respects. It was reported recently that Dr. Lewis and Dr. Harris were regarded as strong advocates of the compulsory vaccination bill, and that Dr. Lederle was numbered among its opponents. None of them have ever been in favor of the bill. Steps have been taken to put an end to the compulsory vaccination bill. The substitute bill will probably be an amendment to the present law regarding vaccination. In this city public school children must furnish proof that they have been vaccinated within a certain period or be vaccinated. In such a case vaccination is compulsory. But some boards of health in certain parts of this State have apparently no faith in vaccination, and have adopted no rules relating to the vaccination of children in attendance at public schools in their districts, or, in fact, in relation to the vaccination of any class of persons. Frequently the school commissioners of such places have been in conflict on this subject with the boards of health, and, after fruitless and prolonged efforts to get the boards to change their views on the subject of vaccination, have asked aid from the State commissioner of health to compel the boards to adopt rules making the vaccination of school children compulsory. The State commissioner of health found himself powerless to bring about the desired result, except in cases where his views on the subject and his wishes in the matter had weight with the boards. The substitute bill will give the State commissioner of health power to make vaccination compulsory when he thinks such action necessary. This power will practically be unlimited, as it will affect, whenever the occasion arises, not only school children but all the people of the State.

United States Civil Service Examinations will be held on April 22d for a medical clerk and translator for the Bureau of Animal Industry, Department of Agriculture. The examination will consist of the subjects mentioned below, which will be weighted as follows:

<i>Subjects.</i>	<i>Weights.</i>
1. Translation of medical German.....	25
2. Translation of medical French.....	25
3. Translation of medical Italian.....	10
4. Translation of medical Spanish.....	10
5. Technical bibliographic work in medicine and zoology.....	10
6. Medical and zoological terminology and nomenclature.....	10
7. Experience.....	10
Total.....	100

From the eligibles resulting from this examination it is expected that certification will be made to the position of medical clerk and translator in the Bureau of Animal Industry, Department of Agriculture, at a salary of \$720 per annum, and to other similar vacancies as they may occur. This examination is open to all citizens of the United States, aged twenty years or more, who comply with the requirements. Competitors will be rated without regard to any consideration other than the qualifications shown in their examination papers, and eligibles will be certified strictly

in accordance with the civil service law and rules. Persons who desire to compete should at once apply to either the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners at the places where the examinations are to be held, (a list of which can be obtained from the commission) for application forms 304 and 375, which should be properly executed and filed with the commission at Washington. The regulation requiring that applications be filed at least ten days prior to the date of the examination will be waived in accepting applications for this examination.

Old Managers Retained in State Hospitals.—Governor Odell has indicated clearly, by some appointments made, his intention to retain in the service of the State as many as possible of the former managers of the State Hospitals for the Insane, who were legislated out of office by a recent act. The appointments were those of members of boards of visitation for the Utica State Hospital, the Hudson River State Hospital, and the Binghamton State Hospital. Five persons were appointed as members of a board of visitation for each one of the three hospitals named. Thus fifteen appointments were made, and only one of these new appointments was that of a person not hitherto a manager. Fourteen of the fifteen members of the new boards of visitation were formerly members of the boards of managers.

The Death of Dr. Moore.—The Monroe County (N. Y.) Medical Society, the Rochester Hospital Medical Society, the Rochester Academy of Medicine, the hospital staff of St. Mary's Hospital, the Rochester Chamber of Commerce, and the Rochester Park Board all held memorial meetings on March 4th in honor of the late Dr. E. M. Moore, a notice of whose death appeared in our last issue. Each of the organizations named adopted resolutions setting forth the high appreciation in which the services of Dr. Moore were held.

In Memory of Dr. Mundé.—At a meeting of the Medical Association of the Greater City of New York, held at the New York Academy of Medicine on March 10th, the following report of the Committee on the Death of Dr. P. F. Mundé was adopted: The Medical Association of the Greater City of New York desires to give expression to the loss it has sustained in the death of its associate, Dr. Paul F. Mundé, one of its founders and most distinguished members. In his professional life and work he exhibited the attributes of the conscientious and conservative physician, and throughout his whole career, in every position he occupied, discharged its duties with fidelity and devotion, winning the respect and esteem of all who knew him. Our deepest sympathy is extended to his afflicted family, and we hereby resolve that this note be entered in our minutes and a copy be sent to the family.

W. H. Katzenbach, M. D.,

Henry C. Coe, M. D.,

Charles F. Adams, M. D.,

Committee.

The Death of Dr. Henry R. Baldwin.—The following resolutions were adopted by the Society of the Alumni of Bellevue Hospital, at the meeting of March 5th:

Whereas, in the death of Dr. Henry R. Baldwin our alumni society has lost one of its most eminent and respected members whose noble attributes and high professional character had endeared him to all his friends and to the community in which he lived; be it

Resolved, that we express to his family our deep sorrow and heartfelt sympathy in their sad bereavement; and be it further

Resolved, that a copy of this part of our proceedings be sent to the medical journals for publication.

J. W. S. Gouley, M. D.
J. F. Erdmann, M. D.,
Irving S. Haynes, M. D.,
Committee.

Official News.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending March 8, 1902:

CARTER, EDWARD C., Major and Surgeon, is granted leave of absence for one month, to take effect April 1st, with permission to apply for an extension of one month.

HALLWOOD, JAMES B., Contract Surgeon, will proceed to Fort Leavenworth, Kansas, for duty.

HOLMES, T. G., Contract Surgeon, is granted leave of absence for one month on surgeon's certificate.

IRELAND, MERRITT W., Captain and Assistant Surgeon, will proceed to St. Louis and assume the duties of attending surgeon and examiner of recruits in that city.

MCALL, JAMES H., Contract Surgeon, will proceed to San Francisco for duty at the United States General Hospital.

RICHARDS, ROBERT L., Contract Surgeon, will report for transportation to the Philippine Islands.

ROBINS, R. P., Major and Surgeon, is granted leave of absence for thirty days, with permission to apply for an extension of thirty days.

WATERHOUSE, M. MANLEY, Contract Surgeon, will proceed from Fort Hancock to Plattsburgh Barracks, N. Y., for temporary duty. Upon the return to duty of T. G. HOLMES, Contract Surgeon, Dr. WATERHOUSE will rejoin his station.

The following contract surgeons will proceed to San Francisco for transportation to the Philippine Islands: EVERETT A. ANDERSON, from Devils Lake, N. D.; R. KING COLE, from Dallas, Texas; BONAPARTE P. NORVELL, from St. Louis; JOSEPH R. PARKE, from Philadelphia; JOSEPH J. SHAFER, from Washington.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 8, 1902:

DISEASES.	Week end'g Mar. 1		Week end'g Mar. 8	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	37	6	27	8
Scarlet fever.....	342	33	337	21
Cerebro-spinal meningitis.....	0	0	0	8
Measles.....	1105	40	900	21
Diphtheria and croup.....	303	38	266	32
Small-pox.....	56	11	60	10
Tuberculosis.....	238	166	207	183

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending March 8, 1902.

Smallpox—United States.			
Arizona.....	Naco.....	Feb. 23.....	12 cases.
Arkansas.....	Mississippi Co.....	Feb. 28.....	100 deaths.
California.....	Los Angeles.....	Feb. 18.....	6 cases.
	San Francisco.....	Feb. 17-23.....	18 cases.
Colorado.....	Denver.....	Feb. 1.....	5 cases.
Illinois.....	Chicago.....	Feb. 22-Mar. 1.....	2 cases.
	Danville.....	Feb. 22-Mar. 1.....	8 cases.
	Galesburg.....	Feb. 15-Mar. 1.....	4 cases.
Indiana.....	Evansville.....	Feb. 1.....	8 cases.
	Michigan City.....	Feb. 1.....	1 case.
	Indianapolis.....	Feb. 1.....	7 cases.
	Terre Haute.....	Jan. 1.....	12 cases.
Iowa.....	Clinton.....	Feb. 22-Mar. 1.....	2 cases.
Kentucky.....	Covington.....	Feb. 22-Mar. 1.....	6 cases.
	Lexington.....	Feb. 1.....	3 cases.
Louisiana.....	New Orleans.....	Feb. 15-Mar. 1.....	2 cases.
Maine.....	Durham.....	Feb. 15.....	12 cases.
	Freeport.....	Feb. 19.....	1 case.
	Portland.....	Feb. 8-Mar. 1.....	9 cases.
	Sanford.....	Feb. 19.....	1 case.
Maryland.....	Baltimore.....	Feb. 22-Mar. 1.....	2 cases.
Massachusetts.....	Boston.....	Feb. 22-Mar. 1.....	40 cases.
	Cambridge.....	Feb. 22-Mar. 1.....	9 cases.
	Everett.....	Feb. 22-Mar. 1.....	1 case.
	Haverhill.....	Feb. 23-Mar. 1.....	1 case.
	Holyoke.....	Feb. 22-Mar. 1.....	9 cases.
	Malden.....	Feb. 22-Mar. 1.....	1 case.
	Newburyport.....	Feb. 22-Mar. 1.....	1 case.
	North Adams.....	Feb. 22-Mar. 1.....	1 case.
	Quincy.....	Feb. 22-Mar. 1.....	1 case.
	Somerville.....	Feb. 15-Mar. 1.....	6 cases.
	Waltham.....	Feb. 22-Mar. 1.....	1 case.
	Weymouth.....	Feb. 15-Mar. 1.....	3 cases.
Michigan.....	Detroit.....	Feb. 22-Mar. 1.....	2 cases.
	Grand Rapids.....	Feb. 22-Mar. 1.....	2 cases.
	Ludington.....	Feb. 22-Mar. 1.....	6 cases.
Missouri.....	Hannibal.....	Feb. 1-28.....	6 cases.
Montana.....	Butte.....	Feb. 10.....	6 cases.
Nebraska.....	Omaha.....	Feb. 22-Mar. 1.....	55 cases.
New Jersey.....	Camden.....	Feb. 22-Mar. 1.....	5 cases.
	Jersey City.....	Feb. 23-Mar. 1.....	19 cases.
	Plainfield.....	Feb. 23-Mar. 1.....	1 case.
	Newark.....	Feb. 22-Mar. 1.....	24 cases.
New York.....	Binghamton.....	Feb. 22-Mar. 1.....	10 cases.
	New York.....	Feb. 22-Mar. 1.....	56 cases.
Ohio.....	Cincinnati.....	Feb. 22-Mar. 1.....	7 cases.
	Toledo.....	Feb. 22-Mar. 1.....	1 case.
Pennsylvania.....	Allegheny.....	Feb. 22-Mar. 1.....	8 cases.
	Philadelphia.....	Feb. 22-Mar. 1.....	62 cases.
	Pittsburgh.....	Feb. 22-Mar. 1.....	6 cases.
	Scranton.....	Feb. 1.....	1 case.
Rhode Island.....	Providence.....	Feb. 22-Mar. 1.....	4 cases.
	Warwick.....	Feb. 22-Mar. 1.....	4 cases.
So. Carolina.....	Charleston.....	Feb. 22-Mar. 1.....	2 cases.
	Greenville.....	Feb. 15.....	3 cases.
Tennessee.....	Memphis.....	Feb. 22-Mar. 1.....	24 cases.
	Nashville.....	Feb. 22-Mar. 1.....	1 case.
Texas.....	Houston.....	Feb. 22-Mar. 1.....	32 cases.
Utah.....	Salt Lake City.....	Feb. 8-22.....	2 cases.
Vermont.....	Burlington.....	Feb. 15-22.....	17 cases.
Washington.....	Spokane.....	Feb. 15-22.....	20 cases.
	Tacoma.....	Feb. 10-23.....	14 cases.
Wisconsin.....	Fond du Lac.....	Feb. 22-Mar. 1.....	6 cases.
	Greenbay.....	Feb. 23-Mar. 2.....	10 cases.
	Milwaukee.....	Feb. 22-Mar. 1.....	2 cases.
Smallpox—Foreign.			
Austria.....	Vienna.....	Feb. 8-11.....	10 cases.
Colombia.....	Cartagena.....	Feb. 15.....	3 deaths.
	Panama.....	Feb. 17-24.....	50 cases.
France.....	Paris.....	Feb. 8-15.....	10 deaths.
Gt. Britain.....	Cardiff.....	Feb. 1-8.....	3 deaths.
	Dublin.....	Feb. 8-15.....	1 case.
	Dundee.....	Feb. 8-15.....	3 cases.
	London.....	Feb. 8-15.....	4 cases.
India.....	Bombay.....	Feb. 8-15.....	1180 cases.
	Calcutta.....	Jan. 27-Feb. 4.....	64 deaths.
	Karachi.....	Jan. 11-Feb. 1.....	3 deaths.
	Madras.....	Jan. 19-Feb. 2.....	8 deaths.
Italy.....	Rome.....	Jan. 25-31.....	1 death.
Mexico.....	Mexico.....	Dec. 27-Jan. 4.....	2 deaths.
Russia.....	Moscow.....	Feb. 8-16.....	1 death.
	Odessa.....	Feb. 1-8.....	20 cases.
	St. Petersburg.....	Feb. 8-15.....	1 case.
Uruguay.....	Montevideo.....	Jan. 1-18.....	14 cases.
Yellow Fever.			
Mexico.....	Vera Cruz.....	Feb. 15-22.....	1 case.
W. Indies.....	Curacao.....	Feb. 1-8.....	1 case.
Cholera.			
India.....	Bombay.....	Jan. 27-Feb. 4.....	1 death.
	Calcutta.....	Jan. 11-Feb. 1.....	159 deaths.
	Madras.....	Jan. 25-31.....	1 death.
Plague—United States.			
California.....	San Francisco.....	Feb. 22.....	1 case.
Plague—Insular.			
Hawaii.....	Honolulu.....	Feb. 2.....	3 deaths.

	Plague Foreign		
China	Hongkong	Jan. 11-12	1 death.
"	Shanghai	Jan. 18	Increasing
"	Yongkeong	Jan. 18	60 deaths.
India	Bombay	Jan. 27-Feb. 4	538 deaths.
"	Calcutta	Jan. 11-Feb. 1	193 deaths.
"	Kochi	Jan. 19-Feb. 2	107 cases.
"	Malabar	Jan. 23-31	1 death.
Russia	Batoum	Feb.	1 case.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending March 6, 1902:

CLARK, TALIAFERRO, Assistant Surgeon. Directed to report to the chairman of the board of examiners at Washington for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

GRUBBS, S. B., Assistant Surgeon. Directed to report to the chairman of the board of examiners at Washington for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

HASTINGS, HILL, Assistant Surgeon. Directed to report to the chairman of the board of examiners at San Francisco for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

LAVINDER, C. H., Assistant Surgeon. Directed to report to the chairman of the board of examiners at Washington for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

McMULLEN, JOHN, Assistant Surgeon. Directed to report to the chairman of the board of examiners at Washington for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

PERRY, T. B., Surgeon. Granted leave of absence for twenty-three days from February 28th.

SAWTELLE, H. W., Surgeon. Leave of absence for seven days from February 27th, under paragraph 179 of the *Regulations*.

THORNBURY, F. J., Assistant Surgeon. Relieved from duty at Port Townsend, Washington, and directed to proceed to Honolulu, T. H., and report to the medical officer in command for duty.

Boards Convened.

Board convened to meet at Washington, March 17, 1902, for the purpose of examining assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the Board: Surgeon L. L. WILLIAMS, chairman; Surgeon R. M. WOODWARD; Passed Assistant Surgeon H. D. GEDDINGS, recorder.

Board convened to meet at San Francisco, March 24, 1902, for the purpose of examining Assistant Surgeon HILL HASTINGS to determine his fitness for promotion to the grade of passed assistant surgeon. Detail for the Board: Passed Assistant Surgeon W. G. STIMPSON, chairman; Passed Assistant Surgeon H. S. CUMING; Assistant Surgeon C. W. VOGEL, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 8, 1902:

CARPENTER, D. N., Passed Assistant Surgeon. Detached from the *Illinois*, ordered home, and granted leave of absence for one month on account of sickness.

GRIFFITH, W. E., M. D. Appointed assistant surgeon from February 20, 1902.

WILSON, H. D., Passed Assistant Surgeon. Ordered to accompany a detachment of marines to the Asiatic Station, March 8th.

Births, Marriages, and Deaths.

Born.

WURTHMANN.—In New York, on Monday, March 10th, to Dr. J. Henry Wurthmann and Mrs. Wurthmann, a son.

Married.

WILSON—MASON.—In Boston, on Tuesday, March 11th, Mr. Richard T. Wilson, Jr., and Miss Marion Steadman Mason, daughter of Dr. A. Lawrence Mason.

Died.

CAMPBELL.—In Washington, on Monday, March 3d, Dr. Thomas B. Campbell, in the sixty-fourth year of his age.

CARPENTER.—In Holyoke, Massachusetts, on Friday, March 7th, Dr. Charles O. Carpenter, in the sixty-third year of his age.

CRAWFORD.—In Galena, Illinois, on Saturday, March 1st, Dr. William S. Crawford, in the fifty-second year of his age.

FENGER.—In Chicago, on Friday, March 7th, Dr. Christian Fenger, in the sixty-second year of his age.

HALL.—In Ripon, Wisconsin, on Wednesday, March 5th, Dr. John Storrs Hall, in the thirty-second year of his age.

HANES.—In Detroit, on Monday, March 3d, Dr. William R. Hanes, in the twenty-fifth year of his age.

KING.—In Saratoga, N. Y., on Friday, March 7th, Dr. George W. King, in the seventy-sixth year of his age.

POTTER.—In Kansas City, on Saturday, March 1st, Dr. Thomas R. Potter, in the eighty-second year of his age.

STREATOR.—In Cleveland, on Monday, March 3d, Dr. Worthy S. Streator, in the eighty-sixth year of his age.

WEBER.—In Phoenix, Arizona, on Thursday, March 6th, Dr. Herman W. Weber, of New York, in the forty-first year of his age.

Obituary.

CHRISTIAN FENGER, M. D.

OF CHICAGO.

Dr. Fenger died at his residence, in Chicago, on March 7th, of pneumonia, in the sixty-second year of his age. He was born in Copenhagen, Denmark, on November 3, 1840. While still a medical student, he served as surgeon in the war between Denmark and Prussia, in 1864. Graduating from the University of Copenhagen in 1867, he served as assistant in Dr. Wilhelm Mayer's ear clinic for two years. He served throughout the Franco-Prussian war as surgeon in the Red Cross Ambulance Corps. From 1871 to 1874 he was prosecutor and from 1873 to 1874 Privat-Dozent in the Copenhagen City Hospital. In 1875 he accepted the post of surgeon to the Khalifa district of Cairo, and became a member of the sanitary council. In 1877 Dr. Fenger went to Chicago, and became a member of the County Hospital staff. Two years later he was made curator of the Rush Medical College Museum, and in 1884 was elected professor of clinical surgery in the College of Physicians and Surgeons. In 1895 he became professor of clinical surgery in the Chicago Medical College, and in 1899 took the chair of clinical surgery in the Rush Medical College. At the time of his death Dr. Fenger was president of the Chicago Medical Society and was a member of various American and European medical associations. During his residence in Chicago he served on the staff of nearly all the leading hospitals. Before leaving Denmark he contributed several valuable papers to the *Nordiskt medicinskt Arkiv*, one of his earliest contributions being on stenosis of the pulmonary artery, which appeared in 1873. He has contributed a number of articles to the medical journals since taking up his home in the United States, the majority of which are on purely surgical topics. In conjunction with Dr. Samuel C. Stanton, he wrote the chapter on diseases of the ureter in the *American Text-book of Genito-urinary Diseases*.

Pith of Current Literature.

American Medicine, March 1, 1902.

Remarks on the Diagnosis of Pancreatic Disease. By Dr. William Sidney Thayer.—The author believes that acute inflammation of the pancreas should be recognized in many instances. The importance of an early recognition of those cases which go on to extensive necrosis is easily appreciable. Chronic inflammation should be suspected when glycosuria develops in a person with chronic cholelithiasis, or with cirrhosis of the liver. Also, in glycosuria in the course of hæmatochromatosis, and in glycosuria following attacks suggestive of pancreatic colic. Pancreatic lithiasis is recognizable only when calculi are found in the stools. Cysts of the pancreas are usually to be recognized on account of their location. The presence of obstructive jaundice, with distended gall-badder and rapidly developing cachexia, in connection with little or no hepatic enlargement, is suggestive of primary cancer of the pancreas. Fatty stools, in the absence of diarrhoea or jaundice, together with indications of interference with the digestion of albuminoids, are valuable confirmatory evidence of deficiency or absence of the pancreatic secretion.

A Case of Very Persistent Laryngeal Stenosis. By Dr. J. P. Crozer Griffith.

The Treatment of Acute General Peritonitis. By Dr. Eugene A. Smith.—The author does not agree with those authorities who express most pessimistic views of operations for acute general peritonitis. He ascribes the high mortality in this class of cases to late operation, which notably increases adynamia of the involved intestine with stercoræmia and consequent overwhelming damage to the resisting and rallying powers of the peritonæum. He points out, however, that seemingly moribund patients will rally surprisingly when the peritonæum is freed from the distending volume of seropurulent exudate so often seen in these cases.

A Preliminary Statement of the Alkalinity of the Blood in Infections and the Infusion of Salts Derived from Horse's-blood Ash as a Therapeutic Measure. By Dr. A. Emil Schmidt.

Respiratory Gymnastics; Emphysema and Atelectasis; Lung Reflex; the Heart in Diseases of the Lungs. By Dr. Albert Abrams.

Suggestions to Anæsthetizers. By Dr. Frank E. Simpson.—In brief, the author's suggestions are: (1) Give the patient your undivided attention. (2) Give the anæsthetic slowly. (3) Keep the patient's lower jaw forward. (4) Give the anæsthetic most cautiously when the stage of unconsciousness is at hand. (5) During deep anæsthesia watch particularly the respiration, but also the pulse, eye, and color. (6) The rolling of the eyeballs from side to side is the first and most easily observed sign of returning consciousness.

Philadelphia Medical Journal, March 1, 1902.

Two Cases of Adiposis Dolorosa; One in a Man, Complicated by Epilepsy; Another in a Woman, Presenting also Circinate Retinitis. By

Dr. F. X. Dercum.—In the one case which came to autopsy there were found, as the most important changes, interstitial inflammation of the nerves passing through the fatty deposit, and also striking changes in the thyroid gland. The latter presented signs of atrophy, with, here and there, some evidences of a hypertrophy, which appeared to be an effort at compensation.

A Case of Ascites, Due to Hepatic Cirrhosis, Treated by Transplanting the Omentum between the Peritonæum and the Abdominal Wall. Results with Autopsy Eight Months Later and Exhibition of the Abdominal Viscera, Showing Specimen and Horse-shoe Kidney. By Dr. W. J. Roe and Dr. George W. Spencer.

The Progress of Knowledge Concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen Years. By Dr. Joseph McFarland. —(Continued.)

The Recognition and Training of Mental Defectives. By Dr. Martin B. Barr.—The author believes that the movement for the establishment of special classes at various centres, in connection with the public schools in some of our large cities, is a great step toward solving the problem of relief equally for the normal and for the defective; but, to be really effective, he believes that these must employ attendants as well as teachers. He is careful to insist that there is no cure for that which is not a disease but a defect.

A Further Report on Cases of Tuberculosis Treated by Intravenous Injections of Sodium Cinnamate. By Dr. Alfred Mann.—The author records several cases in which favorable results have followed the use of this treatment. In most cases strychnine, iron, and other general tonics were used whenever they seemed needed. The action of the sodium cinnamate is to cause an immediate leucocytosis, followed by greater activity in the healing process in the diseased area.

The Ice Pack and Its Definite Therapeutic Advantages over other Methods. By Dr. Lester L. Roos.

Boston Medical and Surgical Journal, March 6, 1902.

A Case of Severe and Threatening Hæmaturia from Movable Kidney, with a Discussion of the Causation of this Condition. By Dr. Arthur T. Cabot.—This case is interesting and justifies the author's explanation of certain accompanying phenomena. He reasons that a kidney with short vessels would be quick to feel the effect of a downward pull, and in a kidney lying unusually high, it is conceivable that this pull might produce considerable obstruction to the circulation before the organ came down low enough to be regarded as a movable kidney. Cases of hæmaturia are occasionally reported in which no cause can be discovered, and in which cutting down upon the kidney and splitting the capsule effects a cure. The author suggests that some of these cases may be instances of congestion from the downward drag which has not been recognized, but which has been corrected by the adhesions following the incision into the kidney.

Report of Two Cases Operated on for Deformity of the Nose. By Dr. J. Payson Clark.

Contribution to the Study of Spinal Fracture, with Special Reference to the Question of Operative Interference. By Dr. G. L. Walton.—The author points out that there are no symptoms which signify irremediable crush of the cord. While total relaxed paralysis, anæsthesia of abrupt demarcation, total loss of reflexes, retention of urine, priapism, and tympanites, if persistent, point to complete and incurable transverse lesion, the onset of such symptoms does not preclude a certain degree at least of restoration of function. The prognosis without operation is grave. In most cases it is wise to operate within a few days of the injury, but a delay of some hours is advisable, partly on account of shock and partly to eliminate the diagnosis of simple distortion. An operation does not materially endanger life, and may at least reveal the lesion and lessen the pain; it may sometimes save a patient from death or from helpless invalidism of the most distressing character. Instead of selecting the occasional case for operation, the author suggests that we should rather select the occasional case in which it is contraindicated—the patient with great displacement of vertebræ, with high and rising temperature, the patient plainly moribund, the patient still under profound shock. The dura should be opened freely; it need not be sutured; drainage is not necessary.

Adenocarcinoma of Liver; Perforation of Stomach; Death; Autopsy. By Dr. Charles S. Walker.

Epidemic Pneumonia at West Townsend, Massachusetts. By Dr. R. S. Ely.

Medical News, March 8, 1902.

The Craig Colony Prize Essay: Serotherapy in Epilepsy. By Dr. Carlo Ceni.—(*To be continued.*)

One Way to Fight Contagion. By Dr. Charles V. Chapin.—The author makes several suggestions for the teaching of cleanliness among school children. He would admonish children not to spit; not to put the fingers in the mouth; not to pick the nose; not to wet the finger with saliva in turning the leaves of books; not to put pencils into the mouth or moisten them with the lips; not to put anything into the mouth, except food and drink; not to swap anything that is habitually put in the mouth. Teach the children to keep their hands and faces clean by frequent washing; to turn the face aside when coughing and sneezing; that their bodies are their own private possessions; that personal cleanliness is a duty; that the mouth is for eating and speaking, and should not be used as a pocket; that the lips should not take the place of fingers.

Congenital Dextrocardia. By Dr. William Edgar Darnall.

Somnolence and Loss of Memory resulting from Cholesteatoma of the Middle Ear. By Dr. Francis R. Packard. In the author's case he expected to find some evidence of meningeal trouble upon opening the skull, but although a considerable surface of brain membrane was exposed, there was no evidence whatever of any pathological condition. A great quantity of dead bone in immediate proximity to the middle ear cavity was removed, with

huge cholesteatomatous masses in the interior of the mastoid process. The patient made an uninterrupted recovery. The author believes the cerebral symptoms were the result of at least a congestion of the meninges and possibly of a slight recurrent inflammation of the meninges.

Urticaria of the Upper Respiratory Tract. By Dr. Lewis S. Somers.—Though there is little in literature concerning the presence of this eruption upon the mucous membrane, the author believes that the affection undoubtedly involves the mucosa much more frequently than the reports of such cases would indicate. The history of previous attacks of urticaria, even if they have not involved the mucosa, is an important aid in diagnosis, and in practically all cases, before the disturbance of the mucosa has entirely subsided, the appearance of isolated or multiple wheals on the skin will clearly indicate the nature of the affection.

Journal of the American Medical Association, March 8, 1902.

The New Era in Medicine: What It Means to Cleveland. By Dr. P. Maxwell Foshay.

Extra-uterine Pregnancy. By Dr. F. F. Lawrence.—The author strongly asserts that the diagnosis of this condition is practicable in the majority of cases, and that it is due to the wives and mothers that we not only emphasize the frequency, importance, and danger of this condition, but that we also emphasize that a failure to attempt to make a diagnosis before rupture, when the opportunity for investigation is presented, is a failure totally without excuse. It is a failure which, if the woman should die as the result of rupture and hæmorrhage, would place a very heavy moral responsibility upon the shoulders of him who caused the delay by failure to recognize the condition. Examination of a patient before rupture will reveal a supersensitive uterus; an elastic, sensitive, and sometimes pulsating tumor behind or to one side of the uterus; a peculiar elastic crepitation, not unlike that elicited by feeling the normal placenta when the membranes have been turned outside. In nearly all cases the mass will be practically fixed, and the ovary can be found in close proximity to the tumor, but still not a part of it.

The Rôle of Certain Non-granular and Granular Somatic Cells in Infection. Technics—The Origin, Significance, and Fate of these Morphological Elements. By Dr. H. F. Harris.

The Correction of Deflections of the Nasal Sæptum with a Minimum of Traumatism. By Dr. Otto F. Freer.

The Indications for Myomectomy in Young Married Women, with a Report of Four Cases of Strangulation of Fibroids during Puerperal Involution. By Dr. Edward Reynolds.—The diagnostic points, according to the author, are: 1. The appearance in the early part of the puerperium of severe, intermittent, paroxysmal pains bearing a close resemblance to labor pains and referred to a definite spot at which there is acute tenderness. 2. The appearance, after a few hours of these pains, of the symptoms of pelvic peritonitis, and often in an alarming degree. 3. The detection, on physical examination, of an irregularity in the uterine wall at

the tender spot, not necessarily of large size, and possibly to be made out only under anæsthesia. The principles of treatment should be: 1. The control of the pain by morphine, or, if necessary, by brief but profound anæsthesia. 2. If this fails, immediate myomectomy is probably the best treatment. 3. If the condition has remained undiagnosed until the peritoneal symptoms are extreme and an abdominal operation will probably involve a high mortality risk, and if in this case the tumor is in any way accessible from below, its free puncture and the drainage of the contained serum may probably be relied upon to terminate the attack and permit a safe removal of the tumor at a later date, should that be necessary.

Symphysiotomy. Practical Deductions from an Experience in Thirteen Cases Without a Death from the Operation. By Dr. Edward A. Ayers.

Fever of Hodgkin's Disease. By Dr. Carl C. Warden.

Medical Record, March 8, 1902.

The Treatment of Malignant Growths by the X Ray, with a Provisional Report on Cases under Treatment. By Dr. William J. Morton.—The author asserts that the x ray has secured: 1. Relief from excruciating pain and constant suffering, often immediately. 2. Reduction in the size of the new growth. 3. The establishment of the process of repair. 4. The removal of the odor, if any is present. 5. Cessation of the discharge. 6. Softening and disappearance of lymphatic nodes. 7. The disappearance even of lymphatic enlargements not directly submitted to treatment and often quite distant. 8. The removal of the cachectic color and appearance of the skin. 9. Improvement in the general health. 10. The cure, up to date, of a certain number of malignant growths.

Regarding the Infectious Agent of Yellow Fever: A Reply to Dr. Souchon. By Dr. Alvah H. Doty.—The author sees nothing in the arguments of Dr. Souchon that would prove that yellow fever is transmitted by personal contagion or by clothing, bedding, etc., nor has Dr. Souchon proved that the mosquito is not the medium of infection in this disease. He points out that neither Dr. Souchon nor any other health official has presented statistics proving that disinfection has diminished the extent of outbreaks of yellow fever which from time to time have appeared in the South. Whether or not other ways of propagating yellow fever exist, we know that the mosquito is a medium of infection, and in what better or quicker way can we bring about a solution of the problem before us than by assuming that the mosquito is *the* medium of infection, and acting accordingly? If there are other ways, they will all the sooner present themselves under this procedure.

Pneumonia in the Light of Modern Research. By Dr. Stephen Smith Burt.—In this article the author asserts that lobar pneumonia is universal in diffusion, in nature infectious, unequalled numerically, and in fatality unsurpassed. It is a malady that can be lessened in frequency and lowered in mortality, if it cannot be eradicated; at the same

time this reduction in prevalence and destructiveness, for the most part, is to be effected by incessant sanitary promulgations.

Diabetic Coma; Symptoms, Pathology, and Treatment. By Dr. Abraham Mayer.

A New Test for Albumin. By Flora C. Fuhs, Phar. D.—The author's test is as follows: Two cubic centimetres of carbol-glycerin solution are poured into a small test tube, and an equal amount of the filtered urine is added. Mix thoroughly with a glass rod, or agitate. If a clear, transparent liquid results, there is no albumin present; but if the slightest turbidity is noticeable, the urine is albuminous.

A Severe Case of Diphtheria, Involving the Pharynx, Larynx, Trachea, Bronchi, and probably the Œsophagus and Stomach. By Dr. J. D. MacPherson.

Hypertrophic and Atrophic Cirrhosis of the Liver. By Dr. John A. Mitchell.

Report of a Successful Case of Gastrotomy in an Infant. By Dr. John J. Howell.

Lancet, March 1, 1902.

The Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. By W. McA. Eccles, F. R. C. S.—(The first and second of the Hunterian lectures). *Anatomy.* The human testis may be arrested in its normal descent at one of several spots—within the abdomen, in the inguinal canal, just below the superficial abdominal ring, or in the upper part of the scrotum. These constitute non-descent, partial descent, or retention. The testis may pass into an unnatural position, such as the perinæum, Scarpa's triangle, the root of the penis, or upon the superficial surface of the aponeurosis of the external oblique muscle of the abdomen. These constitute abnormal descent or ectopia.

The causes of the arrest of the human testis may be classified as follows:

(a) Conditions associated with the mesorchium: (1) An abnormally long mesorchium, the testis moving so freely in the abdominal cavity as not to engage the ostium of the processus vaginalis; (2) adhesions, generally the outcome of intra-uterine peritonitis; (3) abnormal persistence of the plica vascularis.

(b) Conditions associated with the testis and its component parts: (1) The spermatic vessels too short; (2) the vas deferens too short; (3) the epididymis abnormal in size; (4) fusion of the two testes-synorchism; (5) certain forms of hermaproditism.

(c) Conditions associated with the gubernaculum testis: (1) Absence of the normal attachments of the gubernaculum; (2) deficiency of its muscular fibres; (3) deficiency or absence of its scrotal attachments.

(d) Conditions associated with the cremaster: (1) Retraction of the testis after it has reached its normal scrotal site; (2) want of action of the internal fibres of the cremaster before the testis has reached the inguinal canal.

(e) Conditions associated with the route: (1) Ill development of the inguinal canal; (2) ill development of the superficial abdominal ring; (3) ill development of one half of the scrotum.

(f) Other conditions, such as the wearing of a truss, etc. In some cases the body of the testis may be arrested in the canal, while the epididymis and vas pass into the scrotum.

There are probably only two causes of abnormal descent; one is that the testis may be drawn into its unusual position by the traction of certain sets of fibres of the gubernaculum testis, or it may be pushed into its abnormal site by an advancing hernia. It is very doubtful if the testis has ever spontaneously passed through the femoral ring. Into whatever position the testis unnaturally passes, it takes with it a process of peritonæum termed the processus vaginalis testis, provided that the pouch remains connected with the general peritoneal cavity, or the tunica vaginalis if it is shut off from the same.

There are at least three ways in which the abnormal condition of the imperfectly descended testis can be viewed. That there has been an initial want of proper formation of the organ, altogether apart from the want of complete descent. That the organ proceeds in its usual growth up to the period of the commencement of sexual life, but never undergoes that full development accompanying the onset of puberty. That the testis does acquire its normal size and complete physiological function at puberty, but that owing to its abnormal position, it is soon involved in retrogressive changes producing in the end entire atrophy of the seminal tubules and a consequent loss of activity. The structure of an arrested testis differs materially from that of a normal testis. The tubules are fewer in number, smaller, and more widely separated from one another by interstitial tissue which is rich in blood vessels. Scattered throughout are interstitial stroma cells in large numbers. As a rule, neither spermatoblasts nor spermatozoa can be demonstrated in the tubules of imperfectly descended testes.

Physiology. Double arrest or ectopia associated with want of development of the testes, as a rule, implies sterility on the part of the man, although he may be perfectly virile. Experience has shown that a single, well-developed testis is sufficient in itself to provide all that is needed for the proper growth of the individual, and that no serious inconvenience will result should it become necessary to remove its fellow. Arrest of one testis is only very rarely associated with any deficiency in bodily growth. Arrest of both testes, when they are ill-developed, is usually accompanied by some want of development of the body as a whole. In male cretins, for instance, it is very rare to find either of the testes within the scrotum. Arrest of both testes, but with good development of both glands, is rarely connected with imperfect bodily growth. In many cases imperfect descent of the testis is accompanied by actual bodily deformities; among these may be mentioned absence of one kidney, co-existence of talipes, spina bifida, or cleft palate, non-descent of the cæcum, ectopia vesicæ, and double penis.

In both true and false hermaphroditism, non-descent of the testis is common.

Pathology. Inflammation of the imperfectly descended testis may be due to: (1) Traumatism; (2) extension of inflammation from the urethra; (3) secondary inflammation in certain cases of parotitis (in all of these the inflammation is of an acute na-

ture); (4) deposit of the tubercle bacillus; or (5), syphilitic infection.

Although atrophy often follows inflammation of the arrested testis, yet it is doubtful whether malignant disease is ever attributable to the same lesion. Torsion of the spermatic cord may occur in connection with the imperfectly descended testis; indeed partial descent with a freely movable testis is the chief predisposing cause of torsion. For the integrity of the gland torsion necessitates a very grave prognosis. Repeated attacks tend to eventual disorganization. Torsion produces atrophy. Torsion with infection by bacteria leads to true moist gangrene.

Certain Diseases of the Blood Vessels. By A. P. Gould, F. R. C. S.—(The first of the Lettsomian lectures on this subject. They will be abstracted on completion.)

Gray Hair and Emotional States: An Anthropological Note. By Dr. R. Jones.

A Note on Hypostatic Albuminuria of Splenic Origin. By Dr. H. D. Rolleston.—The writer calls attention to the fact that in some patients with considerable splenic enlargement, rest in bed or in the recumbent position may be accompanied by albuminuria and that the albumin may disappear from the urine when the patient assumes the erect position. While the albuminuria is probably due to the mechanical pressure of the spleen on the left renal vein in the recumbent posture, the occurrence of this intermittent or hypostatic albuminuria is very far from constant in cases of splenic enlargement. In this it resembles albuminuria from chronic venous engorgement induced in other ways, as in the backward pressure of mitral disease. It does not depend upon the size of the spleen, for hypostatic albuminuria may be, and indeed, usually is, absent when the spleen is very large, and may be present when the spleen is relatively smaller. Further, the appearance of albuminuria in the recumbent position and its disappearance in the erect position is not absolutely constant even in those individuals with enlarged spleen in whom its presence has been noticed.

This hypostatic albuminuria is the reverse of what usually happens in cyclical albuminuria.

Removal of a Sarcomatous Tumor from the Tail of the Pancreas of a Child Four Years and Eight Months Old; Secondary Growth in the Portal Vein. By J. D. Malcolm, M. B.

General Remarks on Asylum Dysentery and Its Treatment by Injections of Potassium Permanganate. By Dr. P. W. MacDonald.—During the autumn of 1899 and the spring of 1900 dysentery appeared in the Dorset County Asylum. The cases were of the usual type and character. At this time the ordinary therapeutic remedies were employed and in a few cases injections of a solution of silver nitrate were tried, but the results were most discouraging. As far as practicable the cases were isolated and the complaint disappeared, only to reappear in the winter of 1900. During this second outbreak the use of injections of potassium permanganate was resorted to. As soon as the case was diagnosed to be one of dysentery the lower bowel was washed out night and morning with a weak solution (two to four grains to the pint) of perman-

ganate, the instrument used being an ordinary enema syringe. The motions rapidly lessened and seldom had the treatment to be prolonged beyond the third day. In every case the patient recovered, and the outbreak was soon cut short. Apparently the permanganate acts in its double capacity of a disinfectant and a styptic. To insure success the treatment should be commenced early, and thoroughness is an essential precaution.

British Medical Journal, March 1, 1902.

Feeding in Gastric Ulcer. By Sir Lauder Brunton.—In cases of gastric ulcer one begins by giving the patient rest in bed, with feeding by the rectum for a few days, then careful feeding by the mouth while rectal feeding is still continued. The first food given is generally milk in small quantity, a tablespoonful of milk with a tablespoonful of lime water every two hours. The lime water is gradually diminished at the same time that the proportion of milk is increased, as the patient will bear it for several days more. Then the effect of custard, which is very mild and non-irritating, may be tried. Next, pounded fish and perhaps pounded chicken may be given. Some chocolate may be given at the same time; it is well borne and makes a great change in the patient's diet, which is otherwise very monotonous and tasteless. Then some of the various starchy foods may be given, and it should be borne in mind that such foods should be treated as starch—*i. e.*, made into a paste with cold water first, and hot water added afterward. Among the articles of food to be especially avoided are nuts, bones, vegetables containing much cellulose, and stringy meats. By careful mastication much trouble may be avoided, and instructions to that end should be given to every patient.

Medical Diagnosis and Modern Discoveries. By Dr. J. Adam.

Remarks on Congenital Cysts of the Tongue. By Dr. J. W. Cousins.—Congenital cysts of the tongue are not common. They generally occur in the middle line between the genio-hyo-glossus muscles, or between the genio-hyo-glossus and the myohyoid. They may remain unchanged for years. Their contents consist of soft sebaceous matter, and occasionally hair and solid masses of true dental tissue. The cyst wall is lined with squamous epithelium, and is of delicate structure and easily torn, but it is occasionally thick and fibrous. These tumors do not fluctuate, but feel elastic and tense on palpation. They are generally observed in young adults, being overlooked in infancy. They are painless, but if irritated they are apt to suddenly increase in size and to undergo inflammatory changes. Congenital cysts have their origin in the accidental displacement of some epithelial structure. During early embryonic life a portion of the epiblast gets folded in and shut off from the external surface. They always possess a true epithelial lining, provided it has not been destroyed by necrotic and suppurative changes. Nævi and warty growths are the commonest congenital tumors of the tongue. Central sublingual cysts projecting into the submaxillary region are occasionally met with. They are true dermoid cysts and are the outcome of the renewed activity of embryonic relics. Complete ex-

cision of the cysts is the only remedy. The platysma and fascia should be freely divided, the central muscles separated, and the cyst or sinus carefully dissected out.

The Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. By W. McA. Eccles, F. R. C. S.—(Abstract of the Hunterian lectures. See abstract of the *Lancet* for March 1, 1902, in this number of the *Journal*.)

A New Method of Dealing with the Peritonæum in Operating for Radical Cure of Umbilical and Inguinal or Femoral Hernia. By W. F. Brook, F. R. C. S.

Rupture of the Jejunum from Direct Violence without External Bruising. By Dr. J. L. Livingston.

Two Cases of Inoperable Scirrhus of the Breast Treated by Oophorectomy; Results. By E. P. Paton, F. R. C. S.—The author reports two cases of inoperable cancer of the breast in which he performed oophorectomy. In neither case was the patient benefited; the disease progressed rapidly, and the patients died in a few months. In both the growth was associated with either pregnancy or lactation, and the removal of the ovaries was done at a time of life when theoretically such removal should have had the most effect.

Treatment of a Case of Scirrhus Recurrent Five Years in a Patient Aged Ninety-three; Improvement. By Dr. E. A. Peters.—The author reports a case of recurrent cancer of the breast occurring in a patient aged ninety-three years, which was treated by exposure to Röntgen rays. Improvement was noticeable at the end of a week's treatment. The discharge and pain had decreased to a minimum, and the tumor had shrunk greatly in size. Unfortunately the patient died of croupous pneumonia before the completion of the treatment.

Centralblatt für innere Medizin, February 8, 1902.

Leucolytic Serum from a Case of Lymphatic Leucæmia.—Dr. M. Franke, in a preliminary communication, describes how a serum was obtained from a patient suffering from lymphatic leucæmia, which, in a hanging drop, had the power of dissolving the large and small leucocytes obtained from the patient's blood and examined on a warmed stage. Check experiments proved the positiveness of the microscopic finding. The serum was obtained by making an aseptic emulsion of some of the axillary glands, which was injected in gradually increasing quantities into a rabbit. The animal was killed by allowing it to bleed to death, and its centrifugated serum was used for the experiment. The author intends to employ the same method of procedure with freshly removed sarcomata, in order to test the efficacy of such a serum in persons suffering from sarcoma. In the leucæmic case, the serum was not injected owing to the patient's bad general condition.

Münchener medicinische Wochenschrift, February 11, 1902.

Dietetic Therapy in Gastric and Intestinal Diseases. By Professor A. Schmidt.—(*Continued article.*)

Statistical Results of Syphilis. By Professor M. Matthes. (*Continued article.*)

Pulmonary Tuberculosis in Nurslings.—Dr. Alexander Quirin reports some cases, and says emphatically that the positive diagnosis can be made only by the finding of the tubercle bacilli in the sputum, which is notoriously difficult to obtain in infants. The author obtains the sputum by inserting the finger, wrapped with sterilized gauze, into the mouth near the base of the tongue; or, he sometimes evokes a cough by irritating the pharynx and then catches the sputum in the manner indicated before it can be swallowed.

"Mastzellen." By Dr. L. Michaelis.

"Mastzellen" in Exudates. By Dr. Alfred Wollf.

Rare Anomaly of the Biliary Passages.—Professor Hauskehr reports a case in which the gall-bladder lay beneath the left lobe of the liver. The cystic duct emptied into a narrow left hepatic duct which crossed the very large portal vein and joined a larger right hepatic duct at the inferior edge of the hepatico-duodenal ligament.

Chloroform Narcosis without a Mask by Means of a Tracheal Cannula. By Dr. E. Schlechtendahl.

Determination of the Cardiac Boundaries. By Dr. Carl Handwerck.

Renal Injury or Renal Inflammation after Subcutaneous Injuries to the Kidney? By Professor G. Edlefsen.—(*Concluded.*)

Riforma medica, December 6, 7, 9, and 10, 1901.

The Pathogenesis of Bronchial Asthma. By Dr. Benedetto de Luca.—The cause of asthma, in order to produce the attacks, must excite reflexly certain medullary centres, and primarily the vasomotor centre. The attacks of bronchial asthma, in fact, depend upon the abnormal reflex irritability of these centres. In most cases the affection occurs in neuropathic individuals, in whom the central nervous system is easily excited. In such persons the attacks of asthma may be the clinical equivalent of other, more or less complex, nervous manifestations. The attack of asthma, from this point of view, may have a variety of interpretations, and may be regarded rather as a syndrome than as a separate disease. The chief lesion is the narrowing of the bronchi during the attack, partly by virtue of the congestion of the mucosa, partly as a result of muscular spasm. Both elements must be present concurrently in the formation of the attack; if one of them is lacking, the attack will be abortive. The diaphragmatic spasm which occurs during the attack is a collateral phenomenon, and depends only upon the general exaggerated reflex irritability of the respiratory muscles, which is due to the obstacle to the passage of air in the bronchi. The secretion of the bronchial mucosa has no pathological significance in the attacks, and therefore the spirals of Curschmann, and the crystals of Charcot-Leyden have no special significance. The attack of bronchial asthma is developed first by the excitation of the bulbar centres, controlling the tone of the arteries, followed by circulatory disorders in the bronchi, which evoke, by reflex action upon the pneumogastric nerve, a spasm

of the bronchial walls. The obstacle to the passage of air in the bronchi in turn excites the common respiratory centre, thus giving rise to the paroxysm of dyspnoea.

December 11, 1901.

On Acute "Appendicular" Pneumonia in Children. By Dr. R. Massalongo.—It is conceded by most observers that acute morbid processes in other organs may simulate the clinical picture of appendicular inflammation ("pseudo-appendicitis"), and this fact has proved a cold douche upon the heads of the ultra-radical operators. The author calls attention to a type of acute pneumonia in children which begins very much like an appendicular inflammation. Within the past three years he has observed four such cases in children from five to twelve years of age. These cases must not be confounded with the hysterical or nervous "pseudo-appendicitis" of Talamon and other authors; for the evidences of pneumonia which become manifest after a time soon clear up the diagnosis. Nor must it be thought that in these cases there is a primary appendicular inflammation, followed by a secondary pneumonia arising through the migration of the infection from the appendix; for in several cases of this kind an early operation proved that the appendix was perfectly healthy, while pneumonia developed later on, and the type of pneumonia was not of the septic variety met with in pneumonias complicating appendicular inflammation.

The child is taken with fever, preceded and accompanied by gastric disturbances, restlessness, and extremely acute pain and tenderness in the lower right quadrant of the abdomen. Nothing is found on examining the chest; and, of course, in children there is no sputum. The diagnosis is therefore very difficult, but blood-count and microscopical examination of the blood may come to our aid. Appendicular inflammation, moreover, is often accompanied by very indefinite local signs, so that the absence of a tumor, etc., does not help us very much. After three or four days the signs of acute pneumonia developed three times on the right side and suspense, that mistakes as to treatment are frequently made, and that conservatism is imperative. The cause of the abdominal pain preceding the onset of pneumonia has been variously explained; but it is probable that this pain is the result of a reflex which starts at the inflamed lung and is transmitted through the sympathetic and the spinal cord to the intercostal nerves along the twelfth nerve and its branches. In the four cases observed, the pneumonia developed three times on the right side and once on the left.

December 12, 1901.

Cryoscopy of the Urine and of the Blood in Surgical Affections of the Kidney and in Echinococcus Cysts of the Liver. A Preliminary Communication. By Dr. Gaetano Florio and Dr. Pusateri Santi.—A study of this subject, in connection with a number of cases, has convinced the authors that the data of cryoscopy of the urine are of the greatest value in the study of renal functions. The weak side of cryoscopy is the necessity of urethral catheterization, for every surgeon should remember that the latter procedure offers a possi-

bility of infection by the ascending route. Catheterization of the ureters is necessary in cases in which the freezing-point lies between 0.80° and 0.90° and not in those in which the urine has a freezing-point between 0.50° and 0.80° , for in the latter it is almost certain that the kidneys are affected. Cryoscopy of the urine should be complemented by that of the blood, because, by means of the latter, one may obtain, although not always, an idea as to the functional condition of the kidneys. It is not advisable, however, to examine the blood only; for the freezing-point of the urine cannot be deduced with certainty from that of the blood. The freezing-point does not depend upon the specific gravity of the urine, and it often occurs that two urines, having the same specific gravity, have different freezing-points. A urine that remains in the bladder suffers changes affecting its concentration. The formulæ of Claude and Balthazard have only a relative value and the expression $\frac{\Delta}{\delta}$ is not always an index of urinary elimination, nor are the variations therein always caused by the same factor. In uræmia there is also an insufficiency of other organs than the kidney, and this cannot be measured by the aforesaid formulæ. In echinococcus cysts of the liver, the elimination is not affected.

December 13 and 14, 1901.

On the Neuritis of Tuberculosis. By Dr. Clemente Ferraris.—An experimental study of the subject shows that, as has already been found clinically, the neuritis of tuberculous patients is a peripheral one. It is accompanied by paralysis, and by exaggeration of reflexes, and is not accompanied by alterations in sensation, or caused by the toxins of the tubercle bacillus, which attack the peripheral nerve.

December 16, 1901.

A New Culture Medium for Bacteria. By Dr. Andrea Zinno.—A liquid culture medium prepared with digested cerebral substance was found by the author to give very good results in the production of toxins, and he now describes a solid medium prepared with the same material. To a given quantity of the fresh brain of an ox, which has been reduced to a pulp, he adds a double quantity of water and then 1 per cent. of Grubler's purest pepsin. This mixture is now digested at a temperature of 40° or 42° C. for from twelve to fifteen hours, after which it is allowed to boil for an hour, and, after filtering, it is neutralized until a slightly alkaline reaction is obtained with decinormal sodium hydrate. Gelatin and agar are now prepared with this nutrient substance in the usual manner. The author found that a great variety of germs developed upon this medium with marked facility, in fact more easily than upon any other nutritive medium. Most of his researches were made with the bacillus of diphtheria which developed on this new soil more speedily than upon the ordinary nutrient substances employed for its cultivation.

December 17, 1901.

Myelomas of the Tendinous Sheaths. By Dr. Giovanni Tomaselli.—Myelomas or myeloplastic tumors are rare in the tendon sheaths, and occur

more often in bones. They develop slowly; do not bear any of the characteristics of malignant tumors, even locally, and cannot be distinguished from sarcomas except by microscopical examination. The slow protracted course and the absence of glandular enlargements is of aid in their differentiation from malignant growths.

Khirurgia, November, 1901.

On Resection of the Larynx in Cancer. By Dr. N. I. Napalkoff.—Laryngectomy, partial and complete, are operations which deserve wider application. Up to 1888, when attention was called to this subject by the case of the Crown Prince Frederick, there were only 55 cases of partial laryngectomy on record, and since then till 1898 these numbered 146. The complete laryngectomies on record up to 1888 number 15, since then to 1898, 124. The mortality from the complete operation in a collection of 50 cases (Schmicgelov) was 22 per cent., and in 50 cases of incomplete laryngectomy only 16 per cent. No recurrence took place for over three years in 9 per cent. of the partial resections, and in 5.9 per cent. of the complete resections, and Schmicgelov's collection gives 16 per cent. and 10 per cent. without recurrence in these two classes of operations.

The best results are, of course, obtained when operating in cases in which the cancer is still limited to the larynx itself. Whether a partial or complete resection is to be used, must be decided according to the extent of the cancerous process, for even when the whole organ is removed, the patient can speak in a very well audible whisper, and can speak well with the artificial vocal apparatus. The author reports five cases in which resection was performed, and describes the technics used. The wound should be left open throughout its extent, a measure which prevents the occurrence of cellulitis along the trachea into the mediastinum. The trachea should be sewed into the lower end of the wound, so as to prevent pneumonia from swallowing. Of the five cases reported, one patient died on the third day after operation of heart failure, one had a recurrence of the growth, the rest recovered.

On Resection of the Stomach in Cancer of that Organ. By Dr. S. F. Degiurinsky.—The author reports a case of cancer of the stomach, in which resection of the tumor was performed, and in which the patient died eleven days after the operation, supposedly from the rupture of a suture. He thinks that it is better in such cases to sew up separately the stomach and the intestine, and to perform a gastro-enterostomy by Roux's method—an operation which gives a lower mortality than that performed by means of Murphy's button. In spite of the fact that the suture gave way in this case, there was no general peritonitis—a fact which the author attributes to the presence of a Miculicz drain. A local peritonitis with adhesions occurred, and if the patient had been in a better condition and the surgeons more bold, a gastro-enterostomy performed on the day of the rupture might have saved the patient's life.

The Operative Treatment of Exstrophy of the Bladder by Maydl's Method (Transplantation of

the Ureters). By Dr. L. V. Orloff.—Various methods of operation are available in such cases, but there is none that may be termed ideal. The author has operated on four cases of exstrophy by Maydl's method. An ideal method of operation for exstrophy must secure the formation of a bladder of sufficient size; must prevent the occurrence of hernia of the mucous membrane of the bladder through the anterior abdominal wall; and must secure a reestablishment of the functions of the sphincter of the bladder, and the formation of a ureter and a normal urethra. Although perfect results were not obtained in any of the four cases reported, the author favors Maydl's method as approaching most closely to the ideal. An analysis of fifty-six cases operated on for exstrophy showed that Maydl's method gave fairly good functional results as regards the retention of a sufficient amount of urine in the rectum (into which the ureters were transplanted). Hence, this operation removes in most cases the great inconvenience of exstrophy; namely, incontinence of urine. As regards the possibility of ascending renal infection from the rectum after this operation, the author says that an analysis of the statistics shows that this danger is by no means so great as may be supposed theoretically. Maydl proposes to retain as much as possible of the muscles at the mouth of the ureters in transplanting them, and also to transplant the ureters into the sigmoid flexure, instead of into the rectum, in order to diminish this danger. The mortality immediately after operation was 18 per cent., and, later, only 6 out of 59 patients died of complications. In three of these, a pyelonephritis was found. In 9 cases there were fistulæ, and in five, peritonitis.

Roussky Vrach, February 2, 1902.

The Admission of Women to the Universities.

By Dr. D. N. Jbankoff.—In this study the author shows that existing conditions in Russia offer but few opportunities for professional study in the universities to women; that the establishment of special professional schools for women means an enormous expenditure, unless they be imperfectly equipped. He concludes that experiments, both in Russia and abroad, have shown that co-education in the professional schools is without the drawbacks that have been feared when the system was first proposed. As the Russian university laws are now undergoing revision, he urges the admission of women to the universities on the same terms as men.

The Diagnosis and Treatment of Diseases of the Œsophagus. By Dr. S. P. Feodoroff.—The author calls attention to the value of œsophagoscopy in the diagnosis of œsophageal diseases. In cases where the stricture was so narrow that even the smallest bougie could not pass it, the author passed an œsophagoscope, and by the aid of this instrument, illuminating the strictured area, passed a sound directly under control of the eye through the stricture. If this proved impossible, he removed a small piece of granulation, etc., from the stricture by the aid of forceps introduced through the œsophagoscope, and subjected the specimen to microscopic examination. He determined the distance of the stricture from the mouth by means of a special sound devised by him-

self. This sound consists of a very thin elastic plate to which olivary bougies are screwed. On the stem of the instrument are marks indicating the distance of the olive from the edge of the teeth. The distance between the marks on the stem indicates accurately the length of the stricture. Acute inflammations of the œsophagus, such as result from the swallowing of corrosive fluids, should not require the use of the œsophagoscope; in fact, the instrument is contraindicated in these cases. It is quite a different matter with the chronic cases or with cases of acute œsophagitis produced by swallowing foreign bodies. Cancer and syphilis of the œsophagus may also be diagnosticated by the use of the œsophagoscope, and in the case of cancer an early diagnosis may give good results on operation.

On the Question of Cell Toxines (Cytotoxines). Thyreoidotoxines. (A Preliminary Communication). By Dr. A. Th. Manjkovsky.—By the introduction of various organs of one species of animals into the peritoneal cavity of another species, a serum can be obtained which contains substances that are specifically toxic for the cells of the organ corresponding to that introduced, if the serum aforesaid be injected into the original species. It is probable that a specific cytotoxic serum can be produced for every organ in the body of an animal. The author attempted to manufacture such a specifically toxic serum for the cells of the thyroid gland. He excised the thyroid gland of a dog and injected an emulsion of this organ in 0.8-per-cent. salt solution into the peritoneal cavity of a cat. After three injections, given at intervals of two weeks each, the serum of the cat was injected into the peritoneal cavity of a new dog, with the result that certain lesions, which are not definitely described were produced in the thyroid gland of the last animal, and in addition these dogs exhibited the same symptom-complex that is observed in dogs deprived of their thyroid gland by operation. The effects just mentioned occurred also when the specific serum was injected into the circulating blood of the dog, with a difference only in the degree of the action. The serum is therefore a thyreoidotoxic one. The detailed results of this study will appear later.

A Case of Ankylosis of both Hip Joints. By Dr. I. I. Griekoff.—The patient was a woman, aged thirty-one years, who had a double ankylosis of the hips, almost at right angles to the trunk, the thighs being in adduction, so that the knees nearly touched each other. There was a family history of tuberculosis and the usual history of hip disease. Her walk was like the movement of a duck, and her figure resembled that of a Hottentot woman. The first step of the operation was the severing of the muscles of the thigh around the hip joint, in order to see whether the ankylosis was really a bony one. This proved to be the case, and the joint was accordingly resected according to Volkmann's method. The wound healed by first intention, and four months later the same operation was performed on the other side. The after-treatment consisted of massage, baths, and passive movements. The results were as follows: The patient could walk freely with a cane, and could walk and stand without support. She could sit well, and her height was increased six inches. The mobility of the hip joints was not perfect, but greatly improved.

Book Notices.

Infant Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M. D., New York, Visiting Physician to the Willard Parker Hospital, etc. Second Edition. With 52 Illustrations and 23 Charts and Tables, mostly original. Philadelphia: F. A. Davis Company, 1901. Pp. viii-343.

The extended notice which we gave to the first edition of this book contained a detailed analysis of its contents and a review of its principal features. It may be said of the present edition that it is decidedly an improvement upon the first. The author has added several new chapters, including one on infant feeding in summer complaints, and one on diet for children after weaning. The call for a second edition came within six months of the appearance of the first, a fact which speaks plainly for the favorable reception with which the book has met. In the new edition some errors of typography, etc., that had crept into the first have been carefully corrected, and the book has received a more attractive dress from the publishers.

The book as it stands now is probably as complete a manual on the subject of infant feeding as there is in the English language, and will prove of use to all those who are interested in the practical aspects of this subject.

Diseases of the Stomach and their Surgical Treatment. By A. W. MAYO ROBSON, F. R. C. S., Member of Council and Hunterian Professor (1897 and 1900), Royal College of Surgeons of England, etc., and B. G. A. MOYNIHAN, M. S. Lond., F. R. C. S., Assistant Surgeon, Leeds General Infirmary, etc. New York: William Wood & Company, 1901. Pp. x-306.

From very modest beginnings as Hunterian Lectures on gastric surgery by Mr. Mayo Robson, this subject matter has been transformed, under the joint authorship with Mr. Moynihan, into a comprehensive system covering the entire field of the surgery of the stomach. The completeness and explicitness with which this is accomplished are dependent on the due regard for clinical factors which lead up to the indications calling for surgical aid. The style is very vivid, since detailed histories are incorporated with the text, and limitations of personal experiences are compensated for by a liberal perusal of authoritative statements of independent workers in the same field.

This volume is an index of one of the distinct gains that have been made in intra-abdominal surgery. The field bids fair to exceed that of gall-bladder surgery and occupy a place second only to that of appendicular inflammation. Like the latter, diseases of the stomach are on the border line of medicine and surgery, and the admonition expressed in the pages of this book that better results from operations on the stomach can only be expected if the practitioner early recognizes the conditions rightly places the burden of proof on the practitioner.

The volume offers us for the first time a collection of valuable data and accurate statistics of all the surgical procedures appertaining to gastric surgery.

The technical considerations are fully abreast of the times, and this treatise must be viewed as complementary to the several excellent systems dealing with the medical aspects of stomach diseases. By far the largest attention is accorded to ulcer of the stomach and its complications. As to carcinoma, the authors conclude from post-mortem statistics that it is the local character of the growth which determines the death of the patient, and in this they see the keynote calling for more extensive resections in the future.

The illustrations, though not of the high artistic order so common to books of the present day, are none the less sufficient and to the point. A distinct gap has been filled by the appearance of this volume, and what makes its teachings so weighty is that the conclusions are drawn from an extensive experience covering more than two hundred cases.

Morbus Hungaricus. Eine medico-historische Quellenstudie zugleich ein Beitrag zur Geschichte der Türkenherrschaft in Ungarn. Von Dr. TIBERIUS VON GYORY, Budapest. Jena: Gustav Fischer, 1901. Pp. vii-191.

This pamphlet is a medico-historical study which is mainly of local interest to the native physicians of Hungary. Aside from this, its merit consists in its being a painstaking research made into the original literature of the Middle Ages bearing on morbus hungaricus, with a critique of the same which leads its author to declare morbus hungaricus identical with typhus fever.

A Laboratory Handbook of Urine Analysis and Physiological Chemistry. By CHARLES G. L. WOLF, B. A., M. D., Instructor in Physiological Chemistry, Cornell University Medical College. Illustrated. Philadelphia and London: W. B. Saunders, 1901. Pp. 5 to 203. (Price, \$1.25.)

This volume will more nearly fulfil its purpose as a student's laboratory guide than as a reference book for practitioners. It will, however, require considerable revision before it will prove quite satisfactory as either.

The work is very condensed, being reduced to a description of tests and experiments, with only such other matter as is needed to give them logical connection. Its conciseness is a feature that will make the book of value for ready reference when its very obvious faults of omission are corrected. Although the examination of the stomach contents, for no apparent reason, is discussed in two widely separated chapters, neither of these gives any consideration to the all-important subject of the quantitative estimation of free and fixed acids. The urinary tests are described concisely and in sufficient number, but not always with sufficient accuracy. Thus, the author contents himself with instructing us to drop into the mixture of hydrochloric acid and urine "a little saturated solution of sodium hypochlorite" when testing for indican. It is a common experience that an excess of the oxidizing agent (more than one or two drops when using Labarraque's solution) often vitiates the accuracy of the test. Skatol is not mentioned in the book. It seems odd, too, that so recent a publication should not contain at least a passing reference to cryoscopy.

Zur Lehre von der Blutzirkulation in der Schädelhöhle des Menschen namentlich unter dem Einfluss von Medikamenten. Experimentelle Untersuchungen. Von Dr. HANS BERGER, Hausarzt der psychiatrischen Klinik zu Jena. Mit 5 Tafeln, 16 Kurven, und 1 Figur im Texte. Jena: Gustav Fischer, 1901. Pp. 78.

This brochure sets forth the author's personal research bearing on the cerebral circulation as influenced by the administration of medicinal agents used in psychiatric practice. The arrangement of the subject matter comprises a general part, devoted to extensive historical considerations, and a special part in which the experiments are detailed under the headings nosography, technics, cerebral pulsations, vasomotor cerebral pulsations, respiratory cerebral pulsations, and the influence of position and muscular action on the cerebral pulsatory curve. Then follows an account of some of the drugs employed in the experiments—amyl nitrite, camphor, cocaine, caffeine, digitoxine, hyoscine, and morphine. The conclusions of the author are that the actions provoked by these drugs cannot be traced to their influence on circulatory changes alone, but rather abide in their specific influence on the nerve cells.

A Treatise on Medical Jurisprudence, based on Lectures delivered at University College, London. By GEORGE VIVIAN POORE, M. D. (Lond.), F. R. C. P., Professor of the Principles and Practice of Medicine, University College, London. With Illustrations. New York: Longmans, Green, & Company, 1901. Pp. xxiv-533.

The title of treatise is a more formidable one than should have been attached to this book. It is, however, a most interesting, practical, and erudite work, and, for ourselves, we cheerfully accord it that place in our literature which the eminence of its author by itself almost guarantees it. It is a reproduction, with some changes, of a series of lectures delivered at University College, London, and their entertaining, colloquial style lends great charm to the discourse. The introductory chapter, replete with sensible advice for medical witnesses, is an index to the practical character of the other lectures. In these, indeed, scientific facts are so interwoven with interesting narrative and with the report of illustrative cases that they are the more strongly impressed upon the memory, and all the chapters, like the first, partake of the character of friendly personal counsel rather than of dry didacticism. Thus, the chapters on poisons are free from the tedious recital of chemical data, and are reduced to those facts that lie within the interest of all physicians. The treatment of the medicolegal aspects of insanity is preceded by a brief review of the various types of mental deficiency, and a large number of excellent illustrations supplies much in the way of description.

Although there are evidently many differences between English and American laws, the work will prove none the less valuable on this continent on that account, for the common-law principles involved vary but little in all English-speaking territories. Moreover, the author lays stress rather upon simple and practical matters than upon the refinement of medicolegal technicalities. To lawyers, to physicians who recognize the im-

portance of being prepared for any emergency that may involve them professionally in a suit at law, and to those whose interest in the subject is purely educational we warmly commend this fascinating and instructive work.

The Physiological Action of Drugs. An Introduction to Practical Pharmacology. By M. S. PEM-BREY, M. A., M. D., Joint-Lecturer on Physiology in Guy's Hospital Medical School, and C. D. F. PHILLIPS, M. D., LL. D., Examiner in Materia Medica and Therapeutics in the University of Aberdeen, etc. London: Edward Arnold, 1901. Pp. viii-99.

The title of this volume is more comprehensive than its contents warrant. The experiments narrated concern the effects upon the nervous system, the heart, and nerve-muscle preparations of water, salt solution, alcohol, ether, chloroform, chloral hydrate, suprarenal extract, and various alkaloids. Numerous sphygmographic tracings illustrate the text. The experiments are simple, almost crude, and deal, for the most part, with relatively strong doses only. They are, however, useful for student demonstration.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. HALE WHITE, M. D., F. R. C. P., Physician to and Lecturer on Medicine at Guy's Hospital, London, etc. Edited by REYNOLD W. WILCOX, M. A., M. D., LL. D., Professor of Medicine and Therapeutics at the New York Post-graduate Medical School, etc. Fifth American Edition, thoroughly revised. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. 5 to 744.

This is essentially a students' manual. Although, by the addition of much new matter, the book will continue to be of value to the practitioner for quick reference, yet it is evident that the American editor has realized the desirability of keeping the work within the limits that have afforded it its greatest usefulness and its widest popularity.

La tuberculose et la médication créosotée. Par le Docteur SAMUEL BERNHEIM. Pp. 311. Paris: A. Maloine, 1901.

This monograph is an exhaustive thesis on the therapeutic application of creosote and its many derivatives in tuberculosis. Based upon wide personal experience, it is entirely clinical in character. Frankly accepting the limitations of the usefulness of the drug, the author lays down most careful directions for its appropriate form of administration in various and varying conditions, affording the encouragement that failures or bad results are often to be corrected by changing the mode of giving it.

The work is a crystallization of the experiences of all those who have labored in this field, and contains formulæ that have proved valuable to others besides the author.

BOOKS, ETC., RECEIVED.

Psychology Normal and Morbid. By Charles A. Mercier, M. B., M. R. C. P., F. R. C. S., Lecturer on Insanity at the Westminster Hospital Medical School, London, etc. Lon-

don: Swan Sonnenschein & Company. New York: The Macmillan Company, 1901. Pp. xvi-518. (Price, \$4.)

The Accessory Sinuses of the Nose. Their Surgical Anatomy and the Diagnosis and Treatment of their Inflammatory Affections. By A. Logan Turner, M. D. (Edin.), F. R. C. S. Ed., Surgeon for Diseases of the Ear and Throat, Deaconess Hospital, Edinburgh. With Forty Plates and Eighty-one Figures. New York: Longmans, Green & Company. Edinburgh: William Green & Sons, 1902. Pp. xiv-211.

Personal Experiences in Pelvic and Abdominal Surgery. A Contribution by R. Stansbury Sutton, A. M., M. D., LL.D., Ex-president of the American Academy of Medicine, etc. The Calumet Publishing Company, 1901. Pp. 371.

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. Being Two Lectures delivered at the Medical Graduates' College and Polyclinic on October 2, and 9, 1901. With an Appendix consisting of Two Letters published on November 23, 1901, and on January 11, 1902, in the *British Medical Journal*. By Sir Felix Semon, M. D., F. R. C. P., Physician Extraordinary to H. M. the King, etc. London and New York: The Macmillan Company, 1902. Pp. vi-7 to 130. (Price, 2/6d.)

The Scientific Transactions of the Royal Dublin Society. Volume VII. Series II. Part VIII. The Action of Heat on the Absorption Spectra and Chemical Constitution of Saline Solutions. By W. N. Hartley, F. R. S., Dublin. Plates XVII to XXII. Part IX. On the Conditions of Equilibrium of Deliquescent and Hygroscopic Salts of Copper, Cobalt, and Nickel, with Respect to Atmospheric Moisture. By W. N. Hartley, F. R. S., etc. Plates XXIII, XXIV, and XXV. Part X. A new Collimating-Telescope Gun-sight for Large and Small Ordnance. By Sir Howard Grubb, F. R. S., etc. Plate XXVI. Part XI. Photographs of Spark Spectra from the Large Rowland Spectrometer in the Royal University of Ireland. By W. E. Adeney, D. Sc., A. R. C. Sc. I., etc. Plates XXVII and XXVIII. Part XII. Banded Flame-Spectra of Metals. By W. N. Hartley, F. R. S., and Hugh Ramage, B. A., A. R. C. Sc. I., etc. Plates XXIX to XXXIII. Part XIII. Variation: Germinal and Environmental. By J. C. Ewart, M. D., F. R. S., etc. Dublin: Royal Dublin Society. London and Edinburgh: Williams and Norgate, 1901. (Price, one shilling, each part.)

The Scientific Proceedings of the Royal Dublin Society. Volume IX. Part III. November, 1900. Part IV. September, 1901.

Fifty-first Annual Report of the Demilt Dispensary, in the City of New York. For the Year 1901.

Bibliographia lactaria. Deuxième supplément (année 1901) à la bibliographie générale des travaux parus sur le lait et sur l'allaitement jusqu'en 1899. Par le Dr. Henri de Rothschild, Lauréat de la Faculté de Médecine. Paris: Octave Doin, 1902. Pp. 106.

Miscellany.

Myasthenia Gravis Pseudoparalytica.—At a recent meeting of the New York Neurological Society Dr. Frederick Peterson presented a woman thirty-eight years old, the mother of two children, who had been first seen by him in October, 1900. She had been sent to him by Dr. Knapp, of Mount Vernon. For several weeks a difficulty in speech had been noted, and also some dysphagia, the condition resembling, to a certain degree, bulbar paralysis. There was no history of syphilis or of intemperance. She had no pain, not even headache. Examination showed some weakening of one side of the mouth, slight deviation of the tongue to the right, and a very peculiar manner of speech, a dysarthria that had no real resemblance to that of bulbar palsy, general paresis, multiple sclerosis, or any of the common types of difficulty in speaking. It seemed almost as if assumed, as of hysterical simulation. There was no atrophy of the lips or tongue and no actual paralysis of any of the muscles

or of the muscles of the throat. The gait was an imitation of a spastic gait, but without spasticity. She was anæmic, very weak, and with a weak pulse and heart. The pupils reacted normally. The knee-jerks were rather subtypical. There was no weakness of the eyelids, such as the ptosis described in many cases. She was pregnant, and in March, 1901, had a normal child. She was seen again in May and in November, 1901. The condition of pseudo-spastic gait and pseudo-bulbar dysarthria remained unchanged at both of these examinations. There was rapid exhaustion on mastication, speech, swallowing, walking, etc. This disease, the speaker said, was sometimes known as asthenic bulbar paralysis, asthenic paralysis, bulbar paralysis without anatomical lesion, or myasthenia gravis pseudoparalytica, and had been described by Erb, Oppenheim, Hoppe, and many others. The symptom-complex in typical cases consisted of dysarthria, dysphagia, and masticatory weakness, with corresponding paresis of the labial, glossal, palatal, and masticatory muscles. The paresis might affect the upper facial muscles and those of the extremities. There was no atrophy and there were no signs of degenerative reaction. The sensorium remained free. The disease fluctuated from time to time as regarded the severity of the symptoms. The sphincters and reflexes were not appreciably affected. The course might be periodic, acute, subacute, or chronic. The prognosis was unfavorable, though patients had recovered. Several autopsies had been made with negative findings.

Dr. B. Sachs said that he had seen only one other case. In the one just presented the clinical picture was so distinct that there could hardly be any doubt about the diagnosis. Evidently the cases were very rare, for they were not of a nature to be readily overlooked.

Dr. Joseph Collins said that he was under the impression that the case under discussion would eventually become an atypical one of glossolabio-pharyngeal palsy. There was nothing in the case which reminded him of the cases of asthenic bulbar paralysis that he had seen. He would not include under asthenic bulbar paralysis any case with the symptom-complex of a spastic paretic condition. It was entirely opposed to our knowledge of the disease to find exaggerated knee-jerks and tendon-jerks, and for this reason he would rule out the present case from the category of true asthenic bulbar paralysis. Moreover, the woman seemed to be beginning to have atrophy of the lips. The first case of asthenic bulbar paralysis to be described in this country was one that he had long had under observation. That woman found that, while she could chew one or two mouthfuls, she could not continue to do this, and the same was true of muscular acts in general; there would be sudden evidence of exhaustion. Having gone through two or three critical periods characterized principally by the phenomena of surgical shock, she had practically recovered completely, inasmuch as there were no active symptoms of exhaustion present. Her facial muscles, though presenting no evidence of atrophy, still did not respond energetically to conscious stimuli, and the gait was a somewhat shuffling one.

Dr. Peterson said that his first impression had

been that this was a case of true bulbar palsy, but in the year and a half which had elapsed since then there had been no true atrophy of the face and no true spastic condition. The knee-jerks were active, but not exaggerated, and there was certainly no ankle-clonus. It was very easy to demonstrate the presence of muscle exhaustion. It was, of course, possible that later the case might present the evidence of true bulbar palsy, but certainly it did not do so at present.

The Medical Profession and Proprietary Medicines.—The *Yale Medical Journal*, for December, 1901, contains an admirable presidential address, by Dr. Henry L. Swain, delivered at the New Haven County Medical Association. We all recognize the fact that reputable drug firms, as well as disreputable ones, are engaged in a commercial venture, and that where they sink money and time in an effort to produce the best pharmaceutical results, they have a reasonable right to look for a proper recognition of the fact, and to expect support from the medical profession in their undertaking. The difficulty arises in disentangling the products of such firms from the confusion created by the mass of seemingly similar products, which have not the merit of either intrinsic excellence, or quasi-professional care in production, but which come clothed in the same unavoidable garb of commercial introduction. It is at that point that the resemblance arises. Business is business, and the business methods in both cases are necessarily more or less identical; but back of this lies the divergence, in the scientific skill involved in the one case, and its absence in the other. Dr. Swain's remarks are as follows:

"An eminent professor of one of the scientific branches in medicine in one of our greater universities took the pains to collect and collate the matter received through the mail during one year with the following results:

"During the year 1899 he received by mail 424 circulars relative to medicines and their uses. Of these there were only 54 which he was able to class as 'respectable.' By respectable is meant that 'the application of the remedy was first made by a physician, and the results obtained were reported in a medical journal or to a medical society. The firm in question announces the manufacture of this drug with reprints of original articles as recommendation. Firms advertising in this way are to be commended, for they are striving to supply the remedies advocated by leaders in medicine in a respectable and business-like way.' The remaining 370 pieces he divides into 'ordinary' and 'disgusting,' which terms he defines as 'the first consisting of weak journal articles written to praise the remedy in question, considerable commendation by the manufacturer, with numerous letters of recommendation from physicians who have tried the remedy.' In this class, 'ordinary,' alone there were found letters from 1,786 physicians, 56 editors of ten-cent medical journals, and 119 professors in mushroom medical schools. 'The third class were weak and generally disgusting in nature, relating largely to disease of the mucous membrane.' 'The flavor of this extraordinary group is decidedly that of the yellow press, and they disgrace the medical profession by having so many of its members falling low enough to be identified with them.'

"Analyzing the numerous circulars, he finds them to come from various States and foreign countries, and in the States they come most numerous from those which contain a large number of drug firms or inferior medical schools. Where both these existed it sufficed to make the number excessive. He adds: 'There is not an instance in which a physician connected with the University of Michigan recommends a proprietary medicine. The same is true of Harvard, Yale, University of Pennsylvania, and the Johns Hopkins University. Furthermore, nearly all the physicians recommending proprietary medicines are graduates of "mushroom schools." Among the 146 professors recommending proprietary medicines, there are three, and three foreign, belonging to medical schools of the first rank, and ten to schools of the second rank, the rest belonging to 'mushroom schools.' We regret very much to see nine names of prominent men in this list. Did they realize the pernicious effect their names have in inciting less prominent men to recommend almost anything, we feel sure that they would not have sought notoriety in addition to fame. We shall not attempt to apologize in any way for the professors of 'mushroom schools,' for business is business. The same motive is conspicuous in the 128 editorials found largely in corrupt medical journals. Yet all the firms together must expend at least a million dollars each year in printing and postage for our enlightenment, and they must be remunerated in some way, and therefore all of the advertisements do not go into the waste basket. All in all, it appears that the cause of their existence is due to the low standard of medical education with much corruption in the medical schools and journals."

Dr. Swain says: "These so-called 'respectable' pamphlets in the above classification are all right, but they are lost with all the rest, or are assimilated without thorough discrimination along with the 'ordinary' and some 'disgusting.' It is a regrettable fact that what many a practitioner knows about new remedies after he leaves the medical school he learns from these pamphlets. He has, when busy, no time at all for reading even his reputable journals, and plods along until some agent drops in, who, putting a nice preparation before him, says, 'Doctor So-and-So is using this and recommends it as the best combination that can be obtained.' He places before him some authentic printed statement by the man. The doctor does not take the time to look up the context of the quotation or too see the class of cases in which the preparation was recommended, but the impression is made in his mind of a first-class man whom he knows, recommending somebody's tonic, and that very afternoon a patient comes in just as he is going out. She has some indefinite complaint and needs a little general toning-up. The bottle is on the desk. It is an easy way to get through and away, and the bottle is given to the patient. From then on a wave of influence is started. The bottle is in the hands of the patient, who may be benefited by it, for it contains a well-combined and prepared product. Mrs. C—, who has been benefited by taking the sample bottle, hears of Mrs. D—, who is a patient of Dr. X—, by whose advice she has been expecting to be relieved of some chronic trouble mentioned on the label of the tonic. Mrs. C— says, 'My doctor recommended this tonic. Why

don't you get a bottle?" And she does, is made better, and Dr. X—wonders why his bill is tardily paid and at some lack of cordiality on the part of the patient. Or, what is worse, the tonic may contain some ingredient, although it usually does not have much that is harmful, which is just what Dr. X—does not want his patient to have, and frequently he wonders why his patient develops certain symptoms, and only after a time does he learn that the patient was taking somebody's tonic, the patient not thinking it worth while to mention it."

Dr. Swain continues: "The public are always liable to abuse the privilege of themselves prescribing what has been given them by a trusted physician, but they will very much more rarely advise some one else to use a physician's written prescription, whether for a single drug or for a combination, than a ready-made preparation, realizing that one has designed for their individual case while the general remedy, the ready-made one, was for anybody."

"Evidently here lies one remedy for the evil. We should always prescribe, when we can, our own combinations which require the druggist at least to dispense known substances, freshly prepared. If some remedies or combinations are prepared by one firm, to suit us better than by another, then we can write the Latin name of the principal ingredient and place in brackets alongside, the name of manufacturer preferred. Dispense this in a plain bottle, avoiding in this way original packages. *Extractum Cascarae Sagradae fld.* (Smith's) will never do any harm, and gives 'Smith' the credit of doing good work. If, then, no reputable physician made any use of any tonic, except in the way mentioned, the drug firms would only too soon catch the spirit and cater to the best."

Newspaper Publicity and Public Panics.—The *Lancet* for February 15th has the following wholesome comment in its editorial pages, which we wish could be brought home on this side the Atlantic. Says the *Lancet*:

"In the dark days of 1899, when untoward events in South Africa cast a heavy gloom over all men's minds and were filling their mouths with bitter reproaches or hopeless anticipations, there were not wanting, especially among the older members of the community, those who deplored the amount and facility of news. Little reverses, they said, were placarded, published, and talked about till they assumed the size of real disasters; and a loss of men, which in the days of Wellington, for instance, would have gone unknown for months, and would have been disregarded when realized, set people nowadays in a perfect fever of alarm and apprehension. Like a story repeated from mouth to mouth, a piece of news lavishly printed becomes wildly exaggerated. A slight reverse, well headlined, placarded at every street corner and discussed in every club, assumes the proportions of a great defeat. A little space of time shows the true proportion of things, and by to-day people are ashamed of the fears that they allowed to possess them in the early times of the South African campaign. We deeply sympathize with the apprehensions of those who have relatives and dear friends at the war, but they, in common with the rest of the public, have learned that sensational and inaccurate word-pictures save no

lives and allay no fears, but serve rather to depress the *morale* of the country.

"Yet the lesson has not been so well learned but that a small epidemic of small-pox in London is able to create what almost amounts to a panic in the minds of people all over the United Kingdom. The fear to which the present attack of small-pox has given rise in some breasts would be ludicrous were it not that such terrors, however ill justified, have a serious effect upon the business of the nation and the prosperity of London. It is hardly credible that an epidemic like the present—a little epidemic in which, roughly speaking, one person in 7,000 has been attacked—should give rise to anything approaching panic anywhere. Yet such is in reality the case. . . . Such a state of alarm is unreasonable and ill-advised, and is, we feel sure, merely an unintended effect of that general newspaper publicity to which allusion has already been made."

After referring to the excellent example of the King, and the fact that "the entire royal household, having been submitted to revaccination, the royal family stay largely in London and frequent public places with the most conspicuous freedom," the *Lancet* continues: "This very London epidemic that is causing so much alarm is probably the offspring of a more serious outbreak in Paris that gave rise to a far less amount of apprehension. It will be a new circumstance in the history of this nation if we have to point to the imperturbability of the Parisian and to beg our countrymen to endeavor to imitate it under similar circumstances."

An International Language of Science.—From the *British Medical Journal* for February 15th we extract the following: "From a letter addressed to us by 'A Medical Student,' we gather that we have added one more to the long tale of Irish grievances. He writes:

Your leading article on An International Language of Science well illustrates the proverbial want of knowledge (not to use a stronger word) of English writers when they venture on any statements about Ireland or the Irish. In referring to the Catalan claims, you quite gratuitously drag in a reference to a supposed attempt on the part of some Irish member to "impose" some language named "Erse" on the British Parliament. Permit me to inform you that no such language as "Erse" exists except in the imagination of English writers. There is an Irish or Gaelic language which is one of the most ancient in Europe, and which had a flourishing literature and an almost perfect syntax at a period when English only existed as an ovum in the ovaries of time, and the ancestors of the English were naked savages roaming the forests of Germany. The Irish member you referred to had no desire to "impose" this language on anybody. He only claimed a right at present enjoyed by the French in Canada and the Dutch in Cape Colony, namely, to speak in the national language of his country. The case of Catalan is quite different, it being only a dialect of Spanish.

"May we, with the humility proper to descendants of German savages, venture to point out to our correspondent that the word 'Erse' is, in fact, only a variant of 'Irish,' with which it is etymologically identical? As on our correspondent's own showing there is an Irish language, we submit that 'Erse' cannot accurately be said to exist only in the imagination of English writers. As to Catalan he is still less happily inspired. So far from being a dialect of Spanish it is a distinct variety of the *Langue d'Oc* or Provençal with a literature of its own almost as old as that of its sister speech, Castilian. The 'Cata-

lanist' movement to which we referred is a good deal more likely to be successful than 'the present revival of the Irish and Welsh languages even within the shores of these islands' to which 'A Medical Student' refers. Our correspondent proceeds:

Englishmen may as well give up the idea that foreign nations will ever agree to recognize as the universal tongue their promiscuous conglomeration of words borrowed (or stolen) from every language under the sun, and thrown together without grammar or syntax.

"We must own to a feeling of mild surprise that he goes on to suggest Spanish as having the best claim of any modern tongue to be chosen as an international language; we should have expected that he would propose Irish, but this, we suppose, is only another example of the proverbial ignorance of English writers. Our correspondent thinks that 'a good artificial language' would be best, and he says 'It should be within the power of scientific men to construct such a language, and if once adopted as the vehicle of science a literature would soon spring up.' A language constructed by 'scientific men' would be a serious addition to the ever-increasing burden of modern life, and as for the 'literature' that would spring up if such a tongue were invented, it cannot be thought of without a shudder. 'Scientific men' have already done something in the way of constructing language, and in respect of 'literature' we may say, with Falconbridge, that we know their handiwork."

[We entirely endorse the concluding remarks of our contemporary. *Ne sutor supra crepidam judicaret.* As surgeons, we know better than a surgical instrument-maker can, what we want; but it is his business to know how to make our implements better than we could do it ourselves. Language is an implement, just as much as a scalpel or a tracheotomy tube; and, while the scientist sadly lacks an international language of science so constructed as to suit his needs, bearing in mind the awful specimens of 'home-made' philological implements that stare us in the face every time we open a medical dictionary, we should prefer to have it constructed by philological implement makers.]

A Sonnet by Ronsard to Ambroise Paré.—According to *Janus*, for February 15th, M. Gaston Deschamps publishes in the *Temps* the following sonnet addressed by Ronsard to Ambroise Paré, the great French surgeon. The sonnet was found by M. Dorchain (? Deschamps) in a copy of the 1585 edition of Paré's work, and seems hitherto to have escaped attention:

Tout cela que peut faire en quarante ans d'espace
Le labeur, l'artifice et le docte savoir:
Tout cela que la main, l'usage et le devoir,
La raison et l'esprit commande que l'on face,
Tu le peux voir, lecteur, compris en peu de place,
En ce livre qu'on doit pour divin recevoir:
Car c'est imiter Dieu que guérir et pouvoir
Soulager les malheurs de notre humaine race.

Si jadis Apollon, pour aider aux mortels,
Reçut en divers lieux et temples et autels,
Notre France devrait (si la maligne Envie
Ne lui sillait les yeux) célébrer ton bonheur:
Poète et voisin, j'aurais ma part en ton honneur,
D'autant que ton Laval est près de ma patrie.

Ronsard was, in fact, says the writer in *Janus*, a native of the chateau de la Poissonnière, in Vendôme. Ambroise Paré was born in the little village of Bourg-Hersent, close to Laval, in Maine, about the year 1510. The village has now become part of Laval.

To which we may add that Pierre de Ronsard was esteemed as the most famous French man of letters between Rabelais and Montaigne. He was eulogized as the "Prince of Poets," and "The Poet of France," and was the founder and head of the *Pléiade*, a group of seven French poets who aimed at bringing into the literature of France the excellences of the classical literatures of Greece and Rome. It is with considerable diffidence, therefore, that we venture to offer the following English version:

TO AMBROISE PARÉ.

Whate'er can be accomplished in the space
Of forty years, by toil, and skill, and wit,
Whate'er the hand, through practised duty fit,
At the command of mind and soul should face—
That may be seen, enshrined within the place
Of this small book—I pray you hallow it!
For God-like is the power to benefit
And suage the pains of this, our Human Race.

Time was, Apollo, for his aid to men,
Full many an altar had, and many a shrine,
Surely, our France (were Envy not malign
To hood her eyes) should hymn thy glories, then.
Thus I, thy neighbor-bard, should share thy fame,
Proud near thine own Laval my home to claim.

K. W. M.

A New Symptom in Syringomyelia (Thorax en Bateau).—Goldbaum (*Gazeta lekarska* (Polish), No. 13; *Neurologisches Centralblatt*, No. 14, 1901, cited in *Maryland Medical Journal*, January) describes a symptom noted in the clinic of Pierre Marie in Paris, which consists in a boatlike deformity of the thorax in cases of syringomyelia. The anterior thorax wall is unduly sunken. The arms are moved in a plane more forward and higher, so that the head appears sunken. The upper part of the thorax, including the manubrium sterni, inclines posteriorly, and appears sunken. A deep depression is thus formed, giving this portion of the chest the appearance of a boat. The depression extends from shoulder to shoulder and down to the fourth and fifth ribs. The depth of the depression is not the same in different regions of the thorax. The author found the maximum depression three centimetres to the left of the median line; in another case it was nine centimetres to the right. In the sagittal plane the deepest hollow was generally three centimetres below the manubrium sterni. The depth of the affected portion varied in cases from 1.5 to 5.5 centimetres. The author does not believe the condition can be explained by the scoliosis, nor does the presence of muscular atrophy account for it, but credits it to the specific symptoms of syringomyelia under the head of trophic disturbances. As the author points out, this symptom has been described by Marie, also by Astie (*Le thorax en bateau de la syringomyélie*, Thèse de Paris, 1897), and by Kattwinkel (*Deutsches Archiv für klinische Medizin*, 1899).

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WHOLE No. 1216.

Original Communications.

EPIGNATHUS.*

By CHARLES JEWETT, M. D.,

BROOKLYN,

PROFESSOR OF GYNÆCOLOGY AND OBSTETRICS, LONG ISLAND COLLEGE HOSPITAL.

The specimen presented herewith is a typical example of so-called epignathus. It was donated to my collection at the Long Island College Hospital by Dr. Joseph Merzbach.

The woman who gave birth to this anomaly had been attended at the labor by a midwife, and Dr. Merzbach could obtain only the following imperfect history: Of German birth, twenty-four years of age, and a primipara, she was delivered on June 23, 1900, at the seventh month of gestation, the tumor presenting. The foetus presented by the head. The mother gave a history of cough for a period of eighteen months. She failed in health rapidly after labor and died six months later of laryngeal and pulmonary tuberculosis.

Epignathus, according to Gould's *Dictionary*, 1894, is "a twin monstrosity in which the parasite is united to the superior maxillary bone of the auto-site." In the *Student's Edition* of 1901 it is defined as "a monstrosity in which the rudimentary organs of a twin are united to the superior maxillary bone." Foster defines it as "a double monstrosity in which one individual is arrested in development and remains attached to the jaw of the other." Dorland's *Dictionary*, 1901, says it is "a parasitic monster attached to the jaw of an autositic foetus." These definitions reflect the prevailing opinions of the nature of this condition.

The anomaly is rare. In an elaborate paper by Professor Windle, published in the *Journal of Anatomy and Physiology*, London, 1898-1899, sixty cases were collated. These comprised all the known instances of epignathus to that date, so far as could be learned from the literature of the subject. Appended to that paper are tables giving the essential features of each case, with the name of the reporter, and an extended bibliography.

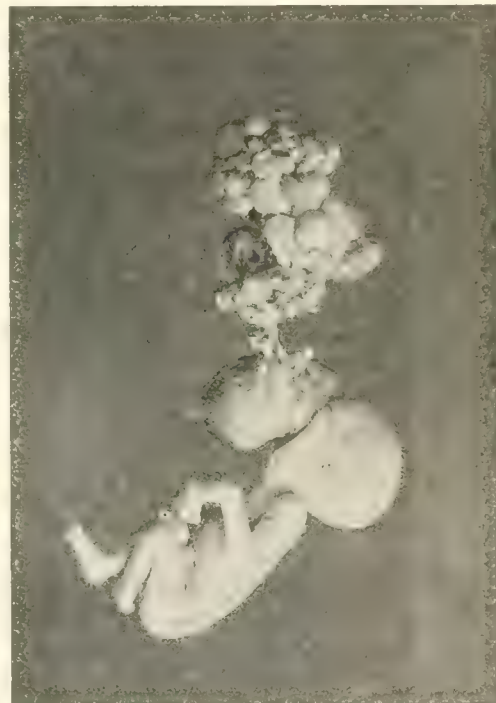
Seven are described as being attached to the mouth or tongue, but not to the palate, twenty-two to the palate or superior maxilla, eight to the pharynx, not including the upper part, and fourteen to

the basis cranii, and three are included under the head "miscellaneous."

Among the structures said to be contained in these tumors were fragments of bone and cartilage, incisor teeth, hair, striped muscle, gland structures, crystalline lens, brain tissue, embryonic liver, intestines, penis, scrotum, testicles, fingers, and bones believed to represent the tibia, astragalus, calcaneum, maxilla, sacrum, etc.

The inaccuracy of many of these descriptions is in keeping with the erroneous notions which, strangely enough, still obtain with reference to the character of this anomaly.

On examination, the specimen presented is found to consist of an immature female foetus from the



widely gaping mouth of which protrudes a lobulated tumor. No other developmental defect is observed. In the erect position of the foetus the tumor would reach fully to the feet. Its entire bulk is nearly equal to that of the foetus itself.

The growth presents four lobes consecutively attached one to another by narrow pedicles. Each lobe except the proximal one is made up of numerous lobules. The tumor springs by a narrow pedicle apparently from the sphenoid bone. It has also some attachment to the lateral wall of the pharynx

*Read before the Brooklyn Gynæcological Society, January 3, 1902.

and to the jaw on the left and to the hard palate, mainly to the left of the median line. The attachments to the jaw, the palate, and other structures than the base of the cranium probably are secondary and unimportant. Its relation to the sphenoid bone, as will be seen, points to the real origin of the tumor.

The palate and the superior maxillary bones are displaced forward by the tumor. The nasal cavities, including the septum and the floor, are normally developed. On opening the cranial cavity, a cyst about three centimetres in diameter and containing a thick, bloody liquid was found in the middle fossa of the basis cranii on the right. From the cavity of the cyst a slender probe could be passed down through the base of the sella turcica, through the pedicle, and into the tumor below. The intracranial and the extracranial tumors were connected by the pedicle which passed through the patent hypophysis duct.

A few only of the lobules of the tumor were cystic, the contents being a thin, somewhat muddy liquid. Two of them contained old blood. Nearly all the lobules were either semi-liquid or in great part solid. The contents of the semi-solid lobules were jelly-like connective tissue. Osseous tissue and cartilage were found in many of the lobules throughout the tumor, but no bone representing any normal type was observed. Smooth muscle fibres were present in several portions of the growth. The histological examination was made by Dr. William A. Jewett.

Various fantastic theories have been offered in explanation of this class of growths, such as "double formation with subsequent union, parasitical double formation, fœtus in fœtu, inclusio fœtalis," etc. Nothing in pathology has created greater confusion than these various ideas.

That double formations occur is not to be denied, since the medullary plates are capable each of producing an entity, and double formations are not rare events among fishes, etc.; but a sharp line of demarkation is needed between these occurrences and those cases so generally explained as double formations and fœtus in fœtu (Bandler).

Windle, in the paper to which reference has been made, remarks that "It is difficult to believe that a nearly equal-sized ovum may pass into the mouth of the autosite, as Ahlfeld claims it does." Instead of the theory of fœtal inclusion he offers the hypothesis that "epignathus has its origin in a small fragment of germ plasm with limited possibilities, perhaps segmented off from the ovum, perhaps derived from some other source, possibly even from a spermatozoon or polar body; that this is not the equivalent of a germ plasm of full embryo-producing power, but that it possesses varying and more

limited potentialities of development." Small fragments of germ plasm, he holds, "may develop into an imperfect embryo or part of an embryo, a process which is essentially what occurs in ovarian dermoids from an ovum and in certain dermoids of the testicle from a spermatozoon."

The small portion of detached germ plasm from which he assumes the growth is developed may be drawn into the primitive oral cavity with the invagination of the ectoderm. Windle furthermore cites the views of Schafer and Roux, who from certain experiments and observations upon the lower forms of life were led to the conclusion that the earlier period of embryonic growth was one of organogenetic development, or, in other words, that individual organs developed in consequence of an inherent endogenous energy in a definite direction without influence from other stimuli. In this power of autodifferentiation, he believes, we have the key to the genesis of the structures found in so-called epignathi and in all teratomata. Windle's hypothesis foreshadows in part the true explanation of the growths we are considering.

The prevailing theory of the origin of dermoids and teratomata of the ovary is the ovulogenous theory of Wilms. This view is accepted by Martin, Sänger, and many other German authorities. Rothrock adopts it in his article on Neoplasms of the Ovaries, in Reed's *Text-book of Gynecology*. Wilms holds that these growths are developed from the ovum, all three germinal layers being represented. Yet a certain proportion of teratomata of other regions than the ovary he would still class with double formations. All ovarian dermoids he regards as parasitic in character.

The ovulogenous theory of Wilms is no longer tenable. The supposed existence of entodermal products in teratoid tumors must be attributed to errors of observation. The origin of all this class of tumors is to be referred to displaced ectodermal and mesodermal cells. This view is set forth by Abel (*Gynecological Pathology*) and by Bandler, his pupil and translator (*Dermoids and other Cysts of the Ovary: Their Origin from the Wolffian Body, American Journal of Obstetrics*, January to June, 1901). It is shown that the embryonic structures are not all represented in the dermoids and teratomata of the ovary. No true internal organs, products of the entoderm, are found in them. The relations of their component structures are not those of a fœtus. They have "nothing in common with a fœtus."

Abel holds that dermoids and teratomata of the ovary are developed from cells of the ectoderm and the mesoderm displaced by the growth of the Wolffian duct. The Wolffian duct is probably developed from the ectoderm, and at the same time is in inti-

mate relation with the mesoderm, and the tubules of the Wolffian body enter normally into the formation of the ovary. Dermoids and teratomata of the ovary, and cystadenomata as well, have their origin in these tubules derived from the Wolffian body. Dermoids and mixed tumors behind the peritonæum, those of the kidney, and some of those in the pelvic connective tissue also are developed from cells displaced by the Wolffian duct.

As Bandler observes, "At the various points of union on the head, face, mediastinum, spine, spinal cord, etc., as well as at all the other fœtal furrows, clefts, and points of union, where, through disturbances of normal development, congenital malformations, fistulæ, and deformities may occur, dermoid cysts also may be found. These latter result through an infolding or detachment of cells, often prominently ectodermal, but usually ectodermal and mesodermal." . . . "The displaced cells form the same tissues which they would have produced had they not been detached from their normal location. They may cause large tumors, and yet the normal development of the individual may in nowise be disturbed, or it may undergo various changes."

Dermoid cysts and teratomata are of essentially the same character and origin. When ectodermal cells predominate, leading to the formation of a so-called derm, accumulating excretions of the skin cells and sebaceous glands result in the formation of a cystic dermoid.

When, on the other hand, the ectodermal cells are not so numerous, "the various tissue forms grow into one another" and no "derm" is developed. By reason of this and the consequent absence of accumulating skin excretions, no cyst is formed. The resulting tumor is relatively solid and is called a teratoma. Teratomata, therefore, are solid dermoid tumors.

Epignathi present essentially the same structures that are found in dermoid cysts and in teratomata of the ovary and other organs. Their nature and origin are substantially the same. They are developed from portions of the ectoderm and the mesoderm which have become displaced from their normal relations and trophic control. They are teratoid tumors of the base of the cranium, the product of aberrant ectodermal and mesodermal cells displaced in the formation of the hypophysis duct.

The hypophysis duct, according to Heisler, is formed as follows: In the fourth week of embryonic development the anterior portion of the pituitary body, or hypophysis, is developed by an evagination, or outpocketing, of the pharyngeal membrane at the back part of the primitive oral cavity. As the pharyngeal diverticulum lengthens, its stalk forms a slender duct communicating with the primitive

pharynx. This is the hypophysis duct. Normally this duct is finally obliterated as the membranous base of the skull becomes cartilaginous and ossifies. Sometimes it persists. An independent growth of ectodermal and mesodermal cells displaced in the formation of the hypophysis duct may result in a tumor in the sella turcica alone, or, as in the case presented, we may have an extracranial and an intracranial tumor communicating by a slender pedicle passing through the pituitary foramen.

A SKIAGRAPHIC STUDY AND RESEARCHES IN THE DIRECTION OF OBTAINING PICTURES WHICH ARE BOTH SHADOW AND SUBSTANCE OF BONE, MUSCLE, AND LIGAMENTS.*

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I trust that the title of this paper will not lead the members to expect that I know it all, that the x ray itself is no more an x for me, or that any definite results have been obtained by me only in this direction. But I thought some brief explanation of what has already been done, with a note of the difficulties still to be overcome, might be interesting for our friends, the surgeons.

Allow me therefore to say a few words about the interior actions of an x-ray tube, in order that you may afterward be able to appreciate my object in making these skiagraphic studies, which show what the x ray can do for the surgeon in regard to the investigation of the development and growth of the bones and their relationships when altered by injury or disease. These pictures are altogether different from others, because they exclude parts which we wish to exclude and give us not only the shadow, but the substance also, the internal structure with beautiful depth and perspective. The negatives themselves are still better.

We all know that the particles of gas in a Crookes's tube, and also those occluded in the terminals, become electrically charged and carry their charge from one terminal to the other when the tube is in action. The stream goes from the cathode to the anode. This movement of particles causes repulsion of unlike sign attraction, so that the particle, being repelled from the cathode and attracted to the anode, strikes the latter with great force. The greater the quantity of charge imparted to the particle, the greater will be its repulsion and the force of the bombardment. This breaking up of the particles produces the x ray; therefore, the more particles we have in action, the greater will be the quantity of rays. To have great contrast in our

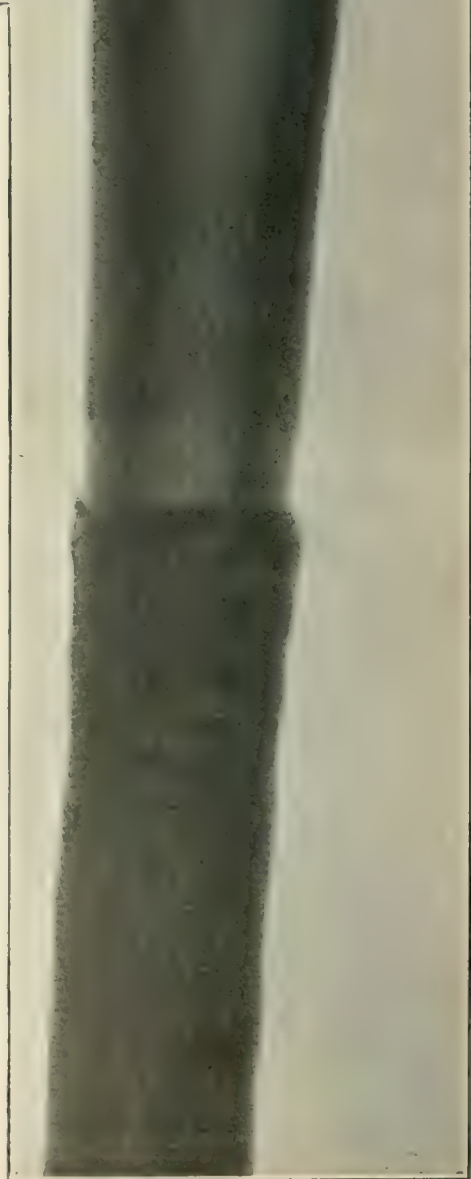
*Read before the semi-annual meeting of the Iowa Union Medical Society, December 10, 1901.



FIG. 1.— Skiagraph made with tungstate of calcium screen and lead support under the dry plate. Picture altogether different from others. Parts excluded which we wished to exclude, not only shadow, but the substances also, and the internal structure of the bones. The line of demarcation, where the lead plate was, is plain; the other part of the dry plate had wood as the support. The lead under the photographic plate seems to act as another cathode, especially if we use two tubes at once, one in front of and one behind our subject, and a lead box for precluding the diffused rays. Exposure, few seconds. Hip of a girl thirteen years old, with the foot not everted, the thigh not abducted, and the greater trochanter close to the plate.

photographic work on our plates, we must have a good source of electricity and a certain intensity of bombardment to each particle in our Crookes's tube; and to make short exposures, we must have a great quantity of rays, which we collect with the help of the calcium-tungstate screen, face down upon the film side of the sensitive plate. The vacuum of a Crookes's tube is constantly changing quantity and should not be relied on to remain constant; it differs in different tubes and sometimes in one and the same tube. We therefore have always to watch our tube. To know our tube, the resistance of the same, and the proper technics, is the whole secret of these results in radiology. The discovery of Röntgen, which makes possible and easy an absolutely correct diagnosis where previously uncertainty and error outweighed definite knowledge, through these results in my experimentation and researches seems to be still more important.

If you wish to make a skiagraph in a given case of the muscles, ligaments, bones, and sometimes even some arteries, of a human body, place two or more sensitized x-ray plates, with the film sides up, in a casket or within yellow and black envelopes. Use two Crookes's tubes, one under your subject and the other one over the same. The tubes must



be of about the same vacuum, which question is easily decided with the help of the fluoroscope. All of the plates will be affected, but in decreasing degree. Against the film of one plate we may lay a calcium-tungstate intensifying screen of very fine grain, and may get one picture showing the internal structure of the bones, muscles, ligaments, etc., exclusively; while the second plate, for instance, is a full exposure for certain parts only, and may show the muscles, ligaments, and a shadow of the bones, without the internal structure; the third one the

one side, and bring us to correct diagnosis on the other. If the print could be made equal to the negative in the minuter details, the skiagraphs would be better than the photographs of the bone itself. There is no question about it that, not only will the x ray prove to be a valuable aid to the surgeon, but that it should be in some cases an absolute necessity.

This and other experiments with the intensifying screens over our dry plates, two tubes, and lead support, I have made since 1896, but, strange to say, the same tubes have not always given the same re-



FIG. 2.—Skiagraph of the head. The internal structure of the bones is marked in that part of the picture which had lead as the support of the dry plate; where there was none, the picture is not so beautiful, because wood has not the properties of lead, which represents another cathode in this case. Two tubes of the same vacuum were used, same make. Sutures of the bones. Some parts purposely excluded. Grooves of the meningeal arteries. One part of the picture shows plainly the layers of the muscles. Both tubes are at a distance of twenty inches. Disc in the vertical line.

muscles only, etc. Quite a number of plates or films may be exposed this way at once to the x rays, and thus an equal number of varying revelations of the same case may be obtained by one exposure. To have still better contrast and sometimes, perhaps, to see the arteries also, we have to use a plate of lead, about one half or one inch in thickness under our photographic plates as a support. This plate seems to act between the two Crookes's tubes as another and new cathode, and, with the intensifying screens between, we may easily demonstrate how clearly the x ray can show us the very texture of the bone on

sults. The shadows under the screen with lead support are altogether different and give better contrast than those without the lead plate. Just see the skiagraph (Fig. 1) of the hip of a girl, thirteen years of age, with the foot not everted, the thigh not abducted, and the greater trochanter as close to the plate as possible. The internal structure of the bone is marked in that part of the picture which had lead as support of the dry plate; where there was none the picture is not so beautiful, because wood has not the properties of the lead in radiography. The skiagraph of the head (Fig. 2) shows, not only the

sutures of the bones, but the grooves of the meningeal arteries. The lead plate under our dry plate and intensifying screen gives the difference in shadows very nicely. One part of the picture shows plainly the layers of the muscles, and, on the other hand, that some parts may be altogether excluded, if we wish it. A skiagraph showing the meningeal grooves and a Mauser bullet at the left wing of the sphenoidal bone, made in the same manner, was published by me in the *New York Medical Journal* in 1898, but, since that time, the apparatus and tubes have been improved and are still improving, so that we are able now to do better work with comparatively short exposures.

If we wish to use only one good tube and the screen with lead support we may do so, and get good skiagraphs also, being well assured of their accuracy. With normal skiagraphs as a basis for comparison, and the fluorometer, it will be easy to recognize any deviation from the normal, be it from trauma or from disease, especially in bones. Great progress has been made in the technics of radiology, and we all hope for still more.

When photographing thick parts of the human body, such as shoulders, chest, and pelvis or buttocks, which necessitate a great distance of the tube from the object, two intensifying screens are recommended, for the purpose of considerably reducing the time of exposure. These screens are a distinct improvement, and, with a good tube at its best, may help us to produce marvellous pictures. The prepared side of the screen is placed against the prepared face of the photographic plate, as stated already, so that the susceptible side of the screen rests on the sensitive surface of the plate. Then the plate is placed, together with the screen, in a cassette or wrapped in envelopes. The sensitive side of the plate, together with the screen, lies upward. For precluding the diffused x rays, we have to use a lead box with diaphragms. The x rays undergo against all substances a strongly diffused reflection, the consequence of which is that, at the corners or edges of an insusceptible substance, the rays appear diffuse. This diffused reflection of light is particularly strong in the flesh of a person under operation. From every minute part of the flesh exposed, rays are independently directed from the tube upon the dry plate, and this is the reason that photographs of the buttock appear sometimes with so little contrast. To obviate this evil, care must be taken not to illuminate a greater part of the body than appears absolutely necessary to bring the entire plate used under exposure. By imagining the tube to be at the distance of 60 centimetres from the plate, it will be clear that, by introducing a diaphragm of lead at a distance of 30 centimetres, a hole of only half the size of the plate will be necessary to direct the oper-

ating cone of rays upon the plate with their full effect. For this purpose I have made a lead box with interposed diaphragms, with a receiver for my tube in the form of a fluoroscope, whereby such work as I have here described is accomplished much more easily.

REMARKS CONCERNING THE PRACTICE OF ASEPTIC SURGERY.*

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Having had a very active hospital service for many years exclusively under my control, I have had exceptional opportunity for the clinical study of surgical methods. The opportunity was especially valuable to me, for the reason that the results due to a method, or a combination of methods, could be studied for long continuous periods, without the interruption which is usual in most hospitals, due to a change of service. At the same time I have been able, through the kindness of my friends in the Pathological Department of the College of Physicians and Surgeons, to profit frequently by their profound knowledge of bacteriology, and I owe them many grateful thanks. I do not pretend either that the methods which I refer to in this brief paper are original, or that they represent conclusions which have been reached only after an exhaustive study of all possible methods. I only state that I am myself entirely convinced of their value after very frequent practical application.

By the term aseptic surgery we mean surgery which is conducted under conditions, and with appliances, which are as free from germ life as we are able to make them. I would add to this definition the statement that, in all aseptic surgical work, every step should be taken in such a manner as to avoid, to the utmost, the creation of one or more conditions which are favorable to the development of germ life. For instance, although all appliances used in a surgical operation may be entirely free from bacteria, an error, such as the leaving of a large blood clot in a closed wound, may lead to the development of active suppuration in a wound which, without this error, would have healed aseptically. The primary cause of sepsis in such an instance is not to be found in the blood clot, which may well have been perfectly aseptic, but in germs, which, having entered the wound from the air, from incised skin, or even from the circulation of the patient, find a condition in the form of a blood clot favorable for their growth. I acknowledge, therefore, that we have not yet learned so to conduct our

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surgical work that we can feel confident that the wounds we make, even under the best conditions, are totally free from bacteria.

It is doubtless true that all wounds contain some bacteria, which, when the conditions are not favorable for their development, are disposed of and actually destroyed, by the healthy living cells of the wound tissues. Our efforts, therefore, in working aseptically, are directed to the accomplishment of two objects: First, the reduction of the number of bacteria which enter a wound to the smallest number possible; second, the most perfect preservation of the self-protecting power of the tissues of the wound. The surgeon who works aseptically is satisfied if he can *remove* all bacteria from everything which is to come in contact with the wound, prevent the entrance of bacteria into the wound, and avoid the creation of a single condition favorable to germ life. The surgeon who works antiseptically begins by attempting to *destroy* bacteria, and throughout his work continues the process of destruction. The former has an abiding faith in the power of Nature to repair wounded tissue, if only obstacles to repair are removed. The latter acts on the theory that bacteria must be destroyed at any cost, and that if they are destroyed, repair will take place.

The aseptic surgeon does not tolerate the use of any agent which can, in the slightest degree, injure living tissue unnecessarily, and so reduce reparative power.

In the practice of aseptic surgery we assume that every object which can, either directly or indirectly, come in contact with the wound having been made surgically clean, we may make the wound without sepsis. We assume that wounds made under these conditions will heal without other aid than protection against sepsis, and we discard as utterly unavailing all chemical agents which are intended to hasten or encourage the natural tendency, on the part of the wounded tissues, to repair the damage done them.

So far as is possible, with our present knowledge, we cleanse every object which may come in contact with the field of operation by heat, which, more perfectly than any other agent, sterilizes instruments, ligatures, sponges, towels, dressings, and bandages. We cleanse the surface of the patient in the gentlest, but most perfect manner, first with prolonged applications of a simple non-irritating soap,¹ then with

soap and water, which removes all loose material of every description, and we get rid of soap and oily material on the surface of the patient by a final washing with sterile water and ether. We know very well that the skin in its sweat glands and hair follicles is permeated with germs, and for that reason we carefully avoid the use of scrubbing brushes, caustic soaps, and other strong chemical agents, which often break and excoriate the skin, and so afford means for the exit and reentrance of numerous bacteria, which, if left undisturbed, we know to be harmless.

What good purpose could an antiseptic serve here? No agent powerful enough to destroy the bacteria which are buried in the skin can be used without destroying the skin itself. How much more rational to absolutely *remove*, without injuring the skin, the free bacteria on the surface, which could be *destroyed* only by using very powerful chemicals. The skin having been made perfectly clean, a moist sterilized towel will protect it until the moment of operation. The surrounding area of skin, clothing, and table is also covered in every direction with sterile material, which should be moist in order that it may not readily slip, and uncover an unsterilized object. The patient is now prepared for the operation, and there remain to be considered only the living instruments, the hands, which must enter the wound and touch every sterile object about it. Clearly they must be sterile or they would infect everything they touched. The sterilization of the hands has actively occupied the attention of surgeons and bacteriologists for a good many years, and a large amount of thought and experiment has been expended on this subject. In general, what has been, and still is, sought for, is a chemical agent or a combination of chemical agents which will render the hands perfectly sterile, for it is universally admitted that the greatest danger is incurred by the contact of an imperfectly sterilized hand with a fresh wound. The problem is probably not capable of solution, for even to-day we find a large variety of opinions in regard to the methods which should be employed for the sterilization of the skin of the hands. It is certainly possible to sterilize *temporarily* some hands, if sufficient time and trouble are expended in the process, but the active use of the hand during an operation is accompanied by free exudation from the skin follicles and by a continuous separation of epithelium, so that the hand which may *begin* an operation in a sterile condition cannot be sterile after a few minutes' use. Multiply the difficulties by the number of hands employed, directly and indirectly, in most operations, and it becomes evident that the likelihood of maintaining all these hands in a sterile condition, from the beginning to the end of an operation, is much too slight

¹Twelve or twenty-four hours before operation a soap application is made in the following manner: A piece of good Castile soap is boiled in a little water until it has become quite soft. It can then be thickly spread, like an ointment, on a piece of linen or cheesecloth. This is applied directly to the operative area, which should be very large, covered with a sheet of thin rubber tissue, with cotton or other dry material over all. This application should be left in place until the time of operation. The effect of the soap is to loosen and soften every particle of free epithelium. Hands, feet, and dirty parts in general should be subjected to two or three soap applications before operation.

to be at all satisfactory. In fact, I must condemn all use of the naked hand in operations as inconsistent with correct ideas of asepsis. But the problem is easily solved in another way. Apply the most perfect method of producing sterilization of inanimate objects, that is, the application of a high degree of wet heat. Cover the hand with a material which has been boiled, and which is impervious to fluids, and the hand is at once made as sterile as the knife, the ligatures, and the dressing. Thin India rubber gloves are, in my opinion, absolutely essential to the practice of aseptic surgery, and the objections which have been made to their use, are purely theoretical. To demonstrate the perfection with which an India rubber glove could be sterilized, some years ago I made the following experiment with the aid of Dr. T. M. Cheeseman, who was then one of the chief assistants in the Pathological Department of the College of Physicians and Surgeons. An operating glove, which had been sterilized by boiling, was suspended at full length in a large jar of sterilized beef broth, and the jar was carefully sealed. Even at the end of three months not a single colony of bacteria had developed.

I doubt if the most enthusiastic supporter of a method for sterilizing the hands by chemicals will contend that he can hold his carefully prepared, but naked hand, in a jar of sterilized broth for even ten minutes without infecting the preparation. I am quite convinced that the almost invariable cause of stitch abscess is the handling of sutures and needles with bare fingers.

I must occupy a few moments in referring to the objections which have been raised to the use of India rubber gloves in operative surgery. It has been often said that the tactile sensibility of the fingers is seriously impaired when the hand is enclosed in a rubber glove. I have not found this statement to be based on fact. If the glove fits perfectly (it should touch the skin of the fingers at every point) the most delicate objects can be felt with perfect appreciation. If the glove is not well-fitting, as is usually the case when the seamless glove is worn, folds of India rubber or collections of air between the glove and the skin will positively interfere with sensation. Moreover, the fingers of the surgeon who frequently uses rubber gloves will always be found to be free from the thick, horny epithelial layer which is so commonly seen on the hands of those who use chemicals for sterilization, and therefore the sensitiveness of his fingers' tips is markedly increased. While operating, the gloved hands are washed perfectly clean with great ease and rapidity, while the ungloved hand is with difficulty kept even partially free from blood and other fluids. One can readily believe that delicate tissues, especially those covered by an endothelium, suffer

far less traumatism when handled with fingers covered with smooth wet rubber, than when subjected to frequent manipulation, with more or less roughened naked finger tips. A moderate amount of practice will enable any fairly dexterous surgeon to operate as skilfully and rapidly with gloves as without them.

I have frequently seen it stated that the liability to cut or puncture the gloves, and so expose the naked hand, is great. I can only say in answer to this statement that there are many mistakes which it is possible to make while doing an operation, such as the accidental division of important vessels and nerves. The careful surgeon is no more likely to cut his operating gloves than he is to commit other gross errors in manipulation.

During the last five years I have never done an operation of any kind with bare hands, and my confidence in the value of India rubber gloves in preventing wound infection has long since reached the point of complete conviction.

The forearms, from the wrist to the elbow, should be covered with snug-fitting sleeves made of some sterile material, so that the bare skin of the arms may not come in contact with the wound, instruments, or other objects in use. Of course the surgeon and assistants should be clothed in sterilized gowns or coats.

Many other details concerning technique in conducting an operation aseptically, such as the handling of instruments, ligatures, gauze pads, etc., might be described, but it is not my intention now to complete the list.

A marked characteristic of good surgical technique is its simplicity, and while no amount of trouble in perfecting important details can be too great, it seems to me that the introduction of unnecessary methods is likely to lead to confusion and so direct attention from those which are really essential.

Among the unnecessary appliances I would enumerate caps on the head, respirators before the mouth, and complicated hand basins with foot attachments.

While a great perfection of preliminary preparations justifies the surgeon in approaching his work with a large feeling of confidence, there are still many important details to be considered in connection with the operation itself, if he would obtain even nearly uniform success in the exclusion of *all* sepsis from a long series of cases. I attach much importance to the statement which I added to my definition of the term aseptic surgery that, in all aseptic surgical work, every step should be taken in such a manner as to avoid, to the utmost, the creation of one or more conditions which are favorable to the development of germ life.

I refer, of course, to the making and treatment of the wound. It is true that when the surroundings and the implements are aseptic one may take great liberties with, and even make great errors in, surgical technique, and still obtain aseptic healing. On the other hand, the surgeon who is indifferent to numerous small details in his technique will not infrequently be surprised by abundant suppuration in an operation wound made, as is so often stated, "with all aseptic precautions." Suppuration is always due to error, and is even now very nearly always avoidable. Probably the day is not far distant when we shall be able to say that it is *always* avoidable. It is unlikely that that day will be brought nearer by the aid of chemicals.

In aseptic work we depend absolutely upon the natural capacity and tendency of the wounded tissues to heal. In our preparations we have made every effort to remove all foreign and injurious material from the things we are to use in the operation, and we must be equally careful so to handle the tissues that we shall do no harm. The fewer the hands which are directly engaged in the operation, the better, if only sufficient assistance is obtained, for, in diminishing the number of hands we diminish the chances of error. The more accustomed these hands are to mutual work, the more perfectly will the operation be done and every detail attended to. A first rate chief assistant is of the utmost importance, and to know how to assist an operator well requires long experience and special ability. The same, in a less emphatic manner, may be said in regard to the nurses employed in a surgical operating room. So far as possible, they should be the same individuals, month after month, and yet one often sees in hospital operating rooms the operation made use of to give what is called "a little practical experience" to the most ignorant beginners. Each assistant and operating room nurse should know his place and keep it, and thus again will the opportunities for error be diminished. "Team work without star players" would be a suitable motto for the operating room.

Knives should be sharp, so that incisions may be clean cut and not ragged and torn, for the latter condition is accompanied often by the death of minute fragments which favor the development of uninjured bacterial guests. For the same reason what is called (and even recommended) "blunt" dissection, in fact all methods which imply the tearing of tissue, are much to be deprecated. Especially should delicate tissues like the serous membranes, and all those which are low in vitality, be very gently handled, that endothelium, upon which so much depends, and minute vessels which supply nutrition, may not be injured.

The more perfectly nutrition is furnished through

uninjured blood vessels to the tissues involved in a wound the more certainly will scattered bacteria be destroyed. Hæmorrhage should be checked as early as possible, not only to save the blood of the patient and so preserve his general capacity for repair, but also to prevent the formation of small blood clots in the loose connective tissue, which often give rise to collections of serum and so create a condition taxing, more or less, the reparative power. To remove, from time to time, small clots and fluid blood from the field of operation, frequent washings with a six-tenths-per-cent. hot salt solution, which has been perfectly sterilized, should be made, as this solution has been found to be very acceptable to the most delicate tissues, upon which it has no harmful effect whatever. What is called dry sponging is not desirable, for by this practice delicate cells are crushed and bruised and a dry condition is totally foreign to their habit. Preparations of an antiseptic nature, such as bichloride of mercury, carbolic acid, alcohol, iodoform, etc., are to be absolutely avoided, for, if the wound is aseptic, they cannot possibly do any good, and they may do positive harm by causing superficial cell injury, thus creating a condition favorable to germ life. The only excuse for the use of such preparations is the belief on the part of the operator that his work is not aseptic, and his vague hope that, at the last moment, he will repair all errors. A vain hope, for only very prolonged use of strong solutions will effect the destruction of septic germs. With the widespread acceptance of Lister's theory, that germ life must be vigorously attacked and destroyed, an equally widespread belief seemed for a long time to be entertained that, as antiseptics were used to protect wounds from disease, no wound should object to them, and they were freely applied to the deepest wound recesses. It is now evident that antiseptics must be regarded as harmful foreign material and totally unsuited to the interior of any wound. And yet, even to-day, one will often see the surgeon who has performed an operation by aseptic methods end by packing his wound with iodoform gauze or by covering a clean suture line with some favorite colored powder. In either case sterilized gauze will absorb and protect perfectly and neither the wound nor the patient be poisoned.

Because foreign materials usually affect the behavior of wounds unfavorably, ligatures, to control hæmorrhage, should be of fine material, so as to leave small knots, and should strangulate as small a bit of tissue only as is essential, and all ligatures, and most buried sutures, should be of absorbable material like catgut. Hæmostasis should be made as complete as possible, and capillary oozing into the wound after its closure should be provided for. If, when seizing the end of a bleeding vessel with

hæmostatic forceps, a considerable fragment of tissue is grasped and included in the ligature, the whole or part of that fragment is liable to necrosis, and so may directly lead to an unfavorable condition. When sutures of non-absorbable material, like silk and wire, are buried in connective tissue, they usually become encysted and remain harmless, but not infrequently such foreign bodies cause small collections of serum, which subsequently become infected through the circulation. If free blood is left in an aseptic wound, it will usually be absorbed, but not seldom it will remain unabsorbed, prevent perfect repair, and even develop a late infection. It is in the interest of asepsis to provide proper escape for blood into the dressings.

If you ask me why, when a wound is made under perfectly aseptic conditions, minute necrotic fragments, blood clots, and aseptic silk ligatures can cause disaster, I refer to my former statement that, strictly speaking, no wound is certain to be perfectly aseptic, as some harmful germs may reach it from the air, from the skin incision, or even from the circulation. Under favorable conditions, and when the enemy to be resisted is not too numerous, the healthy cells will overcome and destroy the foreign germs. Increase the obstacles to repair sufficiently, and an active wound infection is liable to follow. The idea which I wish to convey is that complete aseptic work demands that wounds should be treated with the utmost delicacy and respect. The most careful preliminary preparations will not prevent the bad results of numerous faults in operative technique. When the wound is to be closed, accurate apposition of similar parts should, so far as possible, be made, and sutures should be so applied that no strangulation of skin or other tissue can occur. If this danger threatens it is much wiser to leave the wound wholly or partly open, so as to avoid too great tension and faulty nutrition of the tissues.

I must now ask your attention to the aseptic handling of septic wounds and diseases. This title may sound like a paradox, but nevertheless the subject deserves careful consideration. The belief is actually widely entertained that, if a wound or a disease be already septic, many aseptic precautions may be omitted when operation in such cases is called for. I have frequently heard the remark made, during an operation upon a septic case, that this or that breach of aseptic technique could do no harm. Such a theory is quite erroneous, and such practice as is suggested by it may have very disastrous consequences. In the first place we find a great variety as regards the activity and virulence of sepsis in different cases. In some an abundant collection of pus is nearly aseptic, and in others a very slight septic discharge is poisonous in the highest degree when applied to a freshly exposed

tissue. In all cases the addition of fresh septic germs will add to the activity of sepsis which already exists. It is frequently possible, by *exercising sufficient care*, to obtain clean aseptic healing in a wound which is originally septic. As illustrations I would name suppurating, and even already discharging, lymphatic glands, extensively ulcerating tumors of various kinds, many cases of advanced joint disease, resections of intestine, gangrenous appendices, etc. Especially in this class of cases, the septic ones, have I noticed the most marked improvement in the behavior of the wounds, since I began the use of India rubber gloves in operating. In many in which failure to obtain primary union used to be the result, perfectly clean aseptic healing has been obtained. In others, such as cases of abscess due to a diseased appendix, I have been as much surprised as pleased at the rapidity with which the abscess cavity would become clean, and vigorous granulation tissue close the large wound. On account of this improvement in wound behavior, I have been able largely to close, by suture, the entrance to a suppurating cavity, which under former methods it was absolutely necessary to leave wide open. Even in the extensive septic cases, salt solution has been used for washing and sterile gauze for packing and drainage, solutions of bichloride of mercury, carbolic acid, and iodoform gauze and powder having been entirely excluded. Weak solutions of peroxide of hydrogen have apparently been very useful in breaking up and removing septic fluids, and this preparation, unless too long continued in its application, has not seemed to injure granulation tissue.

When a septic cavity or wound has required packing with gauze for drainage, much more rapid healing has been obtained by making frequent changes of dressing, the rule having been established that the drainage material should be changed as soon as it became wet through with discharge. This rule was established on account of my belief that granulation tissue ceased to grow and became more septic the moment the drainage material ceased to remove discharge from the wound surface. Of course, following this rule, dressings may not infrequently require a complete change twice or even three times daily. The study of septic wounds has convinced me that the perfect and unceasing removal of septic discharge is a most important item in their post-operative treatment, and all so-called "stimulating applications," such as nitrate of silver, carbolic acid, balsam of Peru, and iodoform, are practically worthless. When a wound surface becomes covered with unhealthy, inactive granulations, the best method of stimulating it is to cut the undesirable tissue away with scissors, or to scrape it away with the curette. In this manner septic tissue is actually

removed, and fresh, active cells exposed on the surface. The destruction of septic granulations can also be well and instantly accomplished with the actual cautery, after the use of which healthy granulations grow rapidly, unimpeded by a septic covering.

If actively septic wounds can be advantageously managed on aseptic principles, how much more benefit may naturally be expected if a strict regard is paid to asepsis in all surgery of the mouth, nose, pharynx, rectum, vagina, and urethra. Not one of these regions cannot be efficiently cleaned with soap and water and hot salt solution. It is not difficult to conduct operations upon these parts in a perfectly aseptic manner or to obtain clean aseptic healing. But to accomplish this, one must discard the common belief that a constantly septic wound cannot be injured by a disregard of extreme precautions.

Asepsis demands not a little of the surgeon in the post-operative treatment, if he would avoid the creation of conditions favorable to bacterial life. Patients who have just undergone prolonged severe operations, and especially those who have suffered a considerable blood loss, are usually for some time in a condition of malnutrition. That is to say, every part of their bodies, and especially the parts which have been cut and handled, are temporarily supplied with a less quantity and an inferior quality of blood. Usually, of course, the return to a normal condition of nutrition is not long postponed, and yet in many cases, such as I have just referred to, resistance to sepsis will be increased if the volume of the blood is restored to the vessels. This can readily be done by injecting into the large intestine a quart of hot normal salt solution, or, in extreme cases, by an intravenous infusion of the same material. In order to favor asepsis, wound tissues should be, so far as possible, immobilized. If the recently wounded parts are permitted to be moved by the voluntary and involuntary muscular movement, the growth of new connective tissue is interfered with, new blood vessels are torn, minute hæmorrhages take place, and local nutrition is diminished, at a time when the utmost is required. Hæmatomata, which subsequently suppurate, areas of skin which fail to live, wounds of tissue caused by irregular strain upon sutures, are often due to the neglect to immobilize wounds. Dressings should be large for protection, soft for comfort, and firmly applied for support, and the patient will then be brought at an early stage to a condition of rest, a condition of great importance if one would secure the earliest repair. I should weary you if I were to continue to specify in detail the many items of post-operative treatment, such as the judicious use of morphine, the induction of sleep, the generous supply of water, and many other measures, which, as they greatly add to the patient's

well-being, increase also his power of resistance to sepsis.

I have enumerated many of the methods which I believe in in the practice of aseptic surgery, and indeed it would be very easy to write down such a complete list of instruments and apparatus needed, of methods to be employed, and rules to be observed that every point would be covered and every question answered. And yet the practice of aseptic surgery is not easy. Every one knows what honesty is, and that it is right and proper and even profitable to be honest. Every one acknowledges that the theory of honesty is simple and correct, and yet we find that the practice of this virtue is often defective.

Unfailingly to work aseptically on all occasions and from the beginning to the end of every operation, one must first acquire absolutely clearly defined *convictions* in regard to the principles involved.

The surgeon must *really* believe, in his inmost heart, that most wound diseases are preventable ones, that by strictly living up to his principles he can prevent them, that the responsibility for their prevention rests wholly upon him, and that no temptation is strong enough, no excuse plausible enough, to induce him even momentarily to forget his creed. A belief as strong as this does not permit infractions of discipline, and no accidental false touch or movement will escape unnoticed by the true disciple. With every successful effort his convictions will become more firm, his mistakes less frequent, his perceptions more acute as he strives for the ideal when, to commit a real error, will become impossible. His example will impress itself upon those about him, and his assistants and nurses will all rapidly acquire the same firm belief in the principles which govern the operator. It is evident, therefore, that asepsis will not flourish in the hands of the weak-hearted and the unbelieving. If I have spoken on this subject with enthusiasm, it is because my feelings in regard to it are those of the enthusiast, but I would not have you think for a moment that I am pretending to offer you something new and original. On the contrary, I am well aware that I have no valuable knowledge in regard to asepsis which is not possessed by many others, and this knowledge is becoming more widespread every day. Innumerable workers are constantly contributing the results of their observations and thus adding to the perfection of every branch of the science. The work is so attractive and, so far as life is concerned, its practice is so safe, that I cannot but feel the danger to be greater than it formerly was, that short and easy roads to success will be followed.

Is it not to be feared that the comparative safety of exploratory operations may lead to a neglect of the study of diagnosis? That the ability to obtain

repair, even of carelessly divided parts, may lead to a neglect of the study of anatomy? Even that the perfection of aseptic surgery may lead to the laying of a feeble foundation to surgical education?

I believe it to be true, however, that, while at first the modern improvements in surgical methods seemed to open the surgical field wide to the entrance of all applicants, the ideal perfection in surgical results will always be reserved for those whose surgical education, wide knowledge, acute observation, and painstaking attention to detail are beyond reproach.

28 WEST THIRTY-SEVENTH STREET.

TUBERCULOUS JOINT DISEASE.*

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The subject assigned to me for this evening's discussion is so large that it will be impossible, in the time at my disposal, to do more than touch upon some of its phases.

Many of the so-called joint lesions of a chronic character that have been studied under separate classifications of tuberculous synovitis, tuberculous arthritis, etc., are in reality results of tuberculous bone disease as so clearly set forth by Bradford and Lovett.¹

Heredity plays a conspicuous part in the ætiology, although traumatism is an undoubted factor. Efforts to ascertain their proper relationship have many times been attempted, notably by V. P. Gibney in his *Strumous Element in Joint Disease*,² and by C. Fayette Taylor in the preface of the German translation of *The Mechanical Treatment of Pott's Disease*. The former (Gibney) in an analysis of 596 cases of tuberculous joint diseases, determined the existence of tuberculous disease in the parents in 68 per cent. The latter (Taylor) analyzed 845 cases of Pott's disease and found 34 per cent. in which there was hereditary history.

The most decided advance in the accurate understanding of this class of diseases was made by Percival Pott, in 1779, when he published his paper, *Remarks on that Kind of Ralsy affecting the Lower Limbs, etc.*, from which I quote: "The primary and sole cause of all this mischief is a disturbed state of the parts composing or in immediate connection with the spine, tending to, and most frequently ending in, a caries of the body or bodies of one or more

vertebræ; from this proceed all the ills, whether general or locally apparent or concealed: this causes the ill health and in time the curvature, etc."

The application of the then startling principle by Pott was utilized to explain joint diseases and resulting deformities which were analogous in their clinical aspects. Theories were advanced and discussed, microbes were found and described that appeared to be responsible for the destructive tendencies of this form of chronic bone disease. The names of Boerhaave, Richter, Cooper, Nélaton, Virchow, Billroth, and many others, are identified with research in connection with the development of the present accepted pathology. It remained, however, for Robert Koch, the Father of Bacteriology,³ to announce in 1882 his great discovery of the bacillus of tuberculosis. He clearly demonstrated the presence of the bacillus, not only in lupus and soft structure tuberculosis, but also in 13 cases of tuberculosis of joints and in 10 cases of bone tuberculosis. Warren⁴ asserts that "Baumgarten should receive credit for first having seen the bacillus with the microscope." Confirmation of the statements of Koch have been made, notably by Schuhardt, Krause, Czerny, and others, until now it is definitely accepted that the pathology is of known character.

Coplin⁵ says: "The bacilli most frequently reach the bone through the circulation. König has shown that tuberculosis of bone arises as a result of a tubercular infarct, and Müller produced such a process by the intravascular injection of tubercle bacilli. Invasion may also occur from infection of contiguous structures, and possibly through the lymphatics. The lesion is most frequently located in or near the epiphyses, through involvement of which extension to the adjacent joint may occur, constituting the usual source of tuberculous arthritis. As a result of proliferation of the fixed connective tissue cells, as well as of leucocytic invasion, and more or less effort at peripheral vascularization, the formation of granulation tissue is brought about. Absorption of the adjacent bone occurs; Rutizky, Ribbert, and others believe that osteoclasts are not necessary to the absorption of bone in the presence of granulation tissue. Certainly, along the lines of osseous invasion in tuberculosis there is evidence clearly indicating that decalcification and removal of the bone matrix without the presence of osteoclasts are in progress. In rare instances the process becomes quiescent, with condensation of the surrounding tissue, constituting a form of healing-in. Early in the process, as a result of the specific poison produced by the tubercle bacillus, marked changes occur in the newly formed vessels, followed by casea-

*Read by invitation before the Medical Society of the County of New York, December 23, 1901.

¹*Orthopædic Surgery*, 1899, p. 177.

²*New York Medical Journal*, July, 1877.

³*Die Aetiologie der Tuberculose, Berliner klinische Wochenschrift*, 1882, No. 15.

⁴J. C. Warren, *Surgical Pathology and Therapeutics*, 1895, p. 56.

⁵*Manual of Pathology*, 1900, p. 724.

tion beginning at or near the centre of the diseased area. Such caseous areas increase in size by confluence of adjacent masses, extension into and absorption of the surrounding bone, and eventually, in many cases, perforation of the periosteum, and the induction of a paraosteal tuberculosis, thereby inducing what is often called a cold abscess" (page 370).

"In favorable cases there is an attempt to limit the process by the development of a dense wall surrounding the tubercular area, through which any fluid that results from the degenerative changes may be partly absorbed, leaving behind the caseous detritus, containing not uncommonly tubercle bacilli; into the fibroid capsule and caseous material, calcareous infiltration may occur, forming a stone-like mass, in which the tubercular virus may be destroyed or indefinitely stored. Sometimes the fibroid changes may be conspicuous and the calcareous infiltration but slight; in other instances the calcific matter may obscure the whole mass. The tubercle bacilli contained within such nodules may retain their viability, and hence their pathogenicity, or, in the course of time, may be no longer demonstrable. At first the organism stains with the characteristic activity—a reaction that becomes less and less manifest, and eventually disappears, so that, in old tubercles, under suitable conditions, the organism may be destroyed, or at least not demonstrable, and the degenerated contents of the mass may be no longer infective."

The insidious character of the onset of bone tuberculosis and the apparent triviality of the symptoms tends to allay suspicion as to its serious nature. The later persistency of disability, changing from intermittency to constancy, the frequent occurrence of night-cries, the failure to obtain relief from the remote pains often ascribed to rheumatism, cystitis, colic, bronchitis, and the occurrence of abscess formation and deformity, however, force a diagnosis and the localization of bone tuberculosis. Thus a correct diagnosis is too often made when it is too late to do more than arrest further progress of the destructive process.

During the early weeks of the affection, haste to prescribe relief, causes a casual inspection only, and does not permit the rigid, critical examination, with the patient entirely divested of clothing, which is so urgently demanded in all these cases.

Specialists are prone to criticise unjustly the family physician for neglecting to arrive at a correct diagnosis in the incipency, forgetting that the family physician is not the only one who makes mistakes. It is easy to make a correct diagnosis when deformity has occurred, or where abscess has shown itself, but it is very far from easy, it is often extremely difficult and not infrequently impossible, to

arrive at a correct diagnosis in the incipency, the time when it is most important.

Courts of justice have reiterated the finding that when a physician has used his best judgment and has done the best he could, he is not accountable for any unfavorable results which may occur, and this has become a legal axiom.⁶ It is therefore clearly apparent that the family physician and the specialist must first demonstrate, at least to themselves, that they have used their best judgment and then have done the best they knew.

If the statements of the parents of children afflicted with tuberculous bone disease can be accepted, it would appear as though the greatest sin of omission in these cases was the hasty examination, if there really was an examination. A prescription and an assurance that the child will be all right professionally encourage further neglect upon the part of the parents. The muscular rigidity, which was hastily taken for rheumatism or growing pains, passes to muscle atrophy and joint distention, the peculiar characteristics of the individual joint involved become pronounced, and, with the arrival at a tardy correct diagnosis, there comes a sense of profound regret at the disastrous consequences of delay in diagnosis.

The temperature of the patient disarms suspicion, because it is rarely more than a degree or a degree and a half above normal, and gives no indication as to the character of the malady.

Rarely is there pain at the joint involved; it is a reflex pain or one referred to some other part more or less remote from the site of disease.

Muscular rigidity is a constant and reliable sign and is always present until muscle atrophy and joint stiffness have occurred. It is caused by the intuitive effort of the child to produce fixation of the joint, and this gives to the individual joints an expression which is typically characteristic. Associated with muscular rigidity is the peculiar character of night-cries, produced in the early hours of sleep, by some disturbance of the child, and the instant instinctive effort of the muscles which were relaxed in sleep, to produce rigidity by contraction. Muscle atrophy naturally ensues and has been observed as early as the eighth day, an expression of which is found in the spindle shape of joints, which is erroneously ascribed to joint enlargement; careful measurement, however, determines the exact condition.

Two very serious errors are committed sufficient often to demand attention. It seems astonishing that they should ever be made in view of the irreparable damage likely to be produced by their use, and especially as they are never indispensable. To anaesthetize a patient with suspected tuberculous

⁶A Medico-legal Aspect of Tuberculous Joint Disease. *American Medicine*, July, 1901.

joint will remove the one symptom which is constant and unvarying in the incipency, namely, muscular rigidity, and leave the way open for more or less severe traumatism from forcible manipulation. Not finding any abnormality, the physician is prone to ignore the serious importance of the previously and subsequently existing muscular rigidity. To press forcibly upon the head and shoulders in suspected spondylitis, or to strike upon the heel or knee in suspected coxalgia, will provide the traumatism which the intuitive muscular rigidity is guarding against, a traumatism that every indication decries, that is never essential, and that at the most is simply confirmation of an opinion already formed from a study of symptoms and signs associated with the joint.

Too frequently attention is diverted by the absence of some of the so-called signs of tuberculosis when in reality these signs are indications, not of disease of the joint, but of its postures. Thus, the effacement of the glutæofemoral crease is caused by the flexion phenomenon produced in the incipency by muscle contraction for immobilization purposes, and later by permanent ankylosis flexion. It therefore possesses value only as evidence of flexion, and is often of value as confirmation. Whitman⁷ says: "Flexion is practically an invariable symptom in hip disease because complete extension, the attitude that puts most strain upon the joint, is first restricted."

Each individual joint or site of tuberculous invasion presents its own peculiar difficulties of exact diagnosis, and care and discernment are required for differentiation.

Tuberculous hip disease may be confounded with the following:

- Syphilitic coxitis.
- Typhoid arthritis.
- Psoas abscess.
- Lumbar Pott's disease.
- Disease or injury of the knee joint.
- Rheumatism.
- Phimosis, adherent prepuce, adherent clitoris.
- Sarcoma.
- Acute synovitis of hip.
- Chronic synovitis of hip.
- Infantile paralysis.
- Epiphysial hyperæmia.
- Congenital dislocation of hip.
- Hysterical joint.
- Periarthritic disease.
- Charcot's joint.
- Coxa vara.
- Sacro-iliac disease.

Tuberculous disease of the spine, according to its location, may be confounded with:

- Sprains.
- Torticollis.

Inflammation of cervical glands.

Scoliosis.

Rhachitic spine.

Hip disease.

Paralysis.

Bronchitis.

Colic.

Acute abdominal disease.

Cystitis.

Hyperæsthetic spine.

Railroad spine.

Malignant disease of the spine.

Traumatic spondylitis.

Syphilis of the spine.

• Osteomyelitis.

Rheumatoidal arthritis.

Sacro-iliac disease.

Perinephritis.

Aneurysm of aorta (abdominal).

In other joints similar difficulties occur or have occurred, in cases where the symptoms and signs were not distinct, or where coincidently more than one condition was present.

The greatest reliance may usually be placed upon the physical expression of the patient's efforts to perform usual normal functions of the joint suspected. These alterations of the character of movements are peculiar to the individual joints, and their recognition is based upon knowledge of the normal action of the part, which may be supplemented by a comparison with the corresponding joint of the other side of the body.

The faulty mechanical action due to muscular rigidity, the guarded character of movements, the intermittent limp or disability, the history of night-cries, combine to effect a diagnosis, or at least to cause one to suspect the presence of tuberculous bone disease. In the latter event, it is far safer to resort to immobilization of the joint at once than to have even temporary recourse to the persuasive growing-pains, or rheumatic pains. The early employment of immobilization, from the diagnostic standpoint, while strongly demanded by our knowledge of pathology and clinical histories, possesses the danger of producing a fear of erroneous diagnosis, as the pains disappear and the muscular rigidity yields to the immobilization methods employed. With the favorable progress of the case toward absorption and resolution, and the entire disappearance of symptoms and signs, the fear of the opprobrium attached to erroneous diagnosis has many times induced recourse to massage, passive motion, and even encouragement to normal use, in order to obtain a rapid restoration of normal function. Needless to say, such methods are based upon serious error or absence of knowledge of the character of the disease, and the traumatism thus effected produces the subsequent serious disasters with which we are all confronted. The destruction of the joint,

⁷*Orthopedic Surgery*, 1901, p. 233.

the invasion of the surrounding structures by the bacillus, the involvement of other joints, the vital organs becoming affected, amyloid degeneration, and death following great emaciation make an unmistakable clinical picture.

This contemplation of the terribly destructive results of unarrested tuberculous bone disease forces us back, step by step, to the beginning of the invasion, where we are confronted by a clinically recognizable condition whose pathology is now well established, the arrest of the progress of which is not only possible, but is imperatively demanded. The assurance that the future usefulness of the joint need not manifest any indication of the former disease, on the one hand, and the positive certainty that vast destruction of joint function with the accompanying alterations in the life prospects of the patient, on the other, indicate the serious responsibilities of the physician in whose hands these patients are placed when the disease is in its incipency.

Much damage is done by considering tuberculous hip disease in the so-called three stages, and attempting the impossible task of ascribing clinical phenomena to those divisions, with a supposed pathological basis. No other tuberculous lesion is so considered, and it is difficult to comprehend the reason for continuing such fallacious teaching. Many surgical text-books of the most recent date persist in this subdivision, a noteworthy exception being DaCosta's *Surgery*. In the edition of 1898, p. 411, he emphasizes the three stages of hip disease, and in the next edition, 1900, p. 517, he gives reasons for the discontinuance thereof. The so-called stages are in reality results of the bone disease, and in no sense should they be considered a necessary part of it.

Postoperative and post-mortem demonstrations have clearly revealed the presence of minute points where resolution has occurred. The small cavities produced by the breaking down of the bone have become filled in with new callus-like material, often leaving the neighboring joint free from indication of abnormality. This gives assurance that, with early recognition, appropriate treatment, and favorable constitutional conditions, the recoveries from bone tuberculosis may be, and should be, without external evidence of its previous existence.

Instead of the most favorable progress, the process may still further advance in one of two ways. It may either break through the periosteum and thus develop extra-articular accumulation of pus-like material, or it may break into a joint and there excite a tuberculous arthritis, ultimately involving the neighboring bone.

It has become a well-assured fact that, even when extensive invasion has occurred, absorption and resolution may be secured, clearly indicating the

controlability of the disease. Based upon modern clinical and pathological research the principle of rational treatment would appear to be to aim at securing ankylosis rather than to attempt to avoid its occurrence. By so doing, ankylosis will not necessarily result, but, instead, normal, or approaching normal, function may gradually be established in those cases where correct diagnosis in the incipency favored early application of appropriate remedial measures. Conditions arising after incipency, whether caused by delay, neglect, or other reason, must be met in an appropriate manner, the consideration of which is outside the scope of this paper.

TRIPARTITION

IN THE STUDY OF THE FEMALE PELVIS.*

By A. ERNEST GALLANT, M. D.,

NEW YORK.

In accepting the invitation of your worthy secretary (my dear old chum, Tuley) to address a body composed so largely of teachers, it is on behalf of a vastly greater army of practitioners and students, who not unjustly complain at the lack of systematic clearness and conciseness in the presentation of subjects upon which they desire to be enlightened and so eagerly seek after at home and abroad.

Would not more careful preparation and presentation on the part of teachers at home deter many from launching themselves, linguistically unprepared, upon the uncertain ocean of Continental medicine, only to return disgruntled, heart-sore, having sought in vain their heart's sincere desire?

"To learn to classify is in itself an education." The orderly presentation of a subject, based upon a uniform plan as an aid to memory (receptive, retentive, and recollective), has always been recognized as of value to student, teacher, and practitioner.

For some years past it has been my custom to arrange the components of the female pelvis (anatomical, functional, and pathological), in natural groups of "threes"—*Tripartition*, as illustrated by the following specimen charts, subject to change and further elaboration.

Anatomically the pelvis may be looked upon as a cavity:

1. Bounded circumferentially by a bony wall.
2. Roofed over by peritonæum, and
3. Closed below by the pelvic floor.

This bony basin, or bird's nest, is formed by the union of the two ossa innominata (originally, os pubis, ischium, and ilium) and the sacrum, united at

1. The sacro-iliac synchondrosis, and

*Presented before the Mississippi Valley Medical Association, at its twenty-seventh annual meeting, Put-in-Bay, Ohio, September 12, 13, and 14, 1901.

2. The pubic arch, by the corresponding ligaments, and by

3. The sacrosciatic ligaments (greater and lesser).

The superior boundary (1) of this basin is designated as its brim or inlet, the inferior portion (2) as the outlet, and the interior (3) lying between inlet and outlet, as its cavity.

The pelvis is roofed over by peritonæum, which enfolds the superior portions of the pelvic organs, and separates them from (1) the peritoneal cavity, (2) the intestines, and (3), the omentum.

As the peritonæum dips down to conform to the pelvic organs, it forms double layers, denominated ligaments, viz., (1) the uterovesical, (2) the broad, and (3), the uterosacral ligaments. The depressions lying between these ligaments and the respec-

tive organs are known as (1) the anterior or uterovesical pouch, (2) the lateral, and (3), the posterior pouch, or *cul-de-sac*, of Douglas.

THE PELVIC CONTENTS.—The pelvis is found to contain three tracts, or channels, each endowed with special functions; each subdividing and subject to changes in size, shape, and consistence necessary for the fulfilment thereof. These tracts, independent, yet wonderfully interdependent; correlated; acting each for itself, yet every action affecting its neighbors for good or evil; working together the one with the other, in such intimate relationship as to require the most thorough knowledge of their anatomy, functions, and pathology to determine (1) which is the sufferer, (2) which is at fault and (3) toward which we must direct our therapeutic efforts.

The PELVIC FLOOR, OR DIAPHRAGM, is made up of:

1. Skin.					
2. Muscles.	1. Vulvovestibular group.	1. Erector clitoridis.		<i>Functions.</i>	
		2. Musc. bulbi cavernosi.		1. Constrictor vagina.	
		3. Constrictor vagina.		2. Control anus and childbirth.	
	2. Transverse perinæi.			3. Support pelvic and abdominal viscera.	
	3. Anal group.	1. Levator ani.			
		2. Sphincter ani.			
		3. Coccygeus.			
3. Fascia.	1. Superficial fascia, superficial layer.				
	2. Superficial fascia, deep layer.				
	3. Triangular ligament.				

Externally the pelvic floor presents:

1. VULVA.	1. Labia majora.	1. Clitoris.
	2. Labia minora.	2. Bulbi vaginæ.
	3. Vestibule.	3. Bartholinian glands.
		1. Meatus urethræ.
		2. Skene's ducts.
		3. Hymen.
2. PERINÆUM—Median rhapshe.		
3. Ischio-anal region.	1. Anus.	
	2. Ischiorectal fossa.	
	3. Coccyx.	

1. URINARY TRACT—Canals.	Inlet or outlet or both.
1. Ureters.	Pelvis of kidney—Ostium of ureter opening into:
2. Bladder.	Meatus internus opening into:
3. Urethra.	Meatus urethræ externus.
<i>Functions.</i> —1. Conduct.	2. Collect.
	3. Expel urine.

2. GENITAL TRACT.—1. Vagina, hymen—Os externum uteri.	
<i>Functions.</i> —1. Coition.	2. Uterine discharge.
	3. Birth canal.
	2. Uterus—Os externum uteri—os tubæ.
<i>Functions.</i> —1. Mensesruation.	2. Gestation.
	3. Expulsion of fœtus.
	3. Falloppian tube—Os tubæ—os fimbriæ.
<i>Functions.</i> —Conduct (1) sperm, (2) ovule, (3) ovum.	

3. ALIMENTARY TRACT.—1. Peritoneal portion.	
<i>Functions.</i> —Collect solids.	2. Conduct fluids.
	3. Expel gas.

THE GENERAL ANOMALIES OF THE PELVIS can bebest grouped under the following headings:

1. Deformities (congenital).	1. Non-formation—absence of.			
	2. Arrested growth—immature.			
2. Distortions.	3. Asymmetrical growth.			
	1. Size.	1. Length.	2. Breadth.	3. Thickness.
3. Distention (contents).	2. Shape.	1. Axial.	2. Calibre.	3. Diameter.
	3. Continuity.	1. Functional.	2. Traumatic.	3. Operative.
4. Dislocations (displacements).	1. Fluids.	1. Blood.	2. Serum.	3. Pus.
	2. Solids.	1. Foreign bodies.	2. Neoplasms.	
5. Disorders.	3. Mixed.			
	1. Position.	1. Upward.	2. Downward.	3. Lateral.
6. Diseases.	2. Direction.	4. Right.	5. Left.	6. Backward.
	3. Mobility.	1. Immobility (fixation).	2. Limited (partial).	3. Excessive.
	1. Function.	1. Absent.	2. Suspended.	3. Abnormal.
	2. Secretion.	1. Suppressed.	2. Diminished.	3. Excessive.
	3. Sensation.	1. Insensitive.	2. Sensitive.	3. Supersensitive.
	1. Infectious.	1. Syphilitic.	2. Tuberculous.	3. Pyogenic.
	2. Structural.	1. Mucous membrane.	2. Muscle.	3. Peritonæum.
	3. Neoplastic.	1. Benign.	3. Malignant.	3. Mixed.

From the study of the development of the genital tract we learn that *Congenital Deformities* may be classified as:

1. Non-development—Uterus, vagina, tubes, one or all absent.
2. Rudimentary development.
3. Incomplete, asymmetrical growth, as:
 1. Uterus unicornis—unilateral development of Müller's ducts.
 2. Uterus bipartitus—non-development of horns.
 3. Uterus duplex.
 1. Didelphys, non-union of Müller's ducts.
 2. Bicornis, partial non-union of Müller's ducts, no fundus.
 3. Sæptus, union of Müller's ducts, sæptum persists.
- Atresia—non-perforation.
 1. Atresia hymenalis—inflammatory adhesion after nineteenth week.
 2. Atresia vaginalis.
 1. Upper and middle third.
 2. Lower third.
 3. Transverse sæpta, any portion of the canal.
 3. Atresia cervix—os ext. or int. (usually acquired).

2. UTERINE DISTORTIONS.—When the uterus lies in the axis of the inlet, the bladder being partially distended, if a straight, stiff wire were introduced at the umbilicus and forced downward and backward so as to emerge at the tip of the coccyx, during its passage through the pelvis it will have pierced the fundus uteri, passed through the uterine cavity and cervical canal, and represent the so-called axis of the uterine canal.

Under one or more of several influences, the cervix or the body may deviate from this line, producing a more or less acute anterior or posterior angle at the junction of the corpus and cervix uteri. Such angulations are designated *flexions*. Most teachers and text-books describe these torsions, without particularizing which portion of the organ has been the factor in making the angulation. In practice we

find that it is either the cervix bent forward—anteflexion of the cervix—or the fundus and body bent backward—retroflexion of the fundus. This claim

can be readily substantiated, as in anteflexion of the cervix the fundus is directed upward and forward, in contact with the bladder—its normal relation—while the cervix instead of lying high up, almost out of reach, in the vagina, has approached the os vaginæ, in direct proportion to the degree of flexion

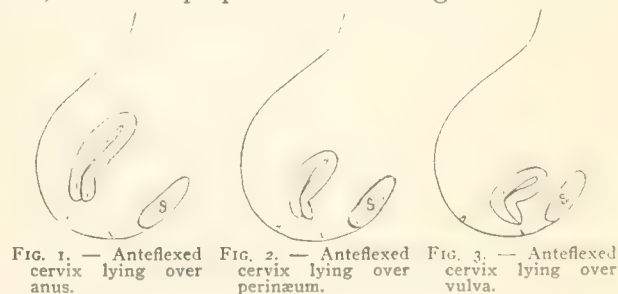


FIG. 1. — Anteflexed cervix lying over anus. FIG. 2. — Anteflexed cervix lying over perinæum. FIG. 3. — Anteflexed cervix lying over vulva.

(Figs. 1, 2, 3). On the other hand, when the fundus is flexed backward, we find the cervix high up

in the posterior fornix and the fundus dislodged to a greater or less degree below the promontory



FIG. 4.—Retroflexion, fundus below promontory. FIG. 5.—Retroflexion, fundus in pelvic hollow. FIG. 6.—Retroflexion, fundus on pelvic floor.

(Figs. 4, 5, 6). It is, therefore, our practice to designate the position of the uterus in the pelvis and the degrees of angulation in the following way:

UTERINE DISTORTIONS.

1. *Anteflexion of the Cervix*.—First degree, os externum over anus; finger must be inserted within hymen to third finger joint, or about three inches (Fig. 1). Second degree, os externum over perineum; finger to second joint, about two inches (Fig. 2). Third degree, os externum at vulva; finger to first joint, about one inch (Fig. 3).

2. *Retroflexion Fundus* (Figs. 4, 5, 6).—First degree, fundus lies below sacral promontory. Second degree, fundus lying in sacral hollow. Third degree, fundus lying on pelvic floor, "U" shaped (rare).

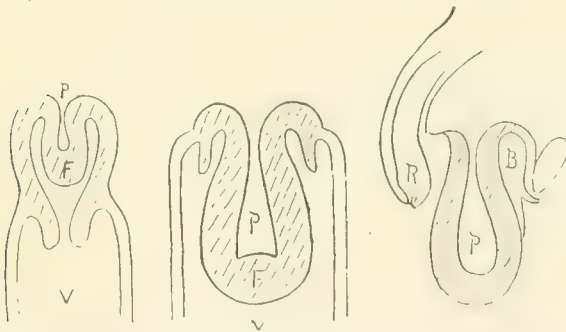


FIG. 7.—Inversion of fundus into uterine cavity. FIG. 8.—Inversion of body into vagina. FIG. 9.—Inversion of uterus through vulva.

3. *Inversion* (Figs. 7, 8, 9).—First degree, fundus inverted into uterine cavity. Second degree, fundus inverted into vagina. Third degree, fundus projects through the vulva.

3. *Distention of the genital tract* arises from:

1. Tubal.
2. Uterine and
3. Vaginal.

1. Hydrosalpinx.
1. Hæmatocolpos.
1. Polypi.
1. Fibrosarcoma.

them, displacement of the pelvic viscera, from whatever cause, have furnished the gynæcologist with matter for serious thought and problems as yet unsolved.

The Position of the Uterus.—The uterus may be looked upon as a wedge-shaped *beam*, suspended within the pelvis, at a more or less acute angle, horizontally, by a hammock-like series of guy ropes (ligaments) fore and aft, to larboard and starboard, made fast at the junction of its middle and lower third, heaviest end up—top-heavy—naturally it tends to dip forward and downward until it rests upon a soft water bag (bladder), firmly attached to and supported by the bony framework (symphysis pubis), and below this point it cannot go. Its lower, lighter, posterior end, the cervix, lies above the rectum, vagina, and coccygeal portion of the perineal floor (Fig. 10). The beam (uterus) thus bridges over the pelvic outlet, and *unless the beam swings backward or bends, or the support (pelvic floor) gives way or breaks*, no amount of force from above can dislodge it (Figs. 11, 12).

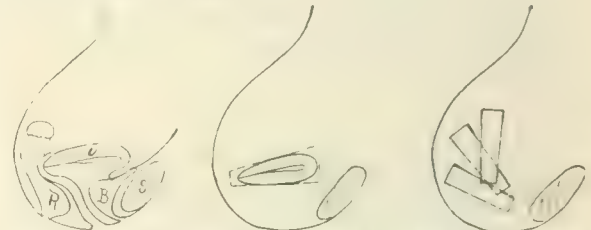


FIG. 10.—Uterus overlying bladder, vagina, and rectum. FIG. 11.—Uterus bridging over vulvar outlet. FIG. 12.—Uterus as a wedge sliding down pelvic floor.

Uterine Mobility.—Normally the hammock-like ligamentary attachments of the uterus and adjacent structures permit of a wide range of mobility in every direction; rising and falling with every respiration, receding and advancing in unison with vesicle systole and diastole, etc.

Abnormal mobility of any of the pelvic contents must be said to be present when any portion of the three tracts *has suffered such a degree of dislocation as prevent it from resuming and maintaining its normal position and relations*, usually denominated *displacements*.

Uterine displacements, represented by the swinging of the beam, without bending (version) so far

- | | |
|-------------------------------------|----------------------|
| 2. Hæmatosalpinx (tubal gestation). | 3. Pyosalpinx. |
| 2. Hæmatometra. | 3. Pyometra. |
| 2. Fibroids. | 3. Fibrocysts. |
| 2. Sarcoma. | 3. Epithelioma, etc. |

4. *Dislocation, or Displacement*.—From the triple standpoint of (1) frequency; (2) the suffering incident thereto, and (3) the almost insurmountable difficulties to be overcome in restoring and retaining

backward that the natural elasticity of the guy ropes (ligaments) will not suffice to restore it to its proper resting place upon the fundus of the bladder, are spoken of as *versions*.

As above noted, the fundus uteri normally rests upon the fundus vesicæ, when that organ is empty, the latter being closely attached to the symphysis pubis, making that bone the real support of the fundus uteri and pathological *anteversion* a practical impossibility. Therefore as deviations from the normal *position* in the pelvis we have:

I. UTERINE.—I. Retroversion (Figs. 13, 14, 15).

2. Lateroversion. 1. Right. 2. Left.

3. Descensus. Internal. 1. Fundus below promontory (Figs. 4, 13).

(Intravaginal) 2. Fundus in pelvic hollow (Figs. 5, 14).

3. Fundus on pelvic floor (Figs. 6, 15).

External 1st degree. Cervix projects through os vaginæ.

(Extravaginal) 2d degree. Partial extrusion of body of uterus with bladder.

3d degree. Complete extrusion body of uterus with bladder and rectum.

2. VAGINAL.—I. Urethrovaginal, or urethrocele,

2. Vesovaginal, or vesicocele,

3. Rectovaginal, or rectocele,

3. OVARIAN 1. Into anterior pouch or shelf (in front of fundus uteri).

and 2. Into lateral pouch or shelf.

TUBAL.—3. Into Douglas's cul de sac, on either side or behind cervix.

Descensus Uteri (Prolapsus, procidentia, hernia, enterocele uteri). Whenever we meet with (1) re-



FIGS. 13, 14, and 15 showing three degrees of retroversion with prolapse.

laxation of the pelvic floor, (2) backward dislocation (retroversion) of the uterus, or (3) ante flexion of the cervix, we also find as a part of the same process, the uterus sliding down the sacral curve (pelvic toboggan) at a speed limited only by the superincumbent weight, intra-abdominal tension, tumors, etc., which will eventually force it with the bladder and rectum entirely outside the vagina. The degrees of prolapse are most lucidly described as internal or intrapelvic, and external, when projecting through the os vaginæ (supra).

¹When the cervix uteri is in its normal position the examining finger cannot be introduced far enough to reach the os externum, but comes in contact with the anterior lip. If (1) the fundus is pushed backward, if (2) the uterus lies in retroversion, or if (3) the cervix is ante flexed, the examining finger readily comes in contact with the external os. This fact has been taken advantage of as a means of designating the position of the cervix and its deviation from the normal, as determined by the distance which the finger must be introduced within the hymen to reach the os externum, and expressed as "finger inserted to the first, second, or third joint" or a corresponding number of inches.

An Hypertrophied Cervix Uteri projecting from the vulva may be mistaken for an external prolapsus uteri, but presents the following distinctive features (Hart, Barbour):

1. Of the vaginal portion—both fornices persist in their normal position (Fig. 16).

2. Of the intermediate portion—the posterior for-

1st degree. Fundus below promontory; os externum over anus,¹ third joint.

2d degree. Fundus in pelvic hollow; os externum over perinæum, second joint.

3d degree. Fundus on pelvic floor; os externum opposite os vaginæ, first joint.

3. Oblique.

1st degree. Fundus below promontory (Figs. 4, 13).

2d degree. Fundus in pelvic hollow (Figs. 5, 14).

3d degree. Fundus on pelvic floor (Figs. 6, 15).

1st degree. Cervix projects through os vaginæ.

2d degree. Partial extrusion of body of uterus with bladder.

3d degree. Complete extrusion body of uterus with bladder and rectum.

aa 1 degree, 2 degrees, 3 degrees.

nix remains (Fig. 17).

3. Of the supravaginal portion—both anterior and posterior fornices are obliterated (Fig. 18).



FIGS. 16, 17, and 18, showing hypertrophy of vaginal, intermediate, and supravaginal portions of the cervix.

FUNCTIONAL DISORDERS may be illustrated in tabular form by enumerating the *Disorders of Menstruation*:

The disorders of reproduction involve as careful consideration of the male as of the female organs.

INFECTIOUS PELVIC DISEASES.—I. *Gonorrhœa*.

Nature.—A specific inflammation due to the presence of the gonococcus (diplococcus) of Neisser.

Ætiology.—Age, birth to old age. Sex, both; most common during sexual activity.

In conclusion—It is hoped that the foregoing outlines will be the means of stimulating teachers to greater activity in systematizing their subjects (1) as conducive to consecutiveness, conciseness, and

1. Period (type).	1. Absent (suspended).	2. Lengthened (infrequent).	3. Shortened (too frequent).	
2. Duration (days).	1. Lessened.	2. Increased.	3. Off and on.	
3. Quantity.	1. Diminished (scanty).	2. Increased.	3. Excessive.	
4. Quality.	1. Clotted.	2. Black.	3. Serosanguineous.	
5. Pain.	1. Time.	1. Before.	2. During.	3. After.
	2. Location.	1. Abdomen.	2. Sacrum.	3. Pelvis and thighs
	3. Nature.	1. Cramp-like.	2. Bearing-down.	3. Continuous.
6. Reflexes.	1. Headache.	1. Occipital.	2. Vertex.	3. Frontal.
	2. Stomach.	1. Nausea.	2. Vomiting.	3. Indigestion.
	3. Bowels.	1. Diarrhoea.	2. Constipation.	3. Obstipation.
	4. Bladder.	1. Anuria.	2. Polyuria.	3. Dysuria.
	5. Breasts.	1. Hardened, erect—congested.		
		2. Sensitive—tender—painful.		
		3. Secreting.		
	6. Veins.	1. Vulva.	2. Extremities.	3. Pelvis.
		1. Congested.	2. Dilated.	3. Varicose.

MALE TRACT contributes:

1. Testicle—spermatozoa.
2. Spermatie and urethral canal.
3. Prostate gland.

FEMALE TRACT contributes:

- Penis—Coition—vagina—uterus, Falloppian tube.
1. Semen.
 2. Ovule.
 3. Ovum.
 2. Gestation.
 3. Parturition.

1. Implantation.

Disorders of Fætation:

- | | | | |
|-----------------|-----------------|-----------------|---------------------|
| 1. Sterility. | 1. Masculine. | 2. Feminine. | 2. Both. |
| 2. Gestation. | 1. Abortion. | 2. Miscarriage. | 3. Premature birth. |
| 3. Parturition. | 1. Precipitate. | 2. Difficult. | 3. Operative. |
- Dependent on the relation of passage, passenger, and powers.

Primarily.	1. Urethra.	Secondarily.	1. Trigonum.	2. Ureters.	3. Kidneys.
	2. Vagina.		2. Skene's ducts.	2. Cervix.	3. Uterus.
	3. Rectum.		1. Bartholin's ducts.	2. Tubes.	3. Peritonæum.
Sources.	1. Birth canal.	2. Manipulation.	3. Coition.		
Habitat.	Mucous membrane, preferably columnar epithelium. Serous membrane, less so (squamous epithelium).				
Course.	1. Incubation (1 to 7 days).	2. Invasion—acute.	3. Course—chronic.		
Symptoms.	1. Pain (local).	2. Congestion.	3. Discharge.		
Diagnosis.	1. Traumatic.	2. Senile.	3. Neoplastic.		
	1. History.	2. Gonococcus.	3. Inspection.		
Treatment.	1. Local, (1) silver nitrate.	2. Ichthyol.	3. Douches.		
	2. General, (1) heat.	2. Cold.	3. Sedatives.		
	1. Nourishment.	2. Urine.	3. Bowels.		
	3. Operative. Excision.	1. Skene's ducts.	2. Bartholin's ducts.	3. Pyosalpinx	

clearness; (2) as an aid to the student in comprehending, noting, and fixing, and (3) as a means of simplifying its application to the living patient.

60 WEST FIFTY-SIXTH STREET.

The Society of Medical Jurisprudence held its twentieth annual dinner at the Savoy Hotel on March 10th. Among the members and guests who attended were: Samuel L. Clemens, ex-Judge Joseph F. Daly, ex-Judge Ernest Hall, Judge E. B. Hinsdale, Edward Lauterbach, Fred B. House, Alex. T. Ketcham, Dr. E. C. Spitzka,

Dr. Nathan E. Brill, Dr. Carl Beck, Dr. C. A. von Ramdohr, Professor W. H. J. Sieberg, D. McLean Shaw, General Henry C. Tremaine, James E. Graybill, Roger M. Sherman, Boardman Wright, A. E. Pressinger, Emerson McMillin, William Watson Pierce, Louis J. Vorhaus, W. L. Lyman, Dr. H. C. Brush, John C. West, William W. Bryan, E. H. Benn, Dr. Jean F. Chauveau, Dr. Max Einhorn, Charles Goeller, C. H. MacDonald, John A. Kamping, Dr. W. M. Leszynsky, Jacob and William Shradly, William R. Wilder, Jackson Wallace, Alfred E. Ommen, and Judge J. Franklin Fort, of New Jersey.

Therapeutical Notes.

For Acute Laryngitis.—*Progrès médical* for January 25th recommends the following:

R Menthol. 30 grains;
 Spirit of Pinus sylvestris, }
 Spirit of eucalyptus, } of each, 45 minims;
 Tincture of benzoin, of each. 30 "
 Tincture of tolu,

M.

The patient should breathe twice or thrice daily the vapor of a few drops of this mixture. Evaporate in an iron spoon over a lamp.

For Intractable Chronic Diarrhœa.—The *Gazette hebdomadaire de médecine et de chirurgie* for February 6th, citing the *Semaine médicale*, ascribes the following to M. J. Hughson:

R Salicine. 120 grains;
 Syrup. q. s. to make 20 pills.

M.

Two pills to be taken every four hours. By this treatment Dr. Hughson has cured, in a few weeks, diarrhœas extending over several years, which had proved refractory to all treatment hitherto employed.

Chronic Blennorrhagia of the Prostate.—Stordeur (*Progrès médical Belge*, February 15th) says that a hygienic regimen is absolutely essential to combat the results of prostatic congestion. All irritating aliments, as game, spiced foods, alcohol in all its forms, must be proscribed, as also all table excesses, prolonged sitting, horseback riding, the bicycle, etc. Sexual abstinence is indispensable.

For internal medication, the same measures as for urethral and vesical blennorrhagia must be used, viz., benzoic acid, benzoates, salol, guaiacol, urotropin, methyl blue, etc.

Locally, lavages of potassium permanganate, $\frac{1}{4}$ to 1 to 1,000, zinc permanganate, $\frac{1}{4}$ to $\frac{1}{2}$ per 1,000, copper sulphate, 5 to 15 per 1,000, resorcin, 10 to 15 per 1,000, ichthyol, 5 to 10 per 1,000, silver nitrate, $\frac{1}{2}$ to 3 per 1,000, protargol, $\frac{1}{2}$ to 2 per 1,000, corrosive sublimate, from 1 to 20,000, to 1 to 10,000, etc., all have their uses. These lavages are administered without a catheter, with a large syringe furnished with a reinforced conical tip, as in the cannula of Janet; the pressure made by the operator will cause the liquid to pass by the membranous sphincter, and come in contact with the prostatic lesion. An irrigator with a Janet's or Tuffier's cannula may replace the syringe. These methods are better supported than the use of a catheter.

Instillations to the prostatic mucosa may be made by means of Ultzmann's syringe or of the instillators of Guyon or Albarran. Weak applications should be used at first. Glycerin solutions are more active than watery ones, but less so than oily ones, such as liquid petrolatum or hydrous wool fat. The author habitually uses Kraus's mucilage:

R Gum tragacanth. 35 grains;
 Glycerin. 150 "
 Sterilized water. 3 ounces;

with which he incorporates copper sulphate, 2 per cent., or ichthyol, $\frac{1}{2}$ per cent.

Not only the medicament, but also the mode of its employment is of importance. Lavages, generally

speaking, should be used when by the two-glass test, the urine is markedly affected, or micturition is accompanied by pain, urgency, or tenesmus; also when symptoms indicate that an acute catarrhal inflammation of the urethral and vesical mucosa exists. Too vigorous medication here might lead to increased inflammation, abscess, orchitis, etc.

When the catarrhal state of the mucosa is alleviated, the urine clear, and no glandular filaments abound in it, instillations are more effectual.

Rectal medication may consist in watery lavements or oily ones. Among the drugs used are iodine, iodoform, ichthyol, potassium iodide, antipyrine, etc., with which may be associated calmatives, such as extract of opium, belladonna, cannabis indica, cocaine, bromides, etc.

The author habitually employs the suppository, as follows:

R Potassium iodide. $4\frac{1}{2}$ grains;
 Ichthyol. from 3 to $4\frac{1}{2}$ "
 Morphine hydrochloride. $\frac{1}{8}$ of a grain;
 Extract of datura. $\frac{1}{8}$ " "
 Cacao butter. enough for one.
 One or two daily.

Hydrotherapy is recommended as follows: At first, cold sitz baths, of 5 or 10 minutes' duration, in indolent and non-suppurative cases; hot baths (temperature not stated) of from 30 to 60 minutes' duration, if there is pain, cystitis, or suppuration (Scharff). Cold douches to the perinæum for some seconds. Hot compresses (Priessnitz) to the perinæum. Hot or cold currents by the urethra or rectum, by means of various apparatus, are sometimes suitable.

Electricity has its advocates. The faradaic current may be used by means of a rectal or urethral electrode, the other pole being applied to the hypogastrium, perinæum, or loins. The galvanic current may be used in the same way with an intra-urethral electrode. [N. B.—The *negative* pole should be used in the urethra. The positive has been known to become embedded in an eschar.] Guitéras passes a current of water charged with from 5 to 15 milliampères of continuous current into the rectum, fluring 10 or 15 minutes. Galvanofaradaization is also recommended.

Finally, massage is applicable in most cases and generally well borne. It expresses the pathological infections and irritating secretions from the glandular cul-de-sacs. The index finger, covered with a fine impermeable sheath, is the best instrument. The pressure should be progressively increasing, and should take a circular movement from left to right and right to left, proceeding from the periphery to the centre, and then in the course of the radii of the gland. Massage is carried on as long as there is elimination of fluids, and until the prostate is notably reduced in volume. In dry forms, and in sclerous prostatitis, massage may be practised for from three to five minutes, but ordinarily the duration must depend on the tolerance of the patient.

Massage should be habitually followed by lavage of the prostatic urethra and bladder, with or without a catheter, or by an instillation in the posterior urethra. Of late the author has practised simultaneous lavage and massage.

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NEW YORK, SATURDAY, MARCH 22, 1902.

THE CARE OF THE FEEBLE-MINDED, THE
IDIOTIC, AND THE EPILEPTIC IN THE
STATE OF NEW YORK.

In the *Thirty-fifth Annual Report of the State Board of Charities*, presented to the legislature on Monday of this week, particular attention is properly called to the urgent need of enlarged accommodation of the feeble-minded, the idiotic, and the epileptic. The board have found (presumably during the year) over seventy feeble-minded children in various private institutions, where they are supported at the public expense, and they find that about eighty such children are forced to remain in the almshouses, owing to lack of room for them in the Syracuse State Institution for Feeble-minded Children. It seems that there are in that institution about a hundred and fifty adult inmates who should be provided for elsewhere, the men in the Rome State Custodial Asylum and the women in the Newark asylum. The Rome authorities, it appears, are willing to receive the men, but those of Newark decline to receive the women. Feeble-minded women are notoriously the prey of licentious men, and their illegitimate and often degenerate progeny are almost sure to become a public charge. These women should certainly be cared for in the Newark institution.

In the various almshouses, where they cannot be properly cared for, there are many idiotic men and women—more than six hundred. They ought, as the report advises, to be removed to the Rome asylum. "For nearly half a century," says the report, "in this and other States, public opinion has demanded that the almshouses be made simply refuges and infirmaries for the aged and infirm poor." The populous almshouse, indeed, is a blot upon civiliza-

tion; there is some capacity for usefulness still left in almost every adult and sane human being, and even in some lunatics, and it ought to be turned to account. Absolute pauperism, save in very rare instances, seems perfectly eradicable; and we greatly err if the present century does not witness its virtual abolition.

According to the latest reports received by the board from the superintendents of the poor, there are now about five hundred dependent epileptics in the State, and nearly three hundred of them are in the various almshouses, not one of which is adequately equipped for the care of epileptics. They are all awaiting admission to the Craig Colony, and thither they ought all to be conveyed, but the capacity of the colony will have to be enlarged before this can be done. The good work already accomplished by the colony ought to convince the legislature that it should be so enlarged as to accommodate all the dependent epileptics in the State.

THE MARINE-HOSPITAL SERVICE.

In our issue for January 4th we published the text of a bill "to increase the efficiency and change the name of the United States Marine-Hospital Service," and we then commented on the bill as being, in our opinion, likely to be enacted and well calculated to enhance the dignity and efficiency of the service. During the time that has since elapsed, it has become evident that the bill does not meet with the entire approval of the officers of the corps; indeed, a protest against it signed by twenty-eight of them has lately been sent to the Secretary of the Treasury, and we are assured that two thirds of them are opposed to the bill. The protest will be found in the department of Miscellany in this week's *Journal*. It is most properly addressed to the Secretary of the Treasury rather than to Congress itself.

The officers who protest have set forth some considerations which, it must be acknowledged, were not at first obvious. For instance, it is not so much "sentimental regret" at the proposed change of name to the "United States Health Service" that leads them to oppose it as it is a feeling, undoubtedly founded in equity, that so much of "Jack's" money has been spent in building and equipping marine hospitals as to justify "Jack" in demurring to the designation of the service as anything else than pre-

eminently his own. They further point out that, in view of our apparent newly acquired domination over yellow fever, in the prevention of which their services have heretofore been so largely required, they are not likely in the future to be called upon to play so leading a part in quarantine operations as in the past. We trust that this prognostication is not too optimistic to be justified by events yet to come, also that what has been gained apparently in the way of mastery over yellow fever will not be offset by some unexpected necessity of increased diligence in the work of fighting off other pestilential diseases.

It is further objected that Section 3 of the bill gives to the surgeon-general a power that does not exist in any other cognate branch of the public service, that of detailing officers as assistant surgeons-general without regard to their rank or length of service, whereby officers of comparatively low rank and relatively brief service might be so elevated as to outrank men much older than themselves, both in years and in regular official status. In other words, it is maintained that, other things being equal, deference should be paid to seniority.

The considerations that we have mentioned, together with others that will be found set forth in the protest, will doubtless be accorded due attention by the Congressional committees before which the bill is to come. After all, it does not seem to us that the promoters of the bill and the signers of the protest are so at variance on radical points as to preclude their substantial agreement, and we hope that in this matter the officers of the service will at the last show a united front, especially as the signers of the protest are among the older officers, and must be absolutely declared to be free from factiousness.

A NEW LIMITATION TO PRIVILEGED COMMUNICATIONS.

A decision which has just been handed down in the Colorado Court of Appeals to the effect that a non-resident physician testifying in a Colorado court, personally or by deposition, cannot seek the protection of the Colorado statutes, which say that a practitioner on the witness stand is not compelled to divulge anything which may have taken place between himself and his patient, places a limitation upon the definition of privileged communications which is, we believe, entirely new and one which, we further believe, will not be upheld by the courts in

general. In the particular case in question, the physician, who was registered in the State of New Jersey, treated in that State a man who two years later applied for admission to the benevolent order known as the Woodmen of the World. Later the applicant moved to Colorado and there died. The widow brought suit against the order to recover the amount of the benefit due her as the next of kin. The defendant sought to introduce a deposition from the physician in New Jersey to the effect that he had treated the deceased for consumption two years prior to the date of his application. This deposition was excluded from the lower court on the ground that it was based upon matter which was in the nature of a privileged communication. The Court of Appeals has now handed down a decision overruling the lower court and laying down the principle that a non-resident is not entitled to the protection of the Colorado statutes governing the matter of privileged communications.

We have no information as to whether this case will be further appealed, and perhaps it may be looked upon as being definitively settled. It by no means follows, however, that the principle enunciated by the judge is one that will be or should be accepted as a precedent outside the State of Colorado, and it is much to be hoped that it will not be generally followed. It seems to us that the crux of the question lies, not in the registration of the physician in the particular State in which his deposition or testimony is to be taken, but rather in his standing as a duly qualified physician in the State in which the acts took place between himself and his patient, in a professional capacity, which constituted the basis of the privileged communication in question. Under the ruling of the Colorado Court of Appeals, a limitation is placed upon the inviolability of professional confidence which may prove to be a serious disturbing factor in breaking up the confidential relations which must necessarily exist between the physician and his patient.

CAPTIOUSNESS EXTRAORDINARY.

Last week it was our privilege to publish an article entitled *The Medical History of Dr. Samuel Johnson*, written by a distinguished surgeon of Philadelphia, Dr. Francis R. Packard. We have for some time been under the impression that long experience had in some measure qualified us to

judge as to what articles were likely to prove acceptable to our readers, and the author of the article in question may be presumed, since he is the editor of the *American Journal of the Medical Sciences*, to himself have an inkling as to the sort of writing that is liked by the medical profession; but our lay contemporary, the *Sun*, avers that the article ought not to have been published, and it bases its contention on the ground that the article is really a violation of professional confidence, or at least an unnecessary exposure of the weaknesses of a great man. We make bold to say that the *Sun's* contention has absolutely no foundation, and we may add that its capitious criticism is made all the more remarkable by the fact that its exordium is little more than a partial catalogue of the physical defects of prominent persons who lived in the past—except those of Dr. Johnson. The *Sun* should subscribe liberally to the monument to Adam.

PUBLIC URINALS.

In an editorial on this subject, properly deploring the absence of public urinals in our streets, in the *Medical News* for March 15th, it is stated that "England suffers from the same false modesty, urinals being as infrequent there as here." This is scarcely correct. There is a very much larger number of public urinals in most large English cities, and especially in London, situated at open spaces, squares, parks, etc. In addition to this, one will be found in nearly every mews, blind alley, etc., and attached to every "public house" (*i. e.*, saloon), but the law in England, we believe, demands that saloon urinals shall be accessible from outside, so as to avoid the necessity for entering the saloon itself. We, however, entirely agree with our contemporary's main contention, that no man ought to be compelled to burst his bladder or go to a grog-shop, "where courtesy as well as custom demands that you buy a drink in exchange for the privilege granted you—of leaving one."

LIMBURGER CHEESE AND ITS MICROBES.

According to press reports, the health commissioner of one of our large cities has decided to interdict the sale of Limburger cheese in the city, on the ground that it contains microbes. If the commissioner has been rightly reported, we fear that his zeal in the suppression of microbes has outrun his discretion. That there are microbes in Limburger, as in all highly flavored cheeses, there is of course no question, but the mere presence of microbes is in nowise an indication of danger. The number of microbes ingested daily by the average human being is so large as to sound startling, but so long as these

organisms are not pathogenic in their character, and, even if they are pathogenic, so long as they do not find the alimentary canal of the recipient in a proper condition for their propagation, they can do no harm. We suspect that some political enemy, seeking the downfall of the commissioner, has set afloat this ingenious canard, knowing that lovers of Limburger will rise as one man and resent this aspersion upon the fair name of their beloved, if somewhat odoriferous, dainty.

GENERALIZED VACCINIA.

Reports of so-called generalized vaccinia seem to be almost always lacking in some feature that might convince the reader of the genuineness of the case. A somewhat remarkable example is afforded by von Ortyński (*Wiener medicinische Wochenschrift*, 1901, No. 39; *Centralblatt für innere Medizin*, March 1st). On the tenth day after revaccination a soldier was seized with a chill and with headache. Two days later a rash resembling that of measles broke out, and shortly thereafter the entire cutaneous surface was covered with typical pocks. There was fever lasting for fourteen days. The stage of desiccation, which began in five days after the appearance of the pocks, ran its course in fifteen days. The lesions left scars. The *Centralblatt's* commentator (Dr. Rostoski, of Würzburg) remarks that it is interesting that the period of incubation and the picture of the disease answered perfectly to those of true small-pox, although numerous other persons were vaccinated with the same lymph without becoming ill. It would have been interesting also, it seems to us, if the author had stated whether or not a vaccinal lesion developed at the site of the vaccination before the onset of the fever and the exanthem. If it did not, the case seems more likely to have been one of genuine small-pox than one of generalized vaccinia, concerning the occurrence of which, save as the result of accidental inoculation, we are somewhat skeptical.

THE POTATO CURE FOR DIABETES.

Starchy food has been so loaded down with charges of affecting the health injuriously, and so many sufferers with various ailments have been condemned to avoid it—on very insufficient grounds, we think—that it is rather a relief to find a potato diet recommended, as it is by Mossé (*Gazette hebdomadaire de médecine et de chirurgie*, February 20th), for diabetics, especially those affected with such complications as phlegmonous inflammations. It is necessary to add, however, that the starchiness of the potato is not what commends it to M. Mossé, but the fact that it contains certain potassium salts.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 24: Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, March 25th: New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, March 26th: New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, March 27th: New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, March 28th: New York Clinical Society (private); New York Society for German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Small-pox in the Tombs Prison.—A case of small-pox having been discovered among the prisoners in the city prison, "The Tombs," on March 10th, all the prisoners were vaccinated.

Suit against a Medical Society for Suspension of a Member.—Dr. J. Byron Sloan, whose name was dropped from the membership list of the Detroit Medical Society over a year ago, has entered suit against the society for damages in the sum of \$25,000, but the suit has been dismissed.

The German Congress for Internal Medicine will hold its twentieth annual session at Wiesbaden from April 10th to 15th under the presidency of Dr. Naunyn, of Strassburg. A number of valuable papers and communications have been promised.

The Mothers' and Babies' Hospital, formerly at 596 Lexington Avenue, has been formally dissolved by the Supreme Court on the application of the directors. Its work is now being done by the new Manhattan Maternity Hospital and the Lying-in Hospital.

Cleveland Colleges to Consolidate.—A movement is on foot, with every prospect of a successful issue, for the consolidation of the Medical College of the Western Reserve University and of the College of Physicians and Surgeons of Cleveland, Ohio.

The Sanitary Patrol of the Brooklyn Watershed is advised in a recent report of Dr. Joseph H. Raymond, assistant sanitary superintendent for the borough of Brooklyn. The water in the Horse Brook and the Hempstead storage reservoirs shows a large increase in the chlorine, the free and the albuminoid ammonia and the total solids.

A New York Physician Honored.—His Excellency, Cipriano Castro, President of the United States of Venezuela, has conferred the high-class decoration of the Bust of the Liberator Bolivar upon Dr. Emil Heuel.

The Cincinnati Academy of Medicine.—At the annual election of officers of the Cincinnati Academy of Medicine, which took place on March 3d, the following were chosen: President, Dr. A. B. Isham; first vice-president, Dr. B. F. Beebe; second vice-president, Dr. Ellen McCarthy; treasurer, Dr. Magnus B. Tate; secretary, Dr. Sydney E. Cone; trustees, Dr. Byron Stanton, 3 years; Dr. Heady, of Glendale, 2 years; Dr. N. P. Dandridge, 1 year.

Antivaccination Bill Lost in Massachusetts.—The committee on public health, having made an unfavorable report on the bill introduced into the Massachusetts Legislature providing for more liberal laws relative to exemption from vaccination, the measure was defeated. The other bill, to make the vaccination laws more strict and to permit an exemption certificate to be issued only by a registered physician, after a personal examination, and stating the reason for the exemption, and further providing that the exemption shall be valid only while the physical disability continues, has been allowed to go to a third reading without opposition.

Meetings of State Medical Societies for the Ensuing Month.—Medical Association of the District of Columbia (semi-annual), Washington, April 1st; Texas State Medical Society (annual), Dallas, April 6th; Medical Society of the State of Tennessee (annual), Memphis, April 8th; Florida Medical Association (annual), Tampa, April 9th; Medical Association of the State of Alabama (annual), Birmingham, April 15th; Medical Society of the State of California (annual), San Francisco, April 15th; Medical Association of Georgia (annual), Savannah, April 16th; Mississippi State Medical Association (annual), Jackson, April 16th; South Carolina Medical Association (annual), Spartanburg, April 16th; Medical and Chirurgical Faculty of Maryland (annual), Baltimore, April 22d.

Nearly Three Million Dollars for Harvard Medical School.—Mrs. C. P. Huntington, widow of the railroad magnate, has given \$250,000 to Harvard Medical School for the erection of a pathological and bacteriological laboratory, to be known as the Collis P. Huntington Laboratory. This makes a total of \$2,821,225 given to the school since last June. The principal donors were as follows: J. Pierpont Morgan, \$1,000,000; John D. Rockefeller, \$1,000,000; James Stillman, \$100,000; Francis L. Higginson, \$60,000; Frederick C. Shattuck, \$50,000; Robert Bacon, George F. Fabyan, Elliott C. Lee, W. L. Richardson, David Sears, and Nathaniel Thayer, \$25,000 each; Augustus Hemenway, \$15,000; and H. H. Hunnewell, \$12,500. There were ten gifts of \$10,000 each, twelve of \$5,000 each, two of \$2,000 each, and seventeen of \$1,000 each, besides many of smaller figures.

District of Columbia Charities under Control of the Secretary of the Interior.—The bill to transfer to the Secretary of the Interior such supervision of the Government Hospital for the Insane, Freedman's Hospital and Asylum, and the Washington Hospital for Foundlings in the District of Columbia as may have been conferred upon the Board of Charities of the District of Columbia under the act approved June 6, 1900, creating such board, was passed without debate recently by the House of Representatives.

The Georgia Journal of Medicine and Surgery.—Dr. W. E. Fitch, founder and for many years editor and business manager of the *Georgia Journal of Medicine and Surgery*, published at Savannah, Ga., has sold his interest in the publication to his former associate and co-editor, Dr. St. J. B. Graham, who becomes editor and sole proprietor. The *Journal*, under Dr. Fitch's editorial management, from the appearance of the first issue, merited the support of the profession, and gradually, year after year, made for itself a place among the best medical periodicals of this country. The doctor will devote his entire attention to the practice of his profession in Savannah, Ga.

The Compulsory Vaccination Bill.—The bill now before the legislature of the State of New York, providing for compulsory vaccination, which was introduced at the instance of the Medical Association of the Greater City of New York, has passed the Senate. At a hearing given by the Assembly committee on public health, objection to the bill was made by Dr. Montague Levenson as president of the Antivaccination League of the State. Dr. Daniel Lewis, health commissioner for the State, requested that the committee amend the bill so as to give the State board instead of the local boards power to say when vaccination was to be enforced.

Earnings of Berlin Physicians.—The official tax returns show (*British Medical Journal*) that one practitioner in Berlin returns the handsome amount of \$74,000, but on the whole the financial condition of the Berlin doctor is by no means brilliant. There are in the Prussian capital 1,946 medical practitioners, of whom 529, or more than one quarter, have a yearly income of less than \$700; 273 have an income ranging between \$700 to \$1,300, while 785 exceed the latter sum and approximate, for the most part *longo intervallo*, to the \$60,000, which is the highwater mark of professional prosperity. No fewer than 107 earn less than \$200, and are consequently exempt from income tax.

Trouble in the Kentucky School of Medicine.—The students of the Kentucky School of Medicine elected Messrs. Black and House and Mrs. Norman and Miss Shepard to represent their college at the convention of volunteer missionary workers, just held at Toronto, Canada. The dean declared he would expel any student who went to Toronto. Nevertheless the delegates went. When they returned Dr. Wathen expelled the two women students, but did not expel the men. An indignation meeting has been held by the students and resolutions of protest were drawn up and signed by about 100 students.

Antitoxine Furnished Free by the State.—The Department of Health of the State of New York announces that it is now prepared to furnish diphtheria antitoxine free. Those entitled to treatment with the State's product are the inmates of State or other charitable institutions, hospitals, and asylums, and any persons suffering from or exposed to the disease who is not able to purchase this remedy. Persons entitled to receive it, or their physicians, should apply to the nearest health officer for the remedy. In the cities and large towns, and in any locality during epidemics, it is the intention of the department to allow the local health authorities to keep a supply of serum on hand for distribution.

A Congress of French Physicians in America will be held at Quebec next June in conjunction with the celebration of the golden jubilee of Laval University. Dr. Brochu, of Toronto, has been elected president of the congress and there will be two general secretaries, Dr. A. Simard, of Toronto, and Dr. LeSage, of Montreal. Dr. A. Marois, of Toronto, and Dr. Cleroux, of Montreal, will act as joint treasurers. Dr. Craik, of McGill; Dr. Campbell, of Bishop; Dr. Rottot, of Laval, of Montreal, and Dr. Simard, of Laval, of Quebec, were re-elected as honorary presidents. Three vice-presidents were appointed: Dr. E. P. Lachapelle, to represent the city of Montreal and Province of Quebec; Dr. C. Prevost, of Ottawa, to represent the Province of Ontario, and Dr. Archambault, of Cohoes, N. Y., to represent the United States.

An Assistant Anthropologist Wanted.—The United States Civil Service Commission announces that on April 22, 1902, an examination will be held in the principal cities of the United States for the position of assistant anthropologist in the Bureau of Non-Christian Tribes, Philippine Service. The examination will consist of the subjects mentioned below, which will be weighted as follows:

<i>Subjects.</i>	<i>Weights.</i>
1. Academic and special training, including field work.	25
2. Publications, etc.	25
3. Essay on ethnologic subject.	25
4. Ethnology of Malayo-Polynesia.	25
Total.	100

The age limit for applicants is eighteen to forty years.

From the eligibles resulting from this examination it is expected that certification will be made to the position of assistant anthropologist, Bureau of Non-Christian Tribes, Philippine Service, at a salary of \$2,400 per annum, and to other similar vacancies as they may occur in that service. This examination is open to all citizens of the United States who comply with the requirements.

Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners in the various cities for application blanks.

St. Joseph's Sanitarium, Silver City, New Mexico, which was initiated only last fall, has outgrown its present quarters and work is about to be begun on an additional new building. The completed plant will form four sides of a square or court; that is, old California mission style. The building will be but one room thick and one story high, with porches outside and inside, upon which the rooms open by means of French windows. The kitchen, dining-room, and research laboratory are in separate buildings. A complete hydrotherapeutic apparatus will be installed. The management of the institution is entirely in the hands of the advisory board. The immediate care of patients is entrusted to Dr. W. T. Williams, and Dr. E. S. Bullock is the pathologist and diagnostician. The plan of treatment is the careful application of the Brehmer principles in an ideal climatic environment.

The Italian Vice-Consul Qualifies as a Physician.—Dr. Gustavo Tosti, the vice-consul of Italy in this city, who has just successfully passed the State medical examination and received a license to practise medicine and surgery, has no intention of availing himself of this privilege, but has been led to devote the time that he could spare from his consular duties in this city in the last five years to the study of medicine by his interest in psychology and criminology. He has pursued his studies at the New York University and the Bellevue Hospital Medical College, and graduated from the Long Island College Hospital in May, 1901, and passed the State examination last month. He has been a member of the consular corps of Italy since 1889, and served successively at Tripoli, Tunis, Cairo, and Marseilles before being appointed to this city in 1895. He is an LL. D. of the University of Naples, a member of the American Psychological Association, one of the Italian editors of *The Baldwin Dictionary of Philosophy and Psychology*, recently published by Macmillan, and a contributor to a number of American and foreign scientific publications.

A Prohibition Hospital.—The New York State Board of Charities recently approved the articles of incorporation of the New York Red Cross Hospital. The charter contains the following paragraph prohibiting the internal use of alcohol in the institution: "The treatment of disease in the said hospital shall be to the fullest possible extent conducted upon the most scientific methods, avoiding, however, the use of such medicines and drugs which have been or may be proved to be deleterious in their after effects upon the human system, foremost of which stands alcohol; therefore, alcohol, as alcohol, or in any of its forms, shall never be used in the said hospital for internal medication or as a beverage." The new Red Cross Hospital is to be conducted by the people who have conducted the Red Cross Dispensary, in West Eighty-second Street, for some time. The incorporators are William T. Wardwell, president; John S. Huyler, Dr. A. Monae Lesser, Bettina H. Lesser, Allen Wardwell, Orleans Longacre, John P. Faure, Edward R. Johnes, Max W. Kraus, Alfred L. Manierre, and William A. Gans. Mr. Wardwell was formerly an officer of the Standard Oil Company, and has long been known as a zealous Prohibitionist.

To Investigate Vaccination.—A bill has been introduced in the legislature of the State of New York providing for the creation of a State commission, which is to investigate into and report on the history, nature, and pathology of small-pox, and also of vaccination as a preventive of the disease. The commission is also authorized to investigate antitoxine and other serums alleged to be prophylactic against diphtheria, hydrophobia, phthisis, and other infectious diseases. The members must devote their entire time to the work of investigation and their salary is to be \$500 (?) per year. The method of appointment is unique in that the first two members are to pass upon the qualifications of the other three and to determine that they are absolutely unbiased as to methods of treatment of infectious diseases before they be appointed by the governor. The latter three must not be members of the medical profession, but the bill provides that the two first named shall be and shall represent the two sides of the vaccination problem. The bill gives the commission unlimited power to inspect hospitals, laboratories, etc., and to subpoena and examine witnesses who may be summoned from any section of the State.

Professional Secrets not Privileged Communications, Save where Physician is Registered.—In the case of *Woodmen of the World* against *Loeher*, the district court of Arapahoe county, Col., held that information gained by a physician in his professional capacity was in the nature of a privileged communication and could not be utilized as evidence. This decision has now been reversed by Judge Wilson, of the Colorado Court of Appeals, who holds that professional privilege may not be pleaded in a Colorado court by a physician not registered in that State. In the case at issue the appellants, a benefit society, sought to show by means of a deposition of Dr. T. A. Skillman, resident at New Brunswick, N. J., with whom it was alleged the applicant had consulted before he came to Colorado and by whom he had been treated about two years before the application for benefit membership, sought to show that the non-resident physician had treated him for consumption, of which he died after coming West. The lower court excluded the physician's statement as to the nature of the dead man's disease on the ground that the statutes hold that a physician need not divulge confidences between himself and patient. Judge Wilson holds that this is true regarding resident physicians, but is not applicable to those residing outside the State.

Army Nurses Strike.—According to the San Francisco newspapers, a number of the female army nurses concerned in the recent strike at the general hospital in Manila reached that city recently on the transports *Rosecrans* and *Hancock*, and are now at the general hospital at the Presidio awaiting further orders. These nurses feel quite strongly on the matter which arose from an order obliging them to wash dishes in addition to their other duties. At the time they left Manila the situation was a very tense one, about 100 of the women on duty as nurses in the hospital having refused to go on with their regular duties unless the obnoxious order compelling them to wash dishes was rescinded. By this time some change of a radical nature must have

taken place, as Colonel B. F. Pope, who was chief surgeon at Manila at the time of the strike, has died since the *Hancock* and *Rosecrans* left Manila. The nurses said they were perfectly willing to wash dishes if it were necessary, but that they had spent both money and time on a special form of training and thought their duties should be confined to nursing, while the dish washing should be done by hired Filipino servants. The strike began by their holding a mass meeting and resolving to leave in a body for the United States proper unless the order was revoked. Mrs. Kinney, the chief nurse in the army, who is on a tour of inspection in the Philippines, sustained the nurses in their strike, and public sentiment in Manila was also said to be strongly in their favor. Some of the nurses who returned on the *Hancock* and *Rosecrans* were among those who came home to the United States rather than obey the offensive order.

Hospital Buildings and Endowments.—Mrs. F. F. Thompson has offered to donate \$100,000 for hospital purposes in Canandaigua, half the sum being used for buildings and one half for an endowment. This offer has brought out donations from two other residents of \$25,000 each toward the endowment fund, which is thus increased to \$100,000.—The building committee has undertaken to raise \$60,000 for the completion of the buildings of the St. Alexis Hospital, of Cleveland.—Donors of the sum of \$25,000 to the German Hospital and Dispensary, in this city, are given the privilege of placing a votive tablet in the hospital commemorative of any friend. Four such tablets have already been put in place, one on each of the four lower floors.—The City Hospital, in Jersey City, consists of several old frame buildings in a dilapidated condition, and the legislature will be appealed to for power to build new ones. A bill has been drafted providing for the issuing of bonds to the amount of \$300,000 for new buildings. The proposed act will take the control of the hospital from the board of police commissioners and vest it in a board of directors of five members, two of whom shall be reputable physicians, to serve without pay.—The committee of the New Jersey Medical Society having charge of the plan for the establishment of a State sanatorium for the treatment of tuberculous diseases has practically agreed on a bill which will give the control and management of the proposed institution to the State. The bill will be drafted by Judge Lanning, of Trenton, and will be introduced by Mr. Horner, the Republican leader of the assembly. It will carry an appropriation of \$50,000 for the building of a sanatorium for consumptives. The project has the endorsement of Governor Murphy and is in line with the suggestion made by him in his inaugural address.—The sum of \$50,000 has been offered by an anonymous donor toward the erection of a private hospital for contagious diseases in this city, to be conducted along the lines of the Minturn Hospital for Diphtheria and Scarlet Fever, at the foot of East Sixteenth Street.—Edward Tuck, formerly of Boston, but who for many years past has resided in Paris, has decided to defray the entire expense of establishing a free American hospital in Paris, the ground for

which has already been bought in the Passy quarter. The hospital is to be named Franklin Hospital, and besides being built on the latest American model, it will be managed entirely by American physicians and nurses. Mr. Tuck will not only defray the expenses of installing the institution, but he will also donate a sufficient fund to maintain it permanently without outside help. Franklin Hospital will be situated in one of the most healthful parts of Paris. It will also be enclosed in extensive grounds. Dr. Magnin, an American physician residing in Paris, will be the director of the institution. Building will be commenced in a few weeks' time, and it is expected the hospital will be opened in 1904.—The New York Ophthalmic and Aural Institute has bought a plot, 100.5 feet by 150 feet, at the north corner of Sixty-fourth Street and Central Park West through H. H. Cammann & Co. from the Century Realty Company. A new home for the institution, it is said, will be built on the site. It is reported that Dr. Herman Knapp, surgeon to the hospital, was the real buyer of the plot, and that he bought it as a gift for the hospital, which he founded in 1869. Not long ago he bought a house in East Twelfth Street and presented the deed to the institution.—The new Lutheran Hospital, at Tenth and John streets, St. Paul, Minn., was dedicated on February 24th. The institution will be under the supervision of the Lutheran Church in the Northwest and will be conducted largely for charity. It will accommodate thirty-five patients and will contain two operating rooms.

Official News.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two weeks ending March 15, 1902:

- BISING, ALBERT G., Contract Surgeon, will report to the commanding officer of the United States troops, on the transport *Hancock*, for temporary duty during the voyage of that vessel to the Philippine Islands.
- CRAMPTON, LOUIS W., Major and Surgeon. The leave of absence granted him is extended six days.
- CURRY, JOSEPH J., Captain and Assistant Surgeon, United States Volunteers, is honorably discharged from the service, to take effect March 14th.
- HENRY, J. N., Major and Surgeon, United States Volunteers, will proceed to Newport News, Virginia, in time to meet the Second Battalion of the Eleventh Infantry upon its arrival from Porto Rico *en route* to San Francisco, and accompany it to that place. Upon arrival at San Francisco, Major HENRY will report for transportation to the Philippine Islands for duty.
- LIPPITT, WILLIAM F., Captain and Assistant Surgeon. The leave of absence granted him is extended seven days.
- McLAUGHLIN, WHARTON B., Captain and Assistant Surgeon, United States Volunteers, is honorably discharged from the service, to take effect March 10th.
- MUSGRAVE, WILLIAM E., Contract Surgeon, is granted leave of absence for one month, to take effect upon his relief from duty at the Army and Navy General Hospital, Hot Springs, Arkansas.
- ROMIG, EDWARD A., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.
- STONE, JOHN H., Captain and Assistant Surgeon, will proceed to Washington Barracks for duty.
- THORP, CHARLES W., Contract Surgeon. The leave of absence granted him is extended twenty-seven days, with permission to apply for an extension of one month.
- WILSON, EGERTON T., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 15, 1902:

DISEASES.	Week end'g Mar. 8		Week end'g Mar. 15	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	27	8	22	6
Scarlet fever.....	337	21	300	26
Cerebro-spinal meningitis.....	0	8	0	5
Measles.....	950	21	850	18
Diphtheria and croup.....	266	32	327	38
Small-pox.....	60	10	65	11
Tuberculosis.....	267	183	243	163

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending March 13, 1902:

BILLINGS, W. C., Assistant Surgeon. To proceed to Ludington, Michigan, for special temporary duty. Relieved from duty at Chicago and directed to proceed to New York and report to Surgeon G. W. STONER for duty.

BOGESS, J. S., Assistant Surgeon. To proceed to Delaware Breakwater, Delaware, and assume temporary charge of the station during the absence of Assistant Surgeon C. H. LAVINDER.

CAMINERO, H. S., Acting Assistant Surgeon. Granted leave of absence for thirty days from March 5th.

HOBDY, W. C., Assistant Surgeon. To proceed to Savannah Quarantine and assume temporary charge of the station during the absence on leave of Acting Assistant Surgeon W. J. LINLEY.

HOUGH, J. S., Acting Assistant Surgeon. Relieved from duty at Yokohama, Japan, and directed to proceed to Hongkong, China, and report to Assistant Surgeon J. W. KERR for duty in the office of the United States Consul General.

LINLEY, W. J., Acting Assistant Surgeon. Granted leave of absence for nine days from March 15th.

MOORE, DUNLOP, Assistant Surgeon. Relieved from duty at Honolulu, T. H., and directed to proceed to Yokohama, Japan, for duty in the office of the United States Consul General.

STONER, J. B., Passed Assistant Surgeon. To proceed to Cape Charles Quarantine and assume temporary charge of the station during the absence on leave of Assistant Surgeon C. W. WILLE.

WILLE, C. W., Assistant Surgeon. Granted leave of absence for ten days from March 21st.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 15, 1902:

ARMSTRONG, E. V., Passed Assistant Surgeon. Detached from the *Olympia* and ordered to Washington, and then home to await orders.

BOGERT, E. S., Jr., Surgeon. Detached from the *Lancaster* and ordered to Buffalo for duty at the Naval and Marine Recruiting Rendezvous.

BRISTER, J. M., Assistant Surgeon. Detached from duty with the Marine Brigade and ordered to the *Frolic*.

DUNN, H. A., Assistant Surgeon. Detached from the *Frolic* and ordered to duty with the Marine Brigade.

FAUNTLEROY, A. M., Assistant Surgeon. Detached from the Naval Hospital, Portsmouth, New Hampshire, and ordered to the *Illinois*.

GRIFFIN, W. E., Assistant Surgeon. Ordered to the Naval Hospital, Newport, Rhode Island.

MARSTELLER, E. H., Surgeon. Detached from the *Richmond* and ordered to the *Lancaster*.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ended March 15, 1902:

Smallpox—United States.

California....	Sacramento....	Feb. 22-Mar. 1.	1 case.
"	San Francisco....	Feb. 23-Mar. 1.	4 cases.
Colorado.....	Denver.....	Feb. 24-Mar. 3.	4 cases.
District of Columbia.....	Washington....	Mar. 1-8.....	3 cases.
Illinois.....	Belleville.....	Mar. 1-8.....	4 cases.
"	Chicago.....	Mar. 1-8.....	19 cases.
Indiana.....	Crawfordsville....	Mar. 1-8.....	17 cases.
"	Evansville.....	Mar. 1-8.....	8 cases.
"	Indianapolis.....	Feb. 22-Mar. 8.	31 cases.
"	Terre Haute.....	Mar. 1-8.....	1 case.
Iowa.....	Ottumwa.....	Feb. 1-Mar. 1.	42 cases.
Kentucky.....	Covington.....	Mar. 2-9.....	9 cases.
"	Lexington.....	Mar. 1-8.....	4 cases.
Maine.....	Portland.....	Mar. 1-8.....	9 cases.
Massachusetts.....	Boston.....	Mar. 1-8.....	17 cases.
"	Cambridge.....	Mar. 1-8.....	4 cases.
"	Chicopee.....	Mar. 1-8.....	1 case.
"	Lawrence.....	Mar. 1-8.....	3 cases.
"	Malden.....	Mar. 1-8.....	1 case.
"	New Bedford.....	Mar. 1-8.....	1 case.
"	Quincy.....	Mar. 1-8.....	1 case.
Michigan.....	Detroit.....	Mar. 1-8.....	3 cases.
"	Ludington.....	Mar. 1-8.....	2 cases.
Minnesota.....	Minneapolis.....	Feb. 22-Mar. 1.	16 cases.
"	Winona.....	Mar. 1-8.....	4 cases.
Montana.....	Butte.....	Feb. 22-Mar. 1.	2 cases.
Nebraska.....	Omaha.....	Mar. 1-8.....	52 cases.
New Jersey.....	Camden.....	Mar. 1-8.....	1 case.
"	Harrison.....	Mar. 2-9.....	2 cases.
"	Hoboken.....	Mar. 2-9.....	2 cases.
"	Jersey City.....	Mar. 2-9.....	46 cases.
"	Kearney.....	Mar. 2-9.....	3 cases.
"	Newark.....	Mar. 2-9.....	22 cases.
"	Union.....	Mar. 2-9.....	1 case.
"	West Hoboken.....	Mar. 2-9.....	3 cases.
New York....	Binghamton.....	Mar. 1-8.....	3 cases.
"	New York.....	Mar. 1-8.....	60 cases.
Ohio.....	Chillicothe.....	Feb. 22-Mar. 1.	1 case.
"	Cincinnati.....	Feb. 28-Mar. 7.	15 cases.
Pennsylvania.....	Philadelphia.....	Mar. 1-8.....	47 cases.
Rhode Island.....	Providence.....	Mar. 1-8.....	3 cases.
S. Carolina.....	Charleston.....	Mar. 1-8.....	2 cases.
South Dakota.....	Sioux Falls.....	Feb. 22-Mar. 8.	15 cases.
Tennessee.....	Memphis.....	Mar. 1-8.....	4 cases.
Texas.....	Houston.....	Mar. 1-8.....	12 cases.
Utah.....	Salt Lake City....	Feb. 22-Mar. 8.	6 cases.
Washington.....	Tacoma.....	Feb. 23-Mar. 2.	5 cases.
Wisconsin.....	Green Bay.....	Mar. 2-9.....	11 cases.

Smallpox—Foreign.

Belgium.....	Antwerp.....	Feb. 8-15.....	4 cases.
"	Ghent.....	Feb. 1-22.....	6 deaths.
Brazil.....	Rio de Janeiro....	Jan. 18-Feb. 9.	33 deaths.
Canada.....	Halifax.....	Feb. 22-Mar. 8.	3 cases.
"	Quebec.....	Feb. 8-Mar. 8.	121 cases.
"	Winnipeg.....	Feb. 15-Mar. 1.	7 cases.
Colombia.....	Cartagena.....	Feb. 17-23.....	1 case.
Cuba.....	Guantanamo.....	Feb. 27.....	1 case.
France.....	Marseille.....	Jan. 1-31.....	1 death.
"	Paris.....	Feb. 15-22.....	3 deaths.
Gibraltar.....		Feb. 9-10.....	1 case.
Gt. Britain:			
England.....	Birmingham.....	Feb. 15-22.....	1 case.
"	Liverpool.....	Feb. 15-22.....	14 cases.
"	London.....	Feb. 8-15.....	64 deaths.
"	Manchester.....	Feb. 15-22.....	1 case.
"	Southampton.....	Feb. 15-22.....	1 case.
Scotland....	Glasgow.....	Feb. 15-28.....	6 deaths.
India.....	Bombay.....	Feb. 4-11.....	11 deaths.
"	Madras.....	Feb. 1-7.....	2 deaths.
Italy.....	Baselice.....	Feb. 17.....	176 cases.
"	Naples.....	Feb. 8-15.....	11 cases.
"		Feb. 15-22.....	9 cases.
Malta.....	Palermo.....	Feb. 1-22.....	35 cases.
Mexico.....	Mexico.....	Feb. 8-15.....	1 case.
"		Feb. 23-Mar. 2.	2 cases.

Yellow Fever.

Brazil.....	Rio de Janeiro....	Jan. 19-Feb. 9.	24 deaths.
Mexico.....	Vera Cruz.....	Feb. 22-Mar. 1.	1 case.

Cholera.

China.....	Canton.....	March 6.....	Increasing among Europeans.
India.....	Bombay.....	Feb. 4-11.....	4 deaths.
"	Calcutta.....	Feb. 1-8.....	50 deaths.
"	Madras.....	Feb. 1-7.....	4 deaths.
Straits Settlements.....	Singapore.....	Jan. 11-18.....	5 deaths.

Plague—Insular.

Hawaii.....	Honolulu.....	Feb. 26-Mar. 2.	3 deaths.
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Plague—Foreign.

Brazil.....	Rio de Janeiro....	Jan. 18.....	11 deaths.
China.....	Shui Tung.....	Jan. 23.....	100 deaths.
India.....	Bombay.....	Feb. 4-11.....	124 deaths.
"	Calcutta.....	Feb. 1-8.....	531 deaths.

McDONNOLD, P. E., Assistant Surgeon. Detached from the Naval Academy and ordered to the *Olympia*.

NORTON, O. D., Surgeon. Ordered to the *Richmond*.

OMAN, C. M., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the *Constellation*.

PRYOR, J. C., Passed Assistant Surgeon. Detached from the Naval Hospital, Newport, Rhode Island, and ordered to hold himself in readiness for duty on the *Massachusetts*.

SPRATLING, L. W., Surgeon. Detached from the Naval Recruiting Rendezvous, Buffalo, and ordered to the Naval Hospital, Portsmouth, New Hampshire.

WARD, B. R., Passed Assistant Surgeon. Detached from the *Constellation* and ordered to the Navy Yard, Boston.

WEBB, U. R., Assistant Surgeon. Detached from the *Kentucky* and ordered to the *Iris*.

Births, Marriages, and Deaths.

Married.

HOLBERG—FETTER.—In Hartwell, Ohio, on Tuesday, March 11th, Dr. J. L. Holberg and Miss Elizabeth Fetter.

RICHARDSON—MEYER.—In San Francisco, on Monday, March 17th, Dr. George Henry Richardson, United States Army, and Miss Emma Marie Louise Meyer.

UNDERWOOD—BIBB.—In St. Louis, on Wednesday, March 5th, Dr. John B. Underwood and Miss Nora B. Bibb.

Died.

AKINS.—In Chicago, on Thursday, March 6th, Dr. William T. Akins, in the sixty-second year of his age.

BECHERER.—In St. Louis, on Saturday, March 8th, Dr. A. A. Becherer, in the twenty-seventh year of his age.

CHAPIN.—In Mount Clemens, Michigan, on Sunday, March 9th, Dr. Andrew B. Chapin, in the sixty-fourth year of his age.

CHRISTIAN.—In Baltimore, on Thursday, March 13th, Dr. John H. Christian, in the fifty-fifth year of his age.

HEITZIG.—In St. Louis, on Friday, March 7th, Dr. Joseph Heitzig, in the eighty-fourth year of his age.

LIPPITT.—In Charlestown, West Virginia, on Tuesday, March 11th, Dr. William Fontaine Lippitt, in the seventy-first year of his age.

TIMBERLAKE.—In Louisville, Kentucky, on Sunday, March 16th, Dr. J. R. Timberlake.

UPHAM.—In New York, on Monday, March 17th, Dr. J. Baxter Uphem, in the eighty-second year of his age.

WARNER.—In Louisville, Kentucky, on Sunday, March 16th, Dr. George M. Warner, in the forty-fourth year of his age.

OBITUARY NOTES.

DR. JOHN H. CHRISTIAN, a well-known physician of Baltimore, died in the Virginia Hospital, Virginia, on March 13th. He was born in Richmond in 1846, served under Mosby throughout the civil war, graduated from the Richmond Medical College and settled in Baltimore in 1868, where he resided up to the time of his fatal illness.

DR. J. R. TIMBERLAKE died at his home, in Louisville, Ky., on March 16th, at the age of seventy-eight. He was born in Ohio, graduated from the Kentucky School of Medicine in 1857, practised in the Pewee Valley neighborhood for thirty years, and removed to Louisville in 1888, where he had since resided.

DR. GEORGE M. WARNER died suddenly of angina pectoris at his home, in Louisville, Ky., on March 16th, at the age of forty-four. He graduated from the Louisville Medical College in 1880. For the next five years he was lecturer on materia medica and therapeutics, and in 1885 was elected professor of these branches, which position he held until his death. For the last ten years Dr. Warner had been president of the Louisville Medical College Alumni Association. From 1894 until 1899 he was editor of the *Louisville Medical Monthly*. For several years he was secretary of the faculty of the Louisville Medical College, and since 1892 had been on the staff of the City Hospital, as well as lecturer in the School of Nurses at Norton's Infirmary. Until about ten years ago he was physician for St. Vincent's Orphan Asylum. Dr. Warner was a man of winning manner and wide personal popularity.

DR. MORIZ KAPOSI, professor of dermatology and syphilology at the University of Vienna and chief of the dermatologic clinic, died on March 6th at the age of sixty-five. Dr. Kaposi was a native of Hungary, and while a student at Vienna under Hebra attracted his attention by his brilliancy and industry and received through Hebra an appointment on the staff of the university clinic. His relations with Hebra were of the most intimate nature, both in his literary and his pedagogical work, his marriage to Hebra's daughter having cemented still closer the ties formed in the university. While he contributed much to the literature of his specialty, Kaposi's greatest success was as a clinical teacher. The assured certainty of his diagnosis, the marvellous keenness of his observations, his wonderful memory, and his vast experience in his field made his lectures vividly interesting and always instructive. He was a man of marked originality and his death is a great loss.

FOREIGN OBITUARY NOTES.—Seymour Graves Toller, M. D., Lond., M. R. C. P., physician to the Kasr-El-Aini Hospital, Cairo, Egypt, and professor of clinical medicine in the Medical School, in that city, died recently at the age of thirty-five. Dr. Toller, besides being a successful teacher of medicine, possessed remarkable personal charm, which made him very popular, and was a brilliant musician, having for many years played the violin in the Royal Amateur Orchestral Society.—Dr. Nil Fifatoff, professor of children's diseases in the University of Moscow, is dead at the age of fifty-five.—Dr. Julius Wolff, director in the University Clinic for Orthopædic Surgery in Berlin, is dead.—The following deaths are also reported in our foreign exchanges: Dr. Chedevergne, professor of internal medicine in the Medical School at Poitiers; Dr. H. Barella, of Chapelle-les-Herleimont, a member and former president of the Belgian Academy of Medicine; Dr. A. Masi, adjunct professor of operative medicine in the Medical Faculty at Naples; Dr. G. Siegmund, one of the oldest physicians of Berlin and author of numerous articles on medical chemistry; Dr. Arthur Geissler, of Dresden, director of the Statistical Bureau of the Kingdom of Saxony; Dr. Eduard Cramer, adjunct professor of hygiene at Heidelberg; Dr. G. Garibaldi, professor of surgical anatomy and operative medicine at Genoa.

Pith of Current Literature.

Philadelphia Medical Journal, March 8, 1902.

A Study of the Cases of Accidental X-ray Burns Hitherto Recorded. By Dr. E. A. Codman.—After considering the factors, in this accidental burning, which we have under our control, the author expresses the opinion that the main element of variation lies in the susceptibility of the patient; in the dryness or dampness of his skin; in his electrical resistance; in his anæmia or plethora; in the acidity or alkalinity of his sweat; in his vasomotor irritability, or in some other of the multiplicity of conditions which make a living organism different from a glass tube stimulated by a current of electricity.

An Outbreak of Chicken-pox among Children Convalescent from Small-pox, with Remarks upon the Relationship of these Two Diseases. By Dr. J. F. Shamberg.

Microchemical Reactions of Tube Casts. By Dr. W. M. L. Coplin.

The Identification of the Colon Bacillus by Reactions Produced in Culture Media Containing Neutral Red. Observations on Reactions of other Bacteria on the same Media. By Dr. Randle C. Rosenberger.—The author's conclusions are: 1. That, while not affording a specific reaction in the case of the *Bacillus coli communis*, neutral red agar should be classed as a valuable differentiating medium. 2. The typhoid bacillus, while it does not cause a fading of the color of the medium, never gives rise to the fluorescence noticed in some cultures of the *Bacillus coli communis*. 3. Further, the test medium should not be the only one depended upon in the differentiating of water, as several very common bacteria found in water give the same reaction.

Intestinal Obstruction Caused by a Cicatricial Band Compressing the Ileum. By Dr. John Glendon Sheldon.

The Progress of Knowledge Concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen Years. (Continued.) By Dr. Joseph McFarland.

March 15, 1902.

Medical Education. By Dr. John B. Deaver.—Clinical and didactic teaching each have their place. Were it possible, the ideal method would be a presentation clinically, in a logical order, of all the varieties and stages of disease. This being impossible, didactic must always fill up the gaps left by clinical teaching; and be useful in reducing the lessons learned clinically, to a systematic and memorable classification. To the author it seems that there is a pressing necessity for a pathology which cannot be learned in the laboratory, and which, for want of a better name, he calls "living clinical pathology." He refers to the information which is obtained by the study of pathological processes in the living body, and particularly that which is alone seen at the operating table.

The Report of a Case of Obliterative Pericarditis with Hepatic Enlargement and Ascites. By Dr. Edward W. Becker.—The author's conclu-

sions from this case, and from a perusal of the literature on the subject, are: (1) That pseudo-cirrhosis of the liver due to pericardial adhesions is a distinct entity. (2) In all cases of this condition at autopsy, the pericardial sac has been found obliterated. (3) Autopsies have shown in all recorded cases that the ascites is due to passive congestion of the liver, causing a connective tissue formation with subsequent contraction and obstruction of the portal circulation, the result of obliterative pericarditis. (4) In all cases of enlarged liver with ascites, without œdema or enlarged spleen, a very careful examination should be made of the heart to determine whether the symptoms are not due to chronic pericarditis. (5) The presence of ascites, with enlarged liver and systolic retraction of the præcordium, together with absent or later appearance of œdema of the ankles, is of great diagnostic value in determining the presence of chronic pericarditis.

Cerebral Apoplexy. By Dr. Edward D. Fisher.—In ordinary attacks of cerebral apoplexy the author advises, outside of speedy movement of the bowels by enemata, calomel, or Croton oil, absolute rest. If the pulse is full, aconite; if there is collapse with feeble pulse, digitalis, or even whiskey and strychnine should be administered. The most important time for treatment is in the prodromal stage, when, if we have made out the ætiological factor, the indication is manifest.

Hepatic Insufficiency. By Dr. H. Richardson.

The Progress of Knowledge Concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen Years. By Dr. Joseph McFarland.

A Study of the Cases of Accidental X-ray Burns hitherto Recorded. By Dr. E. A. Codman.

American Medicine, March 8, 1902.

Concerning the Hypnotic Action of Apomorphine Hydrochlorate in Alcoholism. By Dr. Warren Coleman and Dr. John Metcalfe Polk.—The authors conclude that to obtain a hypnotic action with apomorphine it should be given hypodermically. It is best to begin with a small dose, one thirtieth of a grain or less. After vomiting occurs, further doses should not be given until several hours have passed. Doses repeated in two or three hours have little beneficial effect. Doses should not be repeated in patients who are weak. The duration of the hypnotic action is only a few hours, and when the patient awakes his condition is practically unchanged, except in "ordinary drunks." The best results are obtained from apomorphine when it is followed in two or three hours by some recognized hypnotic, such as a bromide, chloral, etc. Solutions should be freshly made for use. The authors obtained the best results in "ordinary drunks" and in cases verging on delirium tremens. Their observations covered three hundred cases in Bellevue Hospital, and were prompted by the article on Alcoholism by Dr. Charles J. Douglas, in the *New York Medical Journal*, Vol. lxx, 1899, p. 626.

Clinical Report of Two Cases of Osteosarcoma of the Inferior Maxillary Treated by Excision; Report of the Condition of the Patients after One Year. By Dr. Hermann B. Gessner.

Proteosuria. By H. O. Mosenthal, B. A., and William J. Giles, Ph. D.—According to the authors, the urinary proteoses appear to be chemically identical for the most part with the proteoses formed normally in the gastro-intestinal tract during the digestion of albuminous matter. The use of the term "peptonuria" is objected to as being not only inaccurate but confusing, and it should be restricted to the occurrence of true peptone as we now understand the term. The authors have made numerous experiments with urine and fæces to test the validity of Freund's method, and the results seem to show that this method is not a differential process and cannot be safely applied to the urine or fæces as a peptone test. Peptones, proteoses, and gelatins may each give positive results with this test, and, furthermore, a seromucoid might also affect the final reaction.

Tuberculous Pericarditis with Effusion; Repeated Tappings; Bacilli in the Exudates; Recovery. By Dr. Florence R. Sabin.—This case is of interest as illustrating the great value of repeatedappings in serous effusions, the finding of tubercle bacilli in the pericardial exudate, and the high percentage of uninuclear forms in a tuberculous exudate.

Sprue, or Psilosis, in Manila. A Disease or State. By Dr. William E. Musgrave.

Old Compound Depressed Fracture of the Frontal Bone Involving the Frontal Sinuses. By Dr. G. Childs Macdonald.

The Responsibility of the General Practitioner in Diseases of the Nose and Throat. By Dr. Justus Sinexon.

March 15, 1902.

The Use of Borax and Boracic Acid as Food Preservatives. By Dr. Victor C. Vaughan and William H. Veenboer, A. B.—The authors conclude that the use of borax or boric acid as a preservative for butter and cream in the quantities specified in the recommendations of the English commission is justified both by practical results and by scientific experimentation. The dusting of the surfaces of hams and bacon which are to be transported long distances, with borax or boric acid, not exceeding one-and-one-half per cent. of the weight of the meat is effective, and not objectionable from a sanitary standpoint. Meat thus dusted with borax or boric acid does not become slimy because the preservative thus used prevents the growth of aerobic peptonizing organisms.

The Examination of the Blood in Relation to Surgery of Scientific, but often of no Practical Value, and may Misguide the Surgeon. By Dr. J. M. Baldy.—The laboratory has developed many important facts in the matter of blood examination, *e. g.*, the Widal reaction, the protozoon of malaria, the estimation of anæmia, etc. The author believes, however, that, in the matter of leucocytosis as an aid to the surgeon in the diagnosis of surgical troubles, we are far from having anything of positive value. The facts are too much at variance to be relied upon. As at present developed in the hands of the average surgeon, if accepted and consistently acted upon, they would do great harm. One would have to discriminate most astutely not to come to grief.

Sprue, or Psilosis, in Manila. A Disease or State? By Dr. William E. Musgrave.—The author concludes that sprue symptoms are nearly always found in the presence of other and well-known lesions, discoverable by careful clinical studies, aided by microscopic methods. Careful studies of these cases by modern methods fail to indicate an additional ætiologic factor, and, with our present knowledge, it is more rational to consider sprue as a state or symptom-group occurring in the tropics in chronic diseases, especially those affecting the gastro-intestinal tract.

The Value of the Urea Estimation. By Dr. E. P. Behrend.

Pemphigus, with a Report of a Case of Pemphigus Foliaceus Involving the Mucous Membrane of the Respiratory Tract. By Dr. Witten Booth Russ.

Modern Treatment of Drug Habituation. By Dr. Frank R. Searles.

The Diagnostic Importance of a Digital Examination in Diseases of the Rectum. By Dr. Herman A. Brav.

*Journal of the American Medical Association,
March 15, 1902.*

Address: Medical Education. By Dr. John B. Deaver.

A Case of Brown-Séquard's Paralysis from Stab in the Cervical Region, with Complete Hemiplegia and Crossed Hemianæsthesia. By Dr. Arthur R. Edwards.—From this case, and also from the literature, the author concludes that the lack of correspondence between hemispinal section in certain of the lower animals and in man is probably due to different anatomico-physiological conditions. The Brown-Séquard clinical syndrome undoubtedly exists, although less as an entity than as a symptom, and exists despite some physiological evidence to the contrary. Variations from the original type occur from the character of the numerous ætiological factors and from the frequency with which experimental and clinical lesions affect more or less than one exact half of the cord.

Dermatomycoses in their Relation to Allen's Iodine Test. By Dr. Jacob Sobel.—While Allen's iodine test is of service in bringing into prominence visible, and sometimes invisible, parasitic lesions, Lugol's solution indicates, by a dark brown or deep mahogany discoloration, that the lesion is of a parasitic nature. It is not of service, however, in differentiating one parasitic disease from another.

The Origin of Carcinoma of the Stomach from Chronic Round Ulcer of the Stomach. By Dr. G. Fuetterer.—If a carcinoma develops from a chronic ulcer of the stomach, this development occurs from those parts of the edge of the ulcer which are most exposed to mechanical irritation by the contents of the stomach. In all cases in which an ulcer of the stomach, or its scar, narrows the pylorus, a gastro-enterostomy should be recommended early, to prevent the development of carcinoma. If a gastro-enterostomy is not

performed, such patients should be advised to eat slowly and a little at a time, of liquid or semi-liquid foods; carbohydrates should be eschewed, and fatty foods recommended. From the fact that carcinoma does not develop from the large ulcers alone, but may be developed from the very smallest, the prognosis of ulcer of the stomach is bad. Our aim, therefore, should be to prevent the formation of ulcers, rather than to heal them after they are formed, and this may be done to a certain extent by the energetic treatment of all cases of chlorosis and secondary anæmia that come under our observation.

Pneumatic Differentiation in the Treatment of Organic Disease of the Heart. By Dr. Charles E. Quimby.—The author endeavors to show that any agent which decreases vascular tension is an ideal therapeutic measure in organic disease, and that "pneumatic differentiation" lowers vascular tension, increases blood flow, and coincidentally increases nutrition.

Acute Intestinal Obstruction. Report of a Rare Case of Probable Syphilitic Origin. By Dr. Clarence L. Wheaton.

Modified Treatment of Typhoid Fever. By Dr. T. B. Greenley.

Medication of the Respiratory Tract by Anti-septic Nebulæ. By Dr. Homer M. Thomas.

Boston Medical and Surgical Journal, March 13, 1902.

The Value of Alcohol as a Therapeutic Agent in Medicine. By Dr. Henry F. Hewes.—The author does not deny the value of alcohol as a therapeutic agent, but he expresses the hope that the subject may meet with a more careful consideration among physicians, and that consequently a more rational use of the drug than that which exists at the present time, may prevail. He expresses the opinion that there is no drug in general use, in the employment of which there is shown so much carelessness and disregard of its specific drug properties, or with which so much harm is done as alcohol. He points out that the quantity *per capita* given in practice generally to-day is probably less than one half that employed twenty years ago. He believes that, with renewed consideration of the subject in the light of the knowledge and experience upon it which exist at the present time, the use of alcohol will be much further restricted and corrected.

A Clinician's Estimate of Alcohol as a Therapeutic Agent. By Dr. F. C. Shattuck.

The Therapeutic Value of Alcohol. By Dr. E. N. Whittier.—In the author's opinion, conclusions drawn from laboratory work are not in harmony with bedside observations in the matter under discussion. Toxicity, for a long time recognized as easily induced in a state of health by chemically pure alcohol, is almost unknown in those pathological conditions requiring the utmost endeavor to maintain life, wherein this form of alcohol is employed.

The Influence of Alcohol on the Human System. By Dr. Elbridge G. Cutler.—The author

asserts that alcohol is no great antipyretic; neither is it a stomachic nor an analeptic. That it can favor the immunization process in acute infectious diseases is denied. He advocates the diffusion of a proper and scientific knowledge of the action of alcohol, and its restriction to those cases wherein its use appears rational.

Practical Experience with Hydrotherapy. By Dr. J. J. Putnam and Dr. G. W. Fitz.

Medical News, March 15, 1902.

Acute Influenzal Nephritis in Childhood. By Dr. B. K. Rachford.—The author reports four cases of nephritis, each of which occurred, not as a sequel, but as a part of the influenza attack. The influenza poison attacked the kidneys and produced a most violent acute nephritis, just as it, in other cases, attacks and produces inflammation of the lungs, the intestines, the meninges, and other parts of the body. Acute hæmorrhagic nephritis occurring during the influenza attack, is more common in children than in adults. Chronic nephritis, however, resulting from repeated attacks of influenza is much more common in the adult than in the child.

A New Method of Locating Foreign Bodies by Means of the X Ray. By Dr. Lewis Gregory Cole.

The Rate of Growth of Epithelium of Ulcers. Observation of One Hundred Cases at the Vanderbilt Clinic, New York. By Dr. Sigmund Deutsch.—The observation of these cases has shown that: (1) The rate of the growth of epithelium is in direct proportion to the growth of the ulcer; (2) in the majority of cases the average growth of epithelium is from two to three and a half millimetres weekly; the range is from one and four tenths to ten and a half millimetres (traumatic ulcers not included); (3) the time required to heal an ulcer is not proportional to the duration of the ulcer; an ulcer of four months' standing does not heal more quickly than one of four years' standing, other conditions being equal; (4) the rate of growth of epithelium in traumatic ulcers is extremely irregular; it is in no relation to the size or duration of the ulcer; the average weekly growth is about five millimetres; the range is from one millimetre and four tenths to eight millimetres.

Medical Record, March 15, 1902.

Specific Medication. By Dr. Andrew H. Smith.—The author refers to the growing tendency to ascribe a microbic origin to all infectious diseases, but he suggests that a further development of the magnifying power of the microscope may have to precede the solution of this problem. In the mean time, a survey of the field seems to suggest that all the known pathogenic bacteria should be studied, not so much to learn how to grow them, as to learn how to inhibit their growth. Each germ might be interrogated with a list of articles not now thought of as germicides, and unexpected results might be attained by purely empirical methods. The author also believes that carefully conducted experiments will show that the present dosage of remedies may

be safely exceeded in some cases, and that objectionable effects may be avoided by combinations of remedies which yet will leave the specific action intact.

Melancholia Simplex and Melancholia Transitoria Simplex. By Dr. Ralph Lyman Parsons.—The author asserts that there are undoubted cases of extreme mental depression, with strong suicidal impulses, which are sudden in their onset, and which prove to be of limited duration, and, on this account are unnoticed, forgotten, and unrecorded. In the early stages of melancholia, the rest cure, as taught by Dr. S. Weir Mitchell, is often of great service, but it should not be too much prolonged. Later on, the time should be as fully occupied as possible, at first in a passive way, then by suitable and useful occupations which have for their object the accomplishment of some definite end. The physical health should be attended to, and the patient should feel the physician's interest in him, and should believe that his trouble is a physical one, which will be removed when the physical disorder is recovered from. All means should be used to procure prolonged and refreshing sleep.

A Few Remarks on Diseases of the Skin with Relation to General and Special Therapy. By Dr. S. Sherwell.—The author says of skin diseases in general that the most striking thing is the "strenuous treatment" given by the ordinary medical man. He has a great respect for the old practice of giving a purge in every case, and at the beginning of almost every treatment. No skin disease should be treated as a separate entity; the individual should be before all. Most drugs, the author asserts, have been abused in dermatological therapy, and he refers to arsenic in particular. Arsenic, however, he considers to be one of the best tonics that can be used; with that and mild fractional doses of hydrargyrum cum creta, or even of calomel, and often with nothing else than protection to the skin, patients will rapidly recover and the general health return.

A Case of Otitic Brain Abscess and the Lessons which It Obviously Teaches. By Dr. Robert Lewis, Jr.

Apparent Cure of Malignant Ulcer of Breast after Oophorectomy. By Dr. William H. Simons.

Lancet, March 8, 1902.

The Results of Operation in Sixty Cases of Malignant Disease of the Breast. By A. M. Sheild, M. B.—Of the sixty cases of cancer of the breast upon which this article is based, two were lost sight of, and eighteen were treated too recently to estimate their ultimate results; among these eighteen cases there were two deaths, one distinctly due to iodoform poisoning and the other to bad sepsis. Of the forty remaining cases, eight patients had remained well for five years and upward, four for four years, seven for three years, and eleven for two years. Ten patients died, seven of recurrence of the disease either locally or elsewhere, and three of acute pulmonary disease. In the forty cases there was only one instance of slight suppuration, so that, out of sixty cases, all but two ran an aseptic course. In all the cases the most thorough operation was practised, the axillary lymphatic tissues

especially being carefully removed. One of the features of the cases was the freedom from local recurrences; and if local recurrences took place they were of a small or nodulous nature, again easily removed. Such phenomena as oedematous arms, agonizing pain, and fungating masses of disease were conspicuous by their absence. This was attributed to the thoroughness with which the axilla was cleared. The author draws the following conclusions: 1. That the risk of removing cancer of the mammae by extensive operation is small, and should not amount to more than one or two per cent. Sepsis is preventable, and when it occurs is a blameworthy error on the part of the surgeon. 2. That early and free removal gives prospect of years of freedom, and, in a good percentage of cases, of good health and enjoyment of life. 3. That the cases which do badly are (a) soft, rapidly growing cancer in young and vascular women, and (b), cases of long duration before operation, where the skin and cervical glands are widely infected. 4. That, in certain cases, visceral cancers and cancers in the liver coexist with, or rapidly follow operation, and the explanation of these is uncertain. 5. That the practice of early exploration by incision of small nodules and indurations in the breast is of the first importance, and should be strongly urged upon the profession generally, especially upon those in general practice who so often see these cases in their early beginnings, and upon whom the great responsibility of prompt diagnosis falls. 6. No one should undertake an operation for mammary cancer unless he is capable, and has had sufficient operative experience, to remove thoroughly all lymphoid tissues from the axilla, the leaving of infected glands toward the apices of the axillary spaces being a common source of failure in the results of this operation. 7. The prognosis of mammary cancer is still dubious and sometimes cases arise which falsify ordinary experience, *e. g.*, bad cases sometimes have long freedom from return, while early cases show recurrence. But such do not invalidate the rule: "Operate early, operate extensively."

The Blood Vessels of Mammals in Relation to those of Man. By F. G. Parsons, F. R. C. S.—An abstract of three lectures.

A Contribution to the Study of Intestinal Sand, with Notes on a Case in which It was Passed. By Sir D. Duckworth and Dr. A. Garrod.—The authors report the case of a woman, aged thirty-three years, suffering from diarrhoea, in whose movements so-called intestinal sand was found. Contrary to what is usually observed in cases of enteric lithiasis, there was but little pain. There was a distinct gouty history on the father's side. When washed and dried in the air the gritty material passed with the faeces had the appearance of a fine sand. Bacilli and micrococci were present in large numbers.

Two kinds of intestinal sand have been described by various observers. *False* intestinal sand is composed of remains of vegetable foods which have resisted digestion, and which may or may not have acquired some incrustation of earthy salts. Pears and bananas are two fruits, the eating of which gives rise to the presence of these sclerenchymatous granules in the faeces. *True* intestinal sand has no

such vegetable basis, and, wanting a rigid skeleton, owes its hardness and grittiness to the much larger proportion of inorganic material which it contains. There is little room for doubt that true intestinal sand has its origin in the intestinal canal, for chemical and clinical evidence alike point in this direction. The nature of the contained pigments suggests the colon as the most likely seat of formation, and the anatomical structure of the large bowel may be looked on as more favorable than that of the small intestine to the sojourn required for the deposition of the earthy salts of which the material is so largely composed.

Some Experiments to Determine the Actual Efficacy of Izal Oil as an Intestinal Disinfectant.

By M. H. Gordon, M. B.

Two Cases of Lupus Vulgaris Successfully Treated with Urea Pura and the X Rays. By E. Swales, M. R. C. S.—The author reports two cases of lupus vulgaris occurring in women aged thirty years. Both cases were very severe, but were apparently entirely cured by exposure to the x rays and the administration of pure urea in doses of from twenty to one hundred and twenty grains three times a day. The points to which the author particularly directs attention are: The low-pressure tube used (six inches), and consequently the absence of any severe dermatitis in the neighboring healthy skin; secondly, the comparatively short duration of the treatment (three months in one case, and six months in the other) and the small amount of trouble entailed in carrying it out; thirdly, the great improvement in the general health—lungs, heart, mental condition, and anæmia; and, lastly, the absence of all puckering of the skin and unsightly contractions, so commonly seen in patients treated by the older method of scarification. The great objection is the expense of the urea.

Abdominal Hysterectomy for Cancer of the Uterus, with Notes of Two Cases. By R. O'Callaghan, F. R. C. S., and Dr. H. Dardenne.

Electric Shocks. By F. B. Aspinall.—Among the opinions advanced by the author are the following: Not only are different people differently affected by electric shocks, but the same person under different conditions is not affected in the same way. Diseased persons may be more or less susceptible according to what disease they may be suffering from; in Bright's disease the resistance of the skin is lowered, and such individuals are more susceptible; in certain mental affections (idiocy) susceptibility may be greatly diminished. Persons who are sweating heavily, who are drunk or asleep are less liable to be fatally injured by electricity. The left side of the body is more vulnerable, possibly because the valves of the heart on this side are more easily damaged. Moisture of the skin reduces the chance of burning, as it insures better contact; many fatal cases show but little burning. A man need not give the "cry," and it is possible for him to speak after a fatal shock has been received. Alternating and direct current shocks are equally dangerous. It is purely a question of voltage, and many conditions have to be favorable.

British Medical Journal, March 8, 1902.

Two Cases of Spinal Cord Disease Consequent on Syphilis. By Dr. T. R. Bradshaw.—The author reports two cases of disease of the spinal cord, consequent upon syphilis. The first case was one of typical locomotor ataxia; the second, one of spastic paralysis of the right leg with pain in the right lumbar region and exaggeration of the knee-jerk, probably due to a small gumma situated in the pia mater of the right side of the cord near the upper end of the lumbar enlargement. In the first case we have a degeneration which tends to advance, and is not likely to be influenced by anti-syphilitic remedies; nor, indeed, to any great extent, by any therapeutic means at our disposal. In the second case, we have to deal with a special form of inflammation, which we may confidently hope to arrest by appropriate measures. The author's experience is strongly in favor of the syphilitic origin of tabes. The nature of their relation is not clear. The lesion in the latter disease is not structurally the same as that which we recognize as the direct result of the syphilitic poison; neither is it influenced by the administration of remedies which are effectual in arresting and removing the characteristic lesions of syphilis. Two theories have been advanced to explain the apparent connection between tabes and syphilis. According to one, the action of the syphilitic poison gives rise to some toxic agent which exerts its action on certain parts of the nervous system; according to the other, the syphilitic poison lowers the vitality of these parts in such a manner that they are liable to undergo degenerative changes under the influence of causes which would otherwise have no injurious effect upon them.

The Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. By W. McA. Eccles, F. R. C. S.—(Abstract of the second and third of the Hunterian lectures upon this subject. Lectures one and two have already been abstracted from the *Lancet* of March 1, 1902.)

The Influence of Phosphorus on Organic Substances in Pills. By W. H. Martindale, Ph. D.—From his experiments which are here detailed, the author concludes that there is, in most instances, no interaction or decomposition of substances prescribed in pill form with phosphorus. Among the substances tested were strychnine, morphine, quinine, nitroglycerin, and zinc valerianate. Pills containing phosphorus in combination will show a luminous surface on cutting, even twelve months after they have been prepared.

Puerperal Insanity. By Dr. R. Jones.—The author's article is based upon 259 cases of insanity due to pregnancy, confinement, the puerperal state, or lactation. Of these, 120 occurred during the puerperal state. Of the 56 cases of pregnancy, 14 were first confinements, and of these, 11 occurred in single women. As to illegitimacy, 12 per cent. of the insanity was among single women. Of the 259 cases, 60 per cent. occurred in married woman suffering from their first attack, and 25 per cent. occurred in married women who had suffered from previous attacks. Melancholia and mania were about equally common, but the acute form of melancholia was of greater intensity than that of mania. The onset in the puerperal cases was sudden more

often than gradual, and the gradual onset characterized the advent of melancholia twice as often as mania. The symptoms of puerperal mania in 40 per cent. occurred in the first two weeks. The almost universal early symptom was loss of sleep. This was followed in turn by restlessness, concern about trivial details, distrust, suspicion, loss of appetite, and exacting irritability, culminating in wild delirious excitement. Peculiar, mistaken ideas about the baby were not infrequent. Infanticidal promptings occurred in 10 per cent. of the puerperal cases. They were present in 14 per cent. of the lactation cases. The gibberish nonsense, erotic, immodest conduct, and bad language, the evolutions of shameless indecency, accompanied with noisy delirium and marked religious exaltation, with purposeless restlessness, characterized the insanity of the puerperal period. Of the 120 puerperal cases, 88 were first attacks, 19 were second attacks, 9 were third attacks, 9 were fourth attacks, 3 were fifth attacks, and one patient had had 11 previous attacks. Of the puerperal cases, 51 had a faulty heredity, and this was directly maternal oftener than paternal. The greatest incidence was between the ages of twenty-five and twenty-nine years. Of the puerperal cases, 48 patients were described as being of a cheerful temperament.

A Case of Tumor of the Cerebral Cortex. By H. C. Barlow, M. B.—The author reports a case of tumor of the cerebral cortex occurring in a man aged fifty-seven years, which terminated in death at the end of thirty-three days. The interesting points in the case were the absence of optic neuritis and vomiting, and the very slight headache, the short duration of the illness, and the sudden termination without any preliminary stage of coma.

Berliner klinische Wochenschrift, February 3, 1902.

Tympanites.—Dr. S. Talma describes a case of hysterical tympanites which for a time simulated an abdominal tumor. He says that it arose through weakness of the upper abdominal muscles, through partial contraction of the transversalis, and through contraction of the diaphragm.

History of Pupillary Reaction to Closure of the Lid. By Dr. Meyerhof.

Artificial Œsophagus.—Dr. Siegfried Spiegel describes an apparatus of his device by which an artificial Œsophagus takes the place of the organ when there is a stricture of the latter. Œsophagotomy is performed directly beneath the clavicle, and a gastric fistula is also made. The apparatus is then attached to both openings and lies against the chest wall. It may be used in all cases in which nourishment through a gastric fistula is necessary, and in which the patient feels the desire and necessity for going through the acts of chewing and deglutition.

Pulmonary Embolus after Surgical Operations. By Dr. A. Oppenheim.

Sanatorium and Tuberculin Treatment Compared.—Dr. J. Petruschky says that the results of the diagnostic and therapeutic usefulness of tuberculin have been so well studied in recent years, that mistakes in its administration should no longer be made. The best treatment of tuberculosis at the

present day consists in the dietetic and hygienic methods, with gradually increasing doses of tuberculin. The early diagnosis of tuberculosis by means of tuberculin is most earnestly advocated. Institutions for the examination of suspected patients and sanatoria for invalids are absolutely necessary.

Retinal Detachment in Nephritis of Pregnancy (concluded). By Dr. Josef Helbron.

February 10, 1902.

Acute Syphilitic Nephritis with Intense Albuminuria.—Dr. Erich Hoffmann reports the case of a man of twenty-eight years of age, in previous good health, who acquired syphilis. About the time of the appearance of the secondary symptoms, he became pale, passed little urine, of a dark-brown color, and felt very languid and miserable, but at no time did he have any fever. The urine was of a specific gravity of 1.057, acid, contained many hyaline casts, a few leucocytes and red cells, and seven per cent. albumin by Esbach's test, as well as by weight. As the exanthema disappeared, the urine improved until it was finally clear of all albumin and casts, two months after their first appearance. All those who observed the patient agreed as to the cause of the acute nephritis, as being based upon the severe efflorescence of the secondary stage of an acute syphilis. (*To be continued.*)

Examinations of Pleural Effusions.—Dr. Alfred Wolff says that the morphological findings in pleural effusions permit conclusions to be drawn as to the aetiology. The predominance of lymphocytes speaks in favor of a tuberculous process, but these sometimes show at first a polynuclear character; the cells are often not sterile but contain, as many other transudates do, rods which cannot be grown in culture. Gradually the lymphocytes appear in ever-increasing number. In doubtful cases, it is well to puncture every week to secure an established and constant morphological picture.

Peculiarities of Diseases of the Ear in Children. By Dr. B. Baginsky.

Circular Incision for the Cure of Varicose Ulcers.—Dr. C. Wengel recommends a circular incision in the skin above Scarpa's triangle under the strictest asepsis. As the cutaneous veins appear in the wound, from one half to one and one-half inches of them are cut away after ligation of both ends. The wound is then carefully sutured and dressed without drainage.

Centralblatt für innere Medizin, February 15, 1902.

Treatment of Acute Infectious Diseases with Blood of Convalescents.—Dr. E. Walger briefly reviews his work in this direction. He says that the local changes in acute infectious diseases, such as exanthemata or pneumonic infiltrations, are not the essential conditions of the disease, but represent excretory efforts on the part of the organism, whereby large quantities of toxins and antitoxines are excreted. Fever is the result of the development of toxins caused by the exciters of the particular disease. The efforts of the organism toward recovery are directed toward rendering the toxins harmless through chemical action, and toward securing their

elimination from the body in the form of excretions and secretions, especially the sweat, and by the local changes. Cure can result only when the chemical changes in the toxins are sufficiently marked to act in a bactericidal manner. If the toxins become sufficiently changed to produce a cure, the serum of the patient can be used as a therapeutic agent in persons similarly diseased. When such serum is injected, the activity of the bacteria ceases at once, and simultaneously all chemical changes in the toxins, so that the second patient cannot furnish a therapeutic serum. After the injection, the sole task of the organism is to rid itself of the toxins still present, a task usually accompanied by a rise of temperature. Cases from which a useful serum is obtained remain immune for a long time, or even permanently, but this does not hold true for the cases cured by the serum of these patients.

Riforma medica, December 19 and 20, 1901.

Some Points on Cerebral Abscesses. By Giuseppe Fantino.—The author operated upon ten cerebral abscesses, all of which were of traumatic origin, save one, and emphasizes the fact that it is not always possible to locate cerebral abscesses by the clinical symptoms; for it is rare that the lesion is so distinctly circumscribed that it comprises a definite convolution of the brain; and, besides, even if this is so, the symptoms do not always correspond to the physiological theory. In some of his cases the difficulty of determining the location of the lesion was a serious one. Thus, if there are convulsions or paralyzes in a certain part of the body, one cannot be certain that a lesion of the corresponding portion of the cortex will be found, for the symptoms may be due to compression of distant parts. In most of his cases the physiopathology of the brain was of little assistance in locating the lesions, and in but two cases, was he able to locate the abscesses according to the symptoms; namely, in one where there was an abscess over Broca's area, accompanied by aphasia, and in another where there were multiple abscesses of the cortex of one hemisphere, accompanied by hemiplegia of the opposite side. In speaking of the operative treatment, he shows that very frequently the walls of the abscess are very soft and pulpaceous, and that it is difficult to keep the infectious material from spreading over the brain. In order to avoid this, he recommends that the abscess cavity be opened only when the region has been carefully isolated from the rest of the brain surface; by refraining from opening the abscess itself until the following day after trephining, when adhesions will have had a chance to form between the brain and the dura. If this is impossible, the region to be incised should be carefully surrounded by gauze.

December 21 and 23, 1901.

Cytoprecipitin and Its Diagnostic Value. By Dr. Eugenio Centanni.—A fraction of a gramme of bone-marrow from the femur of a rabbit, introduced in the form of an emulsion into the blood or into the peritoneal cavity of another rabbit, produced the phenomena of a profound cachexia, which was in most cases so pronounced that the animals could not be saved by any means afterward. The same effect was obtained by the injection of a small amount of the bone-marrow of the femur into the animal from which the thigh was amputated. The author there-

fore divides the toxic effects of certain diseases into two classes; namely, the primary toxæmias, caused by the metabolism of bacteria, and the secondary toxæmias produced by the re-absorption of cells destroyed by the disease. The secondary intoxication may be subdivided into that produced by the destruction of normal cell-elements, and that caused by the destruction of pathologic tissue-elements. The latter are specific for the disease in question. When the animal is subjected to injections of serum from another species, this animal's serum gradually develops a specific substance, which, if added to the serum of the animal that furnished the inoculating serum, produces a precipitate therein, and the reagent is therefore called a precipitin. These reactions are so accurate that they are now used in the diagnosis between human blood and the blood of other animals. In an analogous way, the author prepared cytoprecipitins, by triturating cells of a given tissue with normal salt solution, glass powder, etc. The emulsion was then centrifuged, and the plasma poured into capillary tubes. On addition of the serum to be investigated, these tubes well show in varying degrees the presence of a flocculent precipitate, after remaining in an incubator and standing for twenty-four hours in a room at ordinary temperature. The application of this reaction to the diagnosis of various lesions will be the subject of further studies.

Gazzetta degli Ospedali e delle Cliniche, January 12, 1902.

On the Effects of Intravenous Injections of Testicular Extract upon the Coagulation of the Blood and the Spermatotoxic Value of the Serum. By Dr. J. Salvioli.—Experiments with the serum of man and various lower animals show that these fluids have distinct spermatotoxic powers, *i. e.*, kill the spermatozooids of animals belonging to the same or to other species. Thus, the serum of a dog killed the spermatozooids of a dog in eight minutes, and the serum of a guinea-pig killed the spermatozooids of the same animal in a still shorter time. The spermatotoxic action was stronger in the fresh serums than in old ones, and varied also with the resistance of the spermatozooids attacked. In addition, the serums in question possessed an agglutinating power upon the spermatozooids, and caused the latter to form clumps of various descriptions. Heating the serum to 58° C. completely destroyed the spermatotoxic powers of the same, but the agglutinating property remained or was even increased. The author also injected spermatic extract into the blood of rabbits and cats, and found that the effects were comparable to those following the injection of peptone or ferments; namely, excitement, vomiting, involuntary emissions of urine and feces, followed by a period of depression, characterized chiefly by a slow respiration and a lowering of the blood-pressure—effects that lasted, according to the dose injected, from half to three quarters of an hour, whereupon the animal returned to his usual condition. The animal's blood showed, however, a marked retardation in the clotting process. The author found also that the serum of these animals possessed a spermatotoxic power considerably inferior to that of normal

serum, after the spermatic extract had been allowed to act for some time, and this diminution in the power of killing spermatozooids extended to the spermatozooids of other species of animals than the one from which the blood was taken.

Chorea and Helminthiasis. By Dr. G. Marchese de Luna.—The author reports a case of helminthiasis accompanied by chorea in which he found that there was an atony of the intestine so that the canal could not be completely emptied, even with repeated purges. A febrile movement was present which was due to the gastro-intestinal disturbances, and not to the presence of worms (in this case round worms and *Taenia solium*); for when these were eliminated the fever continued. The nervous symptoms which persisted during the first few days in spite of purges suddenly diminished markedly after the expulsion of the worms and disappeared completely after two days. They were, therefore, due entirely to the worms. It must be remembered that the absence of the ova of intestinal worms in the faeces is not a conclusive proof that the worms have been removed; for, especially in cases of tape-worm, the head may not have been passed. After the expulsion of the worms, he found that all the nervous symptoms disappeared or became less marked, while the muscular strength of the patient was improved and the other symptoms of helminthiasis with gastro-intestinal complications, such as fever, swelling of the liver and spleen, etc., disappeared on abundant purging. The present case, according to the author, does not fit any of the existing theories as to the origin of chorea, for the chorea in this case depended upon the presence of worms.

Roussky Vrach, February 9, 1902.

The Quantitative Estimation of Alexines in the Serum of Healthy and Diseased Subjects. By Dr. G. A. Goussjeff.—The author found that the quantity of alexines present in the serum of human beings is an inconstant one. It visibly depends on health and the state of nutrition. The coefficient of alexines, KAl, varies in strong, healthy persons to the extent of 1.5 either way, and in the anæmic and weak, this coefficient varies from 0.99 to 1.05. In some infectious conditions, *e. g.*, pulmonary tuberculosis, the coefficient, KAl, is higher than in health, and in two such cases it was 2.33 and 2.32 respectively. The number of leucocytes in the blood in itself does not affect the amount of alexines. Thus, in leucæmia the number of white blood cells was markedly above the normal, but the KAl was 1.76, while in the presence of a normal number of leucocytes it was 1.45. In tuberculosis they are below normal, and yet the KAl was 2.32. Hence, not the number of leucocytes, but their functional capacity, is important for the formation of alexines. The methods of the author are interesting, but it is impossible to describe them here in detail. He proposes the construction of charts showing the alexine curve for the various stages of different infectious diseases, showing the contest of bacteria against the resisting powers of the organism.

The Treatment of Tuberculosis of the Lymph-nodes. By Dr. V. C. Koslovsky.—A review of the various methods of treating tuberculous glands,

and a consideration of the bacteriological data showing that these glands are the seat of tuberculous processes which are caused by the presence of Koch's bacillus, points to surgical methods as the only possible means of successful treatment. General treatment should be regarded only as an adjuvant to the local measures. The use of antiseptic injections into the tuberculous area, in the author's experience, did not prove satisfactory, as he had the opportunity of convincing himself in a large number of cases. Radical operations for tuberculous glands performed in 127 cases in his clinic, show that the best results may be obtained by this method. Of the 127 cases there were 63 per cent. in which the lesion had not as yet ulcerated, and 19.6 per cent. in which ulceration had taken place; 18.1 per cent. in which there were scars from previous operations, and 14 per cent. in which the trouble had recurred after the operation. In other words, the majority of cases had already advanced considerably before the patients came under treatment. There were no deaths in the 127 cases, but in one case there was a secondary hæmorrhage. In the great majority primary union was obtained; in 19 cases, *i. e.*, in 14 per cent., there was recurrence. The operative treatment of tuberculous glands is therefore to be regarded as the treatment of choice. It is contraindicated in the following cases: When the process is very extensive, with great areas of periadenitis, involvement of the skin, in the presence of pulmonary tuberculosis, and in general tuberculosis.

A Case of Tumor of the Cerebellum. By Dr. M. D. Chanutina.

The Suitability of the Blind as Massage Operators. By Dr. I. V. Zabloudowsky.—Eggebrecht, of Leipsic, regards massage as a very suitable occupation for the blind, and thinks that it may help to place these unfortunate people in a position of independence. In Japan, the blind have, under the protection of the government, almost a monopoly of massage. They form a sort of guild, and there are no people in possession of their sight engaged in the occupation of massage operator. In Russia, there exists an institution for the training of blind persons in the art of massage, and the pupils receive instruction in anatomy, physiology, and in the technics of massage. In America, a few masseurs and masseuses have made a success, though hampered by blindness, and the same is true of England and Scotland. The author has attempted to teach personally a few blind people the art of massage, and gives the advantages and disadvantages of employing the blind at this occupation. An important point to be considered in this connection is the fact that the blind cannot judge the degree of irritation of the skin which is produced under their manipulations. Again, in the case of both blind and seeing, surgical and gynæcological massage should be prohibited, and placed in the hands of physicians only. The blind, also, cannot judge the general effect of massage upon their patient as the seeing can, for even the expression of the face is an indication of such effects. Irritable patients even object to being massaged by blind people, because it "makes them nervous" to have a blind man or woman manipulating them, etc. The difficulty of visiting the patient at his home without some one to lead the blind masseur is also an important disadvantage.

Letters to the Editor.

GREEK MEDICAL NOMENCLATURE.

126 EAST TWENTY-NINTH STREET,

NEW YORK, February 24, 1902.

To the Editor of the *New York Medical Journal*:

SIR: Kindly permit me to correct the error which I noticed in my letter published in your issue for February 15th, namely in the transcription of *οοθηκοτομία*, which is oothecotomy. When we succeed in introducing a reformation of our medical language, the word ectomy, in the sense in which it is used at present in our literature, will have to be placed on the index verborum prohibitorum, for *ἐκτομή* means nothing but castration, and words like nephrectomy or orchidectomy are an impossibility in Greek.

You may congratulate me, Mr. Editor; my dream of seeing living Greek recognized in medical language is realization now. Quite a number of colleagues of prominence, here as well as in Europe, especially in Berlin, have written to me to express their satisfaction with my agitation; the most important of all is a new communication from Professor Waldeyer in which he says: "Ich werde mich einmal mit meinen philologischen Kollegen in's Benehmen setzen. Ihr Gedanke, aus dem jetzt lebenden Griechisch unsere Kunstsprache zu reformiren und zu ergänzen, hat meinen vollen Beifall und es lohnt sich wohl desselben zu verfolgen und zu fördern" (I shall have an understanding some of these days with my philological colleagues. Your idea of reforming and complementing our technical language from living Greek has my full approval, and it is worth while to consider this idea and to promote the same").

A. ROSE, M. D.

THE TREATMENT OF VACCINE SORES.

60 WEST FIFTY-SIXTH STREET,

NEW YORK, February 21, 1902.

To the Editor of the *New York Medical Journal*:

SIR: So much of late has been written on how to light up the vaccine conflagration, whether by dry or glycerinated virus, that the subject of *How to put out the vaccination fire* and relieve the soreness, pain, and general discomfort incident thereto has been almost completely overlooked.

Situation.—The inner side of the knee, just over the head of the tibia, affords a location for the introduction of the virus free from muscle and wholly protected from chafing, knocks, etc.

Protection.—An ordinary bunion plaster will prevent rubbing off the virus until dried, and it can be easily removed at the pleasure of the patient.

Inflammation.—After the vesicle has thoroughly devolved, with heat, soreness, or pain and an extending area of inflammation, the further action, locally at least, can be controlled by removing the scab and smearing over the whole reddened surface the following ointment:

M. $\left. \begin{array}{l} \text{R Ichthyol, } \\ \text{Lanolin, } \end{array} \right\} \text{equal parts.}$

Over the ulcer place a thick pad of sterile gauze and cover the ointment with *rubber tissue*. Secure in place by a muslin bandage.

In twenty-four hours the redness will have disappeared and the soreness, swelling, and stiffness diminished, and under the same dressing the ulcer will rapidly heal.

A. ERNEST GALLANT, M. D.

AN OVERCROWDED PROFESSION; A REMEDY.

SCOTLAND, PA., February 27, 1902.

To the Editor of the *New York Medical Journal*:

SIR: I read with much interest your editorial in the *Journal* for February 15, 1902, *The Remedy for Overcrowding of the Profession*. There is no doubt that a remedy for this existing condition in our country is a very important subject, and one in which the whole profession can well strive to bring about.

With the present easy possibilities for entering upon the study of medicine in so many cases, there is practically nothing to prevent the continued influx of students to the schools and an army of new recruits being turned out each year.

There are two measures which, if rigidly carried out will undoubtedly check the rapid increase of the number of medical men and prevent many from taking up medicine who are not well qualified and prepared for the medical course.

First of all, every State should have a non-political board whose duty it should be to examine all would-be students before they are allowed to enter upon the study of medicine, allowing only those well qualified to pursue the course. This would take from the college boards the temptation to augment their student list by admitting any and all applicants who make at least a favorable presentation of preparation. The answers to questions by examining boards show that some enter with but most meagre qualifications. This would have the tendency to close those medical schools which have only as a recommendation ease of entrance.

A second measure, which might be of first importance, is, let every parctitioner who is appealed to for advice by any would-be medical student as to his entering upon the study of medicine consider the applicant in every way, as to his fitness and ability for the medical course and a medical life. He should consider his aptness for study, reasoning powers, physical ability, and financial strength; having in most cases a personal acquaintance will enable him often to do so readily, and unless he is assured of these in a definite degree, let him advise to the adverse and point out the various possible vocations where a more successful career may result.

In carrying out these two measures many young men will be saved the expense and labor of a course in which they may not be allowed to follow, or can achieve only mediocre results in its pursuit. To be turned down by an examining board after incurring the labor and expense of a college course is the more cruel by one's being first allowed the entrance.

Several States have some such measures for entrance examinations now on the statutes and they should be enforced rigidly. The American Medical Association, through the House of Delegates, should urge all States to have laws enacted and enforced toward this reform.

JOHN J. COFFMAN, M. D.

Book Notices.

A Text-book of Physiological Chemistry for Students of Medicine and Physicians. By CHARLES E. SIMON, M. D., Baltimore, Md. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xix-453.

While there has never been any dearth of text-books of chemical physiology having reference to the study of the functions of the various organs of the body, the study of the relationship, constitution, and action of the different products of the activity of these organs, as well as their relationship to physiological function itself, has not heretofore been presented in a form that could be considered adequate to the great importance which the study of physiological chemistry has attained within a comparatively recent period. The present volume is, in some respects, a departure from the lines of study formerly laid down, and it probably represents fairly well the newer methods of approaching the study of physiological chemistry. The descriptions, methods, and processes given in the volume are, however, concise almost to the point of obscurity. This does not make the book the less adapted as a working guide in the physiological-chemical laboratory, where the facts bearing on reactions or combinations are admittedly more of a desideratum than theoretical discussions. The book is eminently practical in its scope, and is one which we venture to think will become popular among students of medicine and physicians, for whose use it is specially adapted.

The arrangement of the book is convenient and orderly. Chapters I to V inclusive consider in a general way the more important characteristics of the three great classes of food stuffs—their origin, their chemical nature, and the important products of their decomposition being fully studied. Chapters VI to XII inclusive deal essentially with the processes of digestion, resorption, and excretion; thus, in this part the saliva, the gastric juice, the pancreatic juice, the enteric juice, and the bile are each considered, both as to their chemical nature and as to the part they play in the animal economy. The author's treatment of the whole subject falls naturally into three divisions. We have touched upon two. The third portion of the work is devoted to the chemical study of the elementary tissues and the various organs of the animal body, the specific products of their activity, and their relation to physiological function, an arrangement which is well adapted to the needs of the average student.

The work is fully abreast of recent progress, and descriptions are given of the substances which have been most recently isolated from the ductless glands—*e. g.*, *epinephrin* of Abel, the *suprarenin* of van Fürth, and the *adrenalin* of Takamine are mentioned, though the elementary composition of these bodies is not stated, perhaps for the good reason that they are not definitely known to the discoverers themselves.

We note some inconsistencies of nomenclature and we trust that in the next edition the author will adopt some one style for the spelling of the names of chemical compounds, also a uniform method of

printing the terms or abbreviations of terms used in the metric system. The rules for nomenclatures laid down in the *United States Pharmacopæia* should be followed, we think, in all works of this kind. The lack of exact references is somewhat annoying. While the author has collated a mass of matter from widely different sources, no reference to the original source of information other than the name of the author or discoverer is given. He thus presupposes an extended acquaintance with the literature of physiological chemistry on the part of the student, and on page 274, in a reference to the isolation of cystin from the decomposition products of horn, he contents himself with the statement "However, I must refer the reader to Mörner's article." This is a defect which we hope to see remedied in later editions.

A Text-book of Pharmacology and some Allied Sciences (Therapeutics, Materia Medica, Pharmacy, Prescription-writing, Toxicology, etc.). By TORALD SOLLMANN, M. D., Assistant Professor of Pharmacology and Materia Medica in the Medical Department of Western Reserve University, Cleveland. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 894. [Price, \$3.75.]

This work is based upon the author's belief that pharmacy and pharmacognosy and those other subjects referred to on the title page as "allied sciences" should all be taught from the same chair as pharmacology. Thus, we find fever, bacterial poisons, toxins and antitoxines, immunity, serum treatment and organotherapy, the pharmacological action of bacterial and vegetable poisons and animal venoms, a full discussion of anæsthesia, and surgical and medical asepsis among the subjects within the wide range covered in this book. We commend its chapters on pharmacy, palatable prescribing, and incompatibilities, although a text-book cannot be expected to supply the place of laboratory teaching in these subjects, so much neglected in our medical schools.

Physiological effects are the logical bases for the study and the administration of remedies, and the author's classification of drugs into a few groups was made with this idea in view. As a text-book, it aims to be practical, and not too much space is devoted to remedies little used. The *United States* and *British pharmacopæias* and the *National Formulary* are used as authorities for preparations and doses. The omission of references to many valuable preparations in the *German Pharmacopæia* is to be regretted. Unofficial but time-tested drugs and preparations are duly considered. Practical exercises in chemistry and animal experiments suitable for demonstration constitute the subjects of the last chapters of the book. The reference tables and index are complete.

BOOKS, ETC., RECEIVED.

The American Year-book of Medicine and Surgery. A Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and Arranged with Critical Editorial Comments by Samuel W. Abbott, M. D.; Archibald Church, M. D.;

Louis A. Duhring, M. D.; D. L. Edsall, M. D.; Alfred Hand, Jr., M. D.; Milton B. Hartzell, M. D.; Reid Hunt, M. D.; Wyatt Johnston, M. D.; Walter Jones, Ph. D.; A. O. J. Kelly, M. D.; David Riesman, M. D.; Louis Starr, M. D.; Alfred Stengel, M. D.; A. A. Stevens, M. D.; G. N. Stewart, M. D.; Reynold M. Wilcox, M. D. Under the General Editorial Charge of George M. Gould, M. D. In Two Volumes. Volume I, including General Medicine. Pp. 7 to 715. Volume II, including General Surgery. Pp. 7 to 684. (Price, each volume, \$3.)

Diseases of the Intestines. Their Special Pathology, Diagnosis, and Treatment. With Sections on Anatomy and Physiology, Microscopic and Chemic Examination of the Intestinal Contents, Secretions, Fæces, and Urine; Intestinal Bacteria and Parasites; Surgery of the Intestines; Dietetics; Diseases of the Rectum, etc. By John C. Hemmeter, M. D., Philos. D., Professor in the Medical Department of the University of Maryland, etc. In Two Volumes. Volume II., Appendicitis, Tuberculosis, Syphilis, Actinomycosis of Intestine, the Occlusions, Contusions, Rupture, Enterorrhagia, Intestinal Surgery, Atrophy, Abnormalities of Form and Position, Thrombosis, Embolism, Amyloidosis, Neuroses of the Intestines, Intestinal Parasites, Diseases of the Rectum. With Plates and many other Original Illustrations. Philadelphia: P. Blakiston's Sons & Company, 1902. Pp. xvi-17 to 679. (Price, \$5.)

Principles and Practice of Operative Dentistry. By John Sayre Marshall, M. D. (Syr. Univ.), Dental Surgeon, United States Army. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. xxi-635. (Price, \$5.)

Ophthalmic Myology. A Systematic Treatise on the Ocular Muscles. By G. C. Savage, M. D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, etc. Sixty-one Illustrative Cuts and Six Plates. Nashville, Tennessee: Published by the Author, 1902. Pp. viii-589.

Human Embryology and Morphology. By Arthur Keith, M. D. (Aberd.), F. R. C. S. (Eng.), Lecturer on Anatomy, London Hospital Medical College, etc. Illustrated. London: Edwin Arnold, 1902. Pp. x-324.

Short Talks with Young Mothers on the Management of Infants and Young Children. By Charles Gilmore Kerley, M. D., Lecturer on Diseases of Children, New York Polyclinic Medical School and Hospital, etc. New York and London: G. P. Putnam's Sons, 1901. Pp. xiii-262.

Obscure Diseases of the Urethra. By E. Hurry Fenwick, F. R. C. S., Eng., Surgeon to the London Hospital, etc. With Special Chapters on Urethral Carcinoma and Calculus, by J. W. Thomson Walker, M. B., Edin., F. R. C. S., Eng. London: J. and A. Churchill. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. v-154. (Price, \$2.60.)

Compend of General Pathology. By Alfred Edward Thayer, M. D., Assistant Instructor in Gross Pathology, Cornell Medical College, etc. Containing 78 Illustrations, several of which are printed in Colors. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xv-17 to 322. (Price, 80 cents.)

Syphilis. A Symposium. Special Contributions by L. Duncan Bulkley, A. M., M. D.; Follen Cabot, Jr., M. D.; Louis A. Duhring, M. D.; Professor Fournier, M. D.; Eugene Fuller, M. D.; E. B. Gleason, M. D.; William S. Gottheil, M. D.; Robert H. Greene, A. M., M. D.; Norman B. Gwyn, M. D.; Orville Horwitz, M. D.; Edward L. Keyes, M. D.; G. Frank Lydston, M. D.; D. J. McCarthy, M. D.; Thomas G. Morton, M. D.; Boardman Reed, M. D.; A. Robin, M. D.; J. D. Thomas, M. D. New York: E. B. Treat & Company, 1902. Pp. 3 to 120. (Price, \$1.)

Miscellany.

A Pessary for Eighteen Years in the Vagina.—M. Derocque and M. Maridort (*Revue médicale du Normandie*, February 1902) record the case of a woman, seventy-two years of age, from whom they removed a wooden pessary that had been *in situ* for eighteen years!

An Ovariectomy on a Man.—The *British Medical Journal* for March 1st describes a case reported

by Krabbel, of Aachen, in the *Monatsschrift für Geburtshilfe und Gynäkologie* for February, of a teacher in a high school, who suffered from an abdominal tumor. "He" was a splendidly built, short 'man' with a moustache and a less developed beard. The voice was high, the larynx not prominent, and the breasts flat. The abdomen was distended by a large tumor. There was a distinct penis, but showing extreme hypospadias, no scrotum, and no testicles, whilst two well-formed labia existed. Under chloroform a small vagina and a cervix were detected. Ovariectomy was performed, the tumor was a multilocular cyst of the left ovary, a small body resembling an ovary which lay attached to its under surface proved to be the parovarium. There was a well-made though small uterus, with a right as well as a left broad ligament, though nothing is reported about a right ovary. One year and a half later a large recurrent growth was removed. Professor Marchand pronounced it to be a teratoma with sarcomatous and myomatous tissue added to the complicated and highly developed structures seen in this kind of morbid growth. No recurrence has taken place and the patient remains in good health. No emissions nor catamenia had ever occurred. Of course the patient was in this case an undoubted female, but hypospadias, undescended 'testicles,' and even a distinct rudimentary vagina are no proof of sex, whilst, as said above, a male, that is a testicle-bearing person, may possess a rudimentary uterus. The nature of the genital gland, in Krabbel's case a cystic ovary, can alone determine disputed sex."

The Causes for the High Death Rate in France.

—The depopulation of France was the subject of a striking paper read by M. Papillon before a recent meeting of the Statistical Society of Paris. After pointing out the fact that the vital statistics of France were very incomplete, the author states (*Lancet*, March, 1902) that the birth rate in France is the lowest in Europe and the mortality grievously high. This is not due to natural causes, but to the customs of the country. Of a population of 38,000,000, 150,000 die annually from tuberculosis, while Great Britain with a population of 41,000,000 only loses 60,000 from the same cause. In every other European country tuberculosis is decreasing, in France it is increasing, because in every other European country alcoholism is decreasing while in France it is on the increase. Here are some figures. Between two censuses the tuberculosis mortality has increased in France by 68 per 100,000 inhabitants. In Germany it has decreased by 109 per 100,000 inhabitants, a difference of 177 per 100,000. This means that nearly 68,000 lives have been lost to France each year by tuberculosis that could have been preserved. Again, there is typhoid fever, a disease which is eminently preventable. The mortality from this disease amounts each year to from 10,000 to 12,000 and these deaths are of young persons just on the threshold of the procreative period of life. In France small-pox kills annually 3,000 people, while in Germany the same disease kills one or two. Rabies is unknown in England owing to the strict muzzling and quarantine regulations. The eruptive fevers exact a heavy toll of life in France owing to non-disinfection of houses and personal belongings. These diseases could easily

be avoided altogether or at least kept from spreading. Another cause of depopulation is syphilis, which either brings about sterility or gives rise to a progeny blighted from the birth. If the money value of a middle-aged man be taken at 5,000 francs France has to submit to an annual loss of 400,000,000 francs of human capital, to say nothing of dilapidations of human energy caused by an excess of infectious disease. France, together with Germany and England, possesses excellent laws, but they are not carried out because outside the diseases enumerated in statistical tables there is another disease not mentioned in international nomenclature, probably because it is national. It is the electoral disease of drink-shops and public-houses, which are not obliged to possess even a municipal licence, because producers of alcohol are considered as merchants of the same class as those producing other goods. Dogs are far too lightly taxed, revaccination is only occasionally carried out, and the water-supply is in the hands of an engineer, while at Berlin the chief of the water-supply is a skilled hygienist. With regard to tuberculosis there are laws against insanitary dwellings, but they are not enforced owing to local interests. Cowsheds are not properly supervised, piggeries have no supervision whatever, and private slaughter-houses are still allowed to exist. After seventeen years' consideration the two chambers have just formulated a law with regard to the protection of the public health, but it will come to nothing, for there is no one charged with seeing that its provisions are carried out. If the various prefects are charged with its administration they will consider matters of convenience rather than those of health. In France sanitary powers and responsibilities are scattered abroad among three departments—those of the Minister of the Interior, of the Minister of Commerce, and of the Minister of Agriculture. All these administrations should be centralized under one under secretary with an organization at his command of sanitary medical officers who should have a free hand. Moral responsibility would thus be increased and statistics of death would no longer be tabulated under the two headings of "cause unknown" and "other causes."

A Protest against a Bill to Increase the Efficiency and Change the Name of the United States Marine-Hospital Service.—The following protest, signed by twenty-eight officers of the service, has been transmitted to the Secretary of the Treasury:

There is no public demand for a change in the name of the service. The fact that bills have been introduced, or may be introduced, to create health bureaus or commissions, which may have been fostered by persons inimical to the Marine-Hospital Service and its duties under any other name, should not be held as a valid reason for surrendering a title now so well understood and appreciated. The mere possession of a name of considerable age is greatly to be desired from a business or personal standpoint, and persons or firms rarely seek such a change, for obvious reasons.

If it be said that our title, United States Marine-Hospital Service, does not express the public health duties performed by it, neither can it be said that

the name United States Health Service expresses the maritime functions for which the service was originally created. Titles of government institutions do not necessarily express all of the duties which reside within their scope. It is not necessary that a title should express everything, nor for that reason alone a service of a century's growth be disorganized to meet the views of those who seek not so much a change of our name as an absorption of our duties. No parallel case is known in the history of the government of a service seeking to disorganize itself and change its name. The medical corps is proud of the history of the service and proud of its name. The proposed title does not indicate that it is a marine service or has anything to do with the commerce of the nation, and, as it does not adequately indicate its duties, it would be most inappropriate as a title. Health bureau or health service is a designation usually applied to the health board or health department of a city, which has authority in all sanitary functions affecting the health of a city.

THE DUTIES OF THE MARINE-HOSPITAL SERVICE.

The primary and principal object of the service at the time of its creation was the care of the sick and injured American seamen, and the primary and principal duties of the service to-day, under all laws relating to it, are marine hospital duties. The service furnishes medical and surgical relief to about sixty thousand sick and injured American seamen annually. Other duties, such as physical examination of officers and men of the merchant marine, United States Revenue Cutter Service, Light House Service, Life-Saving Service, United States Coast and Geodetic Survey, etc., are imposed by law upon the Marine-Hospital Service. None of these duties can be considered public health duties unless the same character of work performed by the medical corps of the army and navy is classed as public health work. Another important duty required of the officers of the service is the medical examination of immigrants, to determine whether they are suffering from insanity, idiocy, or contagious diseases or are suffering from some mental or physical disability that will render them a public charge. As the quarantine service prevents the landing of contagious disease that come under public health regulations, the medical examination of immigrants under the immigration laws is not a public health duty, or, to be strictly accurate, is so in a very limited degree. The quarantine duties required of the service and the laboratory scientific investigations can be performed as well under the present organization and title as under that proposed in the bill.

In abolishing the legal title of the service, which clearly indicates the main and primary object or purpose for which the service was created, and substituting another title which indicates an entirely different object or purpose, the Marine-Hospital Service function *per se* will receive less consideration, it being, through the proposed measure, made of less than secondary importance in the new establishment, and as a consequence it is held that the efficiency of the service will suffer.

THE MAINTENANCE OF THE MARINE-HOSPITAL SERVICE A MORAL OBLIGATION.

The Marine-Hospital Service has represented for

a century what might be called a cardinal principle in promoting national welfare, a principle which had its origin and found expression after the defeat of the Spanish Armada in the provision for the care of the sick and disabled merchant seamen, in order to encourage a vocation which is so essential to the welfare of a maritime nation. It has been followed in England for three centuries, and in this country for 104 years. Marine hospitals existed before hospitals for the navy, and in them were treated seamen of the merchant marine and navy, side by side, for nearly a quarter of a century, until the development of the navy necessitated hospitals of its own. In the wars of the United States the marine hospitals have been a part of the equipment of the nation for the care of the sick and disabled of both services. In the century that has passed this service has been developed and improved by Congress at a cost of millions of dollars, while for nearly ninety years the cost of maintenance of this service was borne by contributions of sailors themselves, out of whose monthly wages a few cents were taken to support an institution which was peculiarly their own. Eleven millions of dollars and over were thus paid by the sailor for the service. Hospitals have been built or improved out of the funds so gathered from Jack's wages, and it would be a betrayal of trust on the part of the government to disorganize this service, even in name, or to change it from its purpose for which it was originally created, or to make it secondary to that of any other. There would naturally be a strong opposition from the shipping interests, the personnel of the merchant marine, the United States Revenue Cutter Service, and other marine services for which the Marine-Hospital Service is the medical corps, and the service, if it advocates that the title indicating its function as a marine service, for which it was created, be abolished, will be denounced as unworthy of their confidence and trust. These services will demand a medical service that they can claim as their own.

It is further believed that in the absence of a marine-hospital service our marine hospitals would drift back into the conditions from which they were rescued in 1871.

REGARDING A BUREAU OF PUBLIC HEALTH.

The reasons given for abolishing the title of United States Marine-Hospital Service and substituting the title of United States Health Service, are, that there ought to be a central health bureau for the collection, uniform compilation, and publication of mortality, morbidity, and vital statistics and the distribution of the same, and that there should be an advisory conference between the central health bureau and the State boards of health; and that the present title of Bureau of Marine-Hospital Service is not sufficiently comprehensive. These reasons do not appear to warrant the repeal of the ancient and honored title of the service and the titles of the commissioned officers. The central office of the service can be designated a Bureau of Health by legal enactment without any change in the name or status of the Marine-Hospital Service. The surgeon-general of the Marine-Hospital Service would be the executive officer of the bureau as he is at the

present time. The bill proposing the change of the title adds no new function to the service; it simply amplifies the matter of the collection and publication of statistics, which is required of the service at the present time.

This service belongs primarily to American commerce and the American sailor, and its continuation in its original integrity is a part of the traditions of the government. The requirements of the public health should not be held as necessarily incompatible with the existence of the Marine-Hospital Service.

It is not contended that there is no need of legislation to develop by conservative and gradual steps measures in the interests of public health, but it has been recognized for many years by those best informed on constitutional studies that national health laws for the interior must be limited to the powers residing in the interstate commerce functions of the government, and the assumption by the government of authority beyond this is of questionable right, to say nothing of its expediency. This has always been the rock upon which legislation has split in the past, and Congress should consider whether it wishes to take this step under the guise of changing the name of the Marine-Hospital Service.

THE MARINE-HOSPITAL SERVICE IS NOT THE PUBLIC HEALTH SERVICE.

It has been stated that the Marine-Hospital Service is *de facto* and *de jure* the public health service. This statement is misleading and not entirely correct. That it performs public health duties is true, but the same can be said of several other government services. In the quarantine act of 1893, Congress recognized the State and municipal health authorities as the public health service of the United States, and provided penalties for the violation of their rules and regulations.

The medical corps of the army and navy, the United States Revenue Cutter Service, the United States Consular Service, and the United States Customs Service are by law required to aid in the enforcement of the sanitary rules of the State and municipal authorities and of such rules as may be made by the government. The same may be said of the Department of Agriculture, which, through its Bureau of Animal Industry, aids in the maintenance of sanitary standards of meats sold for public consumption and through other bureaus is concerned in investigating sources and purity of food supplies.

Congress has authorized the Secretary of the Treasury to make maritime and interstate quarantine rules and regulations at such ports and places as have no State or municipal rules or where such rules are inadequate, and even at these places they are to be enforced by the State or municipal authorities. It is only in the event that the State or municipal authorities refuse or fail to execute these rules that the surgeon-general of the Marine-Hospital Service has the right to enforce quarantine rules. It is perfectly clear that Congress did not intend to establish a public health service, but did intend that the State and municipal health authorities should be the public health service. Congress has been importuned on different occasions to cre-

ate a health service, but has refused to do so. The national quarantine stations were originally established as refuge stations as an aid to State authorities, and at present are operated under the quarantine act of 1893. Nearly all of the large seaport cities of the United States have well-equipped quarantine stations which are conducted by the States or municipalities. The *Consular Sanitary Reports*, published by the Secretary of the Treasury, are, by direction of the law, furnished to the State and municipal health authorities to aid them in their duties as quarantine or health officers.

PUBLIC HEALTH WORK IS NOT CONSTANT.

Many of the public health duties which may be required of the service are temporary duties, while the marine-hospital duties, which are the original duties of the service, are constant. The public health duties required of the corps under the laws of the United States are in a large measure conditional or dependent upon the efficiency of State or municipal health authorities at times when the country is threatened with epidemic diseases. During the prevalence of an epidemic disease the service is authorized to establish interstate quarantine, provided the State or municipal authorities do not enforce effective rules to prevent the disease from spreading from one State to another, and assistance may be given to State and municipal health authorities in enforcing interstate quarantine regulations when, in the opinion of the Secretary of the Treasury, such aid is necessary. This work, when required of the service, is temporary in character and has been in the past largely due to yellow fever. The maritime quarantines which are conducted by the service are operated under the same law. Their permanent status or function has many times been questioned. It may be further stated in this connection that the importance of interstate and maritime quarantines in this country will become greatly diminished, as yellow fever has been practically eradicated from Cuba, and the method of its dissemination by the means of the mosquito is now known.

It has been estimated that about nine tenths of all maritime and interstate quarantine measures of the government have heretofore been directed against yellow fever. It is believed that the problem of the eradication of yellow fever has been solved, and the solution of it is not quarantine. It has been proved to the satisfaction of nearly all scientific investigators that the mosquito is the means of spreading the disease, and, this being known, epidemics can be readily prevented and the disease will no longer threaten this country. While the quarantine function, which is the principal public health duty of the officers of the service, will become less important, the chief duties of the service (marine-hospital) are increasing each year, and will continue to increase as the American merchant marine increases.

MAINTENANCE OF THE HEALTH SERVICE.

The question of the support of the service through its particular fund, the tonnage tax, would become a serious problem under the contemplated change. For seventeen years the tonnage tax has been available for the use of this service, and forms

a natural and proper support of a maritime service for the care of men engaged in shipping. It would be neither a natural, nor do we believe it would be an approved, source of support of a health service expected to undertake such general functions for the benefit of the public, and it is believed that sooner or later the propriety of such uses will be questioned by Congress and the new service will become an annual dependent for appropriations as an inevitable result of disorganization, change of name and function.

SUGGESTIONS.

If Congress deems it wise to entertain the proposition of providing for a central organization to supervise matters relating to public health, it is suggested that it can be readily accomplished without the sacrifice of the Marine-Hospital Service as such, as is contemplated in the proposed bill. The Marine-Hospital Service may be created by law a bureau, and several divisions in the office of the supervising surgeon-general now existing by department regulations can be made such by law, and all necessary investigations which are contemplated in the bill under discussion can be as well performed under the old and stable organization as under a new and undeveloped one. It is evident that the measures referred to are merely the beginning of a large and indefinite service, the entrance to which is not safeguarded by requirements as to qualifications which now exist in respect to the Marine-Hospital Service. Section 6 of the proposed bill provides for three new positions, the occupants of which are to be selected without reference to an ascertained capacity. Officers of the Marine-Hospital Service are now required to undergo a professional examination of the same character as that required of applicants for entrance to the army and navy. This condition has existed for the past quarter of a century, and it is not considered just to the officers who have thus earned their commissions in compliance with law and regulations to be outranked by new appointees given commissions without due examination.

Section 2 of the bill, providing for the increased pay of the surgeon-general, is reasonable, but should not be made conditional upon the other sections of the bill.

The opposition to these measures by a considerable number of the officers is not factious. There are two sides to every question, and in the belief that a wise conclusion may be better reached by a consideration of the question, these views are submitted in the belief that they are valid reasons why the bill should not become a law. With regard to many of the details, it has been thought wise not to enter into their discussion, although there are objections to some of the sections. It is the general question to which your attention is directed—whether it is sound legislative policy to disorganize one service for the purpose of creating another, in the absence of any public demand for such action. If there have been any petitions from the general public, or particular portions of the public, asking that the name of the service be changed, such demands have not yet been brought to our attention, and it is doubtful if any such have been or would be made.

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Original Communications.

THE OBESITY OF ADOLESCENCE.*

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NEW YORK.

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Studying polysarcia of adolescence we are confronted with the fact that in some cases the obesity gradually declines toward the close of the second or at the beginning of the third decennary of life, while in others it continues to exist after attainment of maturity. This circumstance seems to be of ætiological importance.

The underlying causes in instances persisting after completion of growth are, without much doubt, analogous to those giving rise to obesity in the adult; but in such cases where polysarcia ceases during, or at the end of, the period of adolescence, its origin in the great majority of instances must be attributed to factors of a different nature.

Naturally, these post-facts cannot serve as means of classification and diagnosis of a case presenting itself for examination; however, they enable us to recognize and to describe two different forms of the affection. Those cases of obesity abiding after individual development I shall classify among the "metabolic," and as "transitory" or "specific" those which subside with the approach of adult life.

The origin of the metabolic form occasionally antecedes the period of puberty. A fat child of six or seven years may retain its corpulency during after life. In other instances, the child may have been stout before the seventh or eighth year, and from then on may have declined in weight and rotundity until the age of puberty was reached. Notwithstanding an inclination to stoutness in a number of children, metabolic obesity usually does not set in before the tenth or twelfth year.¹

The transitory form always makes its appearance

with the approaching state of puberty, and, as it again vanishes during or at the close of adolescent life, we may well term it the specific obesity of adolescence.

The metabolic, as well as the specific, form occurs in both sexes. However, I have found the metabolic variety more frequently among boys, while the specific form certainly predominates among girls.

Metabolic obesity of adolescence is virtually nothing else but a juvenile modification of that which I have described as metabolic obesity in the adult. Under the latter form I understand that condition in which polysarcia concurs with a normal or slightly subnormal degree of body-density.² It is the most common of all types of polysarcia and is always due either to excessive ingestion of nutriment, or to insufficient oxidation in the organism, or to both these eventualities together.

A close investigation of the individual cases will evince that a caloric value of the nourishment usually ingested far exceeds the needs of the organism. The caloric demand of the youthful body for the maintenance of its metabolic equilibrium per kilogramme of body-weight and under like conditions is the same as that of the adult organism. Normally there are utilized on food stuffs for each kilogramme of body-weight in twenty-four hours: When at absolute rest, 30 calories, of which 4.1 calories should be yielded by albumin; when leisurely occupied, 35 calories, of which 5 calories should be yielded by albumin; when moderately active, 40 calories, of which 6.1 calories should be yielded by albumin; when laboring strenuously, 45 calories, of which 7.2 calories should be yielded by albumin.

As, however, the adolescent individual but rarely performs very hard labor, its needs of nourishment practically never exceed a value of 40 calories to the day and kilogramme of body-weight.

In the well-nourished adult, lack of exercise alone resulting in diminished oxidation, and therefore in increased fat deposition, stands often at the foundation of metabolic obesity. This factor hardly ever plays an important rôle in the production of metabolic polysarcia during the period of systemic de-

*Read before the Medical Society of the State of New York, at its ninety-sixth annual meeting, held at Albany, January 28-30, 1902.

¹Metabolic obesity of early infancy, due to over-feeding, artificial foods rich in carbohydrates, and the long periods of sleep, disappears as a general rule when the infant is put on a different diet and when it starts to walk.

²The methods which I employ in determining the volume-weight of the living organism were published in my articles on Investigations upon Corporeal Specific Gravity, and upon the Value of this Factor in Physical Diagnosis (*Medical Record*, February 9, 1901), and On the Treatment of Obesity (*Journal of American Medical Association*, February 15, 1902), to both of which I refer the reader.

velopment, an age when recreation is deemed synonymous with outdoor games, sports of all kinds, dancing, and so on.

Metabolic obesity during infancy or adolescence may, in some exceptional instances, be the consequence of a preexisting or an acquired systemic anomaly. Hence we may assume a predisposition to polysarcia in some individuals. The vast majority of cases, however, where all or nearly all living members of a family, from the grandparents down, are affected with metabolic obesity, are not due to an inherited inclination or diathesis, but to the same mode of living pursued by every member of the family, *i. e.*, to a similar degree of superalimentation or body-inactivity, or to a combination of these two factors.

While metabolic obesity in the adult, on account of the various concomitant disorders, must be regarded as an expression of a certain degree of systemic deterioration, its occurrence during adolescence is not indicative of any important or specific organic changes. The condition during youth almost always lacks the characteristic symptoms which it exhibits when occurring in a more advanced period of life. On this account its recognition and proper classification are possible only on the basis of the history of the case and by determining the caloric value of the food habitually ingested. If it is found that in accordance with the amount of work performed the nourishment yields more than 30, 35, or 40 calories respectively, to the day and kilogramme of body-weight, it may be concluded that the obesity present is of the metabolic type. Normal or almost normal corporeal specific gravity, although characteristic of metabolic obesity, is no absolute indication of the latter's presence during youth, as many cases of specific obesity of adolescence exhibit no abnormal blood or body densities. The surplus in absolute weight in metabolic obesity during youth, as in adult life, depending entirely upon amount and quality of nourishment and the degree of oxidation in the organism, naturally varies greatly in individual cases. It may amount to 15 or 25 per cent., but it may be increased to 50 per cent., and even more.

While metabolic obesity may exist during any or all periods of life, transitory obesity of adolescence is a specific condition whose occurrence is limited to the latter stage. It must be understood, however, that similar ætiological factors which are productive of adiposis during youth may also occur at other periods of life, particularly at such times when constitutional changes take place. There is little doubt that transitory obesity of adolescence is caused by certain metamorphic anomalies incidental to pubescence and disappearing before or at the completion of systemic development. Such anomalies

are also apt to occur at the climacteric age in women, and after orchidectomy and oophorectomy; in short, as the consequence of pronounced alterations in the organism. The anomalies produce various disorders and abnormal conditions, among which adiposis interests us most at this moment.

Thus, faulty activity of the same organ or organs may be at the bottom of lipomatosis during various phases of life; as, however, the obesity in adult persons or in those advanced in years is more a manifestation of decline of functional activity, while in the adolescent it is but a developmental disturbance, the transitory form of obesity of adolescence may well be designated as a specific type.

The greater frequency of the specific form among girls explains itself by the fact that the changes occurring at the period of puberty are much more decisive in the female than in the male organism. Superalimentation does not play any part in the production of the specific type. On the contrary, I know of instances where the caloric value of the nourishment generally partaken of was unusually small. Moreover, anorexia is not infrequently met with. The appetite is often capricious. While, in the majority of instances, the heat- and fat-producing ingesta are given preference by the adolescent individual affected with this type of obesity, this is not always the case, and I remember some instances where even an aversion existed for carbohydrates or hydrocarbons or for both.

Again, as superalimentation is not a causative factor of specific obesity of adolescence, this must be due to diminished intra-organic oxidation. One of the anomalies underlying the latter we are quite justified in seeking in a retarded or otherwise perverted function of the thyroids (or parathyroids, or of both?). My reasons for ascribing the catabolic disorders to faulty thyroid (or parathyroid) activity, are: First, disappearance of the thymus gland and marked development of the thyroids at the period of puberty; second, the more frequent occurrence of thyroid affections in girls than in boys, which fact tends to explain the analogue, greater frequency of transitory obesity of adolescence among the pubescent female; and, third, our physiological and clinical experience as regards increase in protoplasm oxidation after administration of thyroid gland or its preparations.

Most cases of transitory obesity run an uneventful course. Anorexia, chlorosis, constipation, headache, and dull pains in back and loins are often present; a sense of rigidity in the joints and sacrolumbar region, giving rise to ungraceful and awkward motions, is not uncommon; circulatory disturbances synchronously produced with transitory obesity or appearing during the course of the latter, are not very frequent and seem comparatively slight; how-

ever, preexisting anomalies of the circulatory apparatus may occasionally become decidedly aggravated after abnormal fat deposition. In severe cases we may meet with pronounced anæmia or leucocytosis; and in rare instances with vertigo and cardiac dyspnoea.

The specific gravity of the blood and consequently that of the body are not pathognomonic of the condition. That is, they do not as a general rule differ materially from those in metabolic obesity of adolescence. Some cases tend to what I have described as hydroplasmic obesity,³ a condition of lipomatosis characterized by low blood density and lesser volume weight of the organism. Typical cases of hydroplasmic obesity are the result of a decided systemic deterioration, and are, therefore, of but exceptional occurrence during adolescence. There may be instances in which a specific type of polysarcia has apparently lost its transitory character. This may occur after an intercurrent disease, as enteric fever, or after any accident or affection favoring or provoking metabolic or hydroplasmic obesity. Thus, if a case of the latter type of adiposis is said to have originated during adolescence, I am of the opinion that it is almost always an instance of transformation from the metabolic to the hydroplasmic form, or that its occurrence was preceded by transitory obesity of adolescence, with which condition it does not stand in any true relationship.⁴

The excess in absolute weight in transitory obesity of adolescence amounts on the average to about 25 or 30 per cent. It may, however, vary a good deal in different cases. A patient of mine affected with the condition, a girl thirteen years of age, weighed over 200 pounds.

It occurs to me that in this form of obesity deposition of fat is more frequent upon the chest, breasts, and extremities, while, in the metabolic variety, it principally gathers in and upon the abdomen, in the region of the hips, and on the buttocks.

Another observation I have made in a number of obese girls is that in the specific form of the affection the hair of the head is full and attains great length, while it is much less abundant and comparatively short in metabolic obesity.

Both forms of juvenile obesity only demand treatment either when the overweight is so excessive as to interfere with the function of certain organs, or in the presence of grave concomitant disorders. Uncomplicated cases of less than 30 per cent. overweight are better not subjected to any continuous

treatment, as this will always produce more or less pronounced disturbances in the developing organism. Treatment, if instituted at all in such cases, should be directed toward maintenance of the individual's present body-weight. It should be of such a nature as to prevent protoplasm decline on the one side, and further accumulation of fat on the other side.

If, in other members of the family, metabolic obesity has already appeared at an early age, or if it is soon recognized after its onset, a proper preventive treatment conscientiously executed will avert its formation altogether or materially influence its progress. The preventive treatment of the metabolic form, which must be preeminently a dietetic one, will be of no avail in checking the course of transitory obesity, and as this is the result of certain developmental anomalies, I do not see by what means we may in the early stages intercept its progressive tendency.

Juvenile metabolic obesity in which treatment is indicated should be subjected to about the same dietetic regulations as if it were metabolic obesity in the adult. Successfully to combat metabolic obesity

AUTHOR'S TABLE DENOTING MEAN HEIGHT AND WEIGHT OF BOTH SEXES IN THE DIFFERENT AGES OF LIFE IN THE UNITED STATES.

Age.	Men.				Women.			
	Body, inches.	Height, ctm.	Body, pounds.	Weight, kilo.	Body, inches.	Height, ctm.	Body, pounds.	Weight, kilo.
1.....	28.74	73	21.78	9.9	28.50	72.4	20.24	9.2
2.....	32.67	83	28.16	12.8	32.44	82.4	24.60	11.2
3.....	35.82	91	32.70	14.9	35.59	90.4	29.04	13.2
4.....	38.18	97	36.68	16.9	37.95	96.4	33.	15.
5.....	40.55	103	39.60	18.0	40.31	102.4	35.20	16.
6.....	42.91	109	43.34	19.7	42.68	108.4	38.50	17.5
7.....	45.27	115	47.08	21.4	45.04	114.4	41.58	18.9
8.....	47.63	121	51.7	23.5	47.40	120.4	40.92	18.6
9.....	50.	127	55.60	25.3	49.76	126.4	49.06	22.3
10.....	52.36	133	60.94	27.7	52.13	132.4	54.56	24.8
11.....	54.33	138	66.40	30.2	54.09	137.4	58.52	26.6
12.....	56.30	143	72.60	33.	56.06	142.4	67.98	30.9
13.....	58.27	148	78.10	35.5	58.03	147.4	77.44	35.2
14.....	59.84	152	84.40	38.4	59.60	151.4	87.34	39.7
15.....	61.42	156	105.80	48.1	60.84	152.	97.02	44.1
16.....	63.39	161	120.10	54.6	60.	152.4	97.46	44.3
17.....	65.35	166	132.80	60.4	60.39	153.4	.....	.....
18.....	66.93	170	136.40	62.	61.18	155.4	.....	.....
19.....	67.37	171	138.60	63.	61.84	157.	118.80	54.
20.....	67.72	172	144.10	65.5	62.36	158.4	122.10	55.5
25.....	68.90	175	151.80	69.	63.15	160.4	124.30	56.5
30.....	69.29	176	154.	70.	63.78	162.	124.30	56.5
35.....	68.90	175	157.30	71.5	63.54	161.4	127.60	58.
40.....	68.90	175	166.00	73.	63.39	161.	133.10	60.5
45.....	68.11	173	161.70	73.5	62.99	160.	132.	60.
50.....	67.72	172	156.20	71.	61.81	157.	128.70	58.5
55.....	67.32	171	151.80	69.	61.42	156.	126.50	57.5
60.....	66.93	170	149.60	68.	61.02	155.	126.50	57.5
70.....	66.14	168	145.20	66.	60.23	153.	117.70	53.5

in the adolescent and yet to prevent the consumption of body-albumin, the caloric value of the nutriment should amount to 30 to the day and kilogramme of body-weight. This is a somewhat higher amount than that needed in the treatment of such cases occurring in the adult; it is necessary because, first, a marked reduction in nourishment is usually not well

³Loc. cit. (On the Treatment of Obesity.)
⁴Specific obesity of adolescence ceases with the close of that period, but, as a matter of fact, in most instances it has already disappeared before that time. One could surmise that the continued existence of its underlying causes would also favor its continuation beyond that period. This seems true, but if the underlying anomalies are of a severe and lasting nature, the adolescent individual will succumb to them long before the attainment of maturity.

borne by the growing individual for any length of time; secondly, the youthful obese, as a general rule, is more actively engaged in physical exercise, and, thirdly, the percentage of over-weight in most cases is less than in cases occurring in the adult.

To determine the necessary amount of calories, the height of the patient, and with the assistance of the appended table the corresponding weight in kilogrammes, should be ascertained. Ignoring the absolute weight of the patient, the number of kilogrammes thus obtained should be multiplied by 30, for instance:

Boy, aged sixteen, absolute weight, 72 kilogrammes, height 165 centimetres. Normal weight corresponding to 165 centimetres = 60 kilogrammes, therefore $60 \times 30 = 1,800$ calories, which should be daily yielded by the prescribed nourishment.

The amount of liquids to be taken should be the same as I have calculated for the adult in this condition, that is 45 cubic centimetres to the day and kilogramme of normal weight.

The dietetic treatment alone will suffice in most instances. In other cases an increased amount of exercise, gymnastics of the lungs, massage, hydrotherapeutic and other measures, must be resorted to in addition to the former. Medicines should be administered, if at all, only for the accompanying disorders, and never for the reduction of metabolic obesity during adolescence.

In cases of transitory obesity demanding treatment, dietetic restrictions are not only superfluous in the vast majority of cases, but often effect lasting injury to the youthful organism. Our therapeutic efforts in such instances should be directed rather to that of the complications and concomitant disturbances than to the obese condition itself. The latter, if extreme and giving cause for alarm, may be treated by preparations of thyreoid. A safe form of administering thyreoid substance, a tablet which I have made use of for a number of years, is this:

R Arsenous acid. 0.001 = $\frac{1}{100}$ grain;
 Adonidin. 0.005 = $\frac{1}{12}$ "
 Thyreoid gland, dry powder. 0.12 = 2 grains.
 M. ft. C. T. No. 1.

Physical treatment, in any of its branches, may be of benefit in individual cases of transitory obesity.

Newspaper Medicine.—The *Virginia Medical Semi-monthly* for February 21st cites the following from a country newspaper: Mrs. Thomas — was operated on this morning at the home of her son, Alfred, for necrosis of the bone, by Dr. —, assisted by Dr. — and Dr. —. A piece of dead bone was removed from the tibia of the right eye.

THE RELATION OF LOCAL DISEASE TO NERVOUS DISORDERS, ESPECIALLY NEURASTHENIA.*

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I wish to bring before you to-night a subject which has been talked over so often, that it may seem to many that nothing new can be said about it. My excuse for attempting to reopen the question of the relation of local irritations, especially in the female pelvic organs, to neurasthenia, is that though many neurologists and many gynæcologists have made up their minds upon it, there is still room for discussion while so many minds have been made up upon opposite sides. I have recently talked with an eminent gynæcologist from another city, a man of large experience in such cases, who told me very confidently that there was no doubt that many cases of so-called neurasthenia were caused by pelvic disease and could be cured by the gynæcologist. I have also recently talked with an eminent neurologist in still another city, who was equally confident in assuming that there was no doubt that more harm than good was done by the gynæcologist who meddled with neurasthenic women, and that only temporary good, due perhaps to suggestion, was done by the oculist in the same class of cases, who of course could find some astigmatism, which, if it was the cause of neurasthenia, would make us all neurasthenics. I was forced to agree with both of these gentlemen and to disagree with both. They expressed the general trend of opinion in their respective specialties. Each of them practically agreed with the men in his own line of work who discussed this subject at a meeting of the American Medical Association about two years ago. Divergence of opinion upon such a subject is the natural consequence of the tendency to such early and complete specialization in practice, which, with all its admirable results in the mastery of technique and in completeness of knowledge along one line, must, save in exceptionally broad-minded men, result in a strange incompleteness of knowledge of human beings as a whole.

I propose to state briefly my own view of the relation of local irritations to neurasthenia, and to illustrate them by the quotation of a few among the most striking of my own cases. My own views are founded on the experience of the past ten years in private practice and in my clinic at the Boston Dispensary, where hundreds of neurasthenias and other neuroses are treated annually, and where I have

*Read before the Boston Society for Medical Improvement, November, 1891.

tried to exercise great care in following up the results of treatment. In 80 per cent. of patients heard from after two years, I think I may say that the results have been satisfactory. The frequency with which my opinions excite surprise when expressed in consultation, seems an additional reason for inviting a more general discussion of them. But my principal object is to elicit the opinions upon the subject of the eminent gentlemen who have been asked to take part in the criticism of this paper.

My own view is, briefly stated, as follows: Neurasthenia has been well defined as "the fatigue neurosis." It seems to me important for practical purposes to keep this conception of the disease in mind: What we may call the neurasthenic diathesis may be inherited, or in non-inherited cases may be apparently congenital; it may be acquired as the result of overtaxing the nervous system by any kind of severe and prolonged strain. For one who starts with or acquires this diathesis a strain may be severe which would not be felt as serious by another who had a thoroughly sound nervous system. If neurasthenia is a state of the nervous system in which it is too easily exhausted, a lack of nervous endurance may be of almost any degree. We see patients who become the victims of neurasthenia from no discoverable cause, except the wear and tear of everyday life. These are the cases of extremely poor organization and nourishment of the nervous system, and what I have to say further applies less to them than to the next and, as it seems to me, more numerous class. There are many others who could have endured the wear and tear involved in the conditions of average lives, but who break down under the strain of some peculiarly trying occupation, the excitement and worry of the stock exchange, for example. Others, again, add to the necessary work of the nervous system in daily life a continuous and complicated series of stimulations and inhibitions, none the less nervous work because they are performed involuntarily and unconsciously, involved in correcting or trying to correct errors of refraction. Constantly recurring pain, either mental or physical, involves obviously enough a very considerable form of nervous work. It is largely for this reason that dysmenorrhœa or dyspareunia breaks down a nervous system that might have done its work well enough had it not been for this extra strain. Dyspareunia is a frequently overlooked cause of mental and physical suffering. I carefully avoid the expression "reflex irritation," because we really do not exactly know what we mean by it. But there are local irritations which do not involve pain, of which the patient may be even unconscious, which may involve nervous work. Such are the irritation of an unerupted third molar,¹ an adherent prepuce, or

what is still oftener overlooked, an adherent clitoris or a spur in the nose. Any stimulus passing along a nerve must, I suppose, involve a certain amount of the physical or chemical changes which constitute the wear on the nerve of doing its work and on the ganglion cells of receiving and sending out stimuli. Enuresis, which is so frequently found in children with adherent prepuce or clitoris, is an obvious example of the fact that local irritations which do not excite consciousness may be the source of fatiguing, because morbid, activity in the central nervous system. Such local irritations as do not cause pain or require constant balancing of opposing muscles, as in eye strain, would naturally cause less severe wear on the nervous system, and accordingly we find the local conditions last enumerated much less apt to cause marked nervous symptoms than eye strain or pelvic diseases of the more painful kinds, or, if the nervous trouble is marked, it is in the cases of those whose very poor resisting powers make them succumb to trifling causes of nerve fatigue. My enumeration of local irritations does not purport to be complete. I have only mentioned those in the case of which I have personally observed most frequently the evidence of connection with neurasthenia. In many cases more than one of these causes is found at the same time.

We see patients with such wretchedly constituted nervous systems that the mere exertion of living seems to tire them out. But in most of the neurasthenics that I have had to treat I seem to see patients whose poorly constructed nervous systems are unable to bear these additional strains, yet would do well enough if the causes of extra fatigue were removed.

Or, to state the case in another way, which may serve to make my meaning clearer, we may, without pretending to push the analogy too much into detail, divide neurasthenia, like anæmia, into primary and secondary. I believe that, in the one disease as in the other, the secondary will be found much the more numerous. In neurasthenia, as in anæmia, the treatment of the secondary cases, if directed only to the neurasthenia without due regard to its cause, will be found unsatisfactory. The secondary neurasthenias, except the severest cases, are, many of them, what have been called pseudo-neurasthenia. In this paper I shall speak only of the secondary neurasthenias, originating from the strain of local irritations. I fully recognize that there are cases of primary neurasthenia and hysteria which do not arise from such causes. Moreover, I believe that there are cases of secondary neurasthenia due to chronic intoxications, overwork, and especially overworry, with which the present discussion is not concerned. But after making all deductions, the group

¹As in the case reported by Lauder Brunton.

of cases due to local irritations presents, I believe, a common and well-marked type of this disease.

If we pay too exclusive attention to the nervous and psychological elements in such cases, we are apt to be disappointed in the result, because we have failed to find and remove so far as possible, often because we have not even looked for, the local causes which increase unnecessarily the task which a weak nervous system has to perform. On the other hand, the gynecologist or other, what I may call, local specialist, is too apt to think that an already exhausted and demoralized patient should recover promptly from her nervous symptoms upon the correction of the local troubles with which his specialty has to deal.

The mischief already done, even if it has been done by a pair of cystic ovaries, would often not, so far as the patient's nervous condition goes, have resulted from the same condition in a woman with a thoroughly sound nervous system, and it cannot be undone by simply removing the cysts, still less by substituting a new and often more severely felt source of nervous strain by completely removing both ovaries from a young woman. The evil results of complete oophorectomy have been frequently pointed out by the neurologist as illustrating the evil effects of meddling gynæcology. I believe it is very rarely that such a radical operation is necessary, and a small portion of one ovary being left is known to prevent the occurrence of premature change of life, with its unfortunate consequences to the general health of the patient.

It has, however, always seemed to me an amusing inconsistency that the same men who deny that any other abnormal condition of the female sexual organs can be the cause of serious nervous derangements have laid so much stress upon the evil effects of the ablation of both ovaries. It is rather difficult to see how, if the function of the sexual organs is not intimately related to the health of the central nervous system, the removal of some of these organs should have so much effect upon that system.

My own plan of treatment is: First, to search carefully for the evidence of hereditary tendency to neurasthenia or of the appearance of the disease in childhood. This gives a rough indication of the gravity of the tendency and of the likelihood of benefit from removing local causes of extra fatigue. Second, then to search especially in the eye and in the pelvic organs, but also in the nose and teeth, and of course with great care in the habits and occupation of the patient, for sources of removable strain. Third, to remove these local irritations as completely (but in gynæcological cases as conservatively) as possible, never waiting until the patient is better before removing what I think is the reason why she is not better. Fourth, and lastly, what the surgeon

too often forgets, as it seems to me, we should never rest satisfied with removing the local irritation, but should set at once about building up the nervous system and the mental condition as far as possible. For this, which is equally important, and is often the longest and hardest part of such a case, I rely less upon drugs, although they are almost always needed, than upon massage, gymnastics, hydrotherapy, some forms of electricity, a great deal of informal suggestion, and, in the worst cases, hypnotism.

The point I wish especially to insist upon is that a well-marked case of neurasthenia will not get well by merely removing local irritations which may be found, and neglecting the general care of the patient; and, on the other hand, that to keep on treating the nervous condition without removing the accessible causes which are at least factors in producing it, is to make the task before us unnecessarily difficult, if not impossible.

There is one danger in attempting to explain and treat neurasthenia through the patient's local derangements, which should be kept constantly in mind. We frequently find the disease, especially in young women, complicated by hysteria or hysteroid elements; in such cases I have learned by disagreeable experience that a great deal of mischief may be, at least temporarily and often permanently, done by drawing the patient's attention to local diseases of which she had not thought. If these local troubles are such as can be immediately and completely cured, the mental effect may be very beneficial, not only from the actual value of the treatment, but through means of suggestion. Unfortunately, however, suggestion of this kind may work both ways in hysterical subjects, and I have met with cases in which I did more harm than good by talking too frankly to the patient about her local diseases, because I did not realize at first the importance of the hysterical element in the case.

I am well aware that the quotation of a few cases cannot be appealed to as a proof of my argument, and offer them only as illustrations of my meaning. As they are intended as illustrations, I have selected the more striking examples rather than the average cases, which would be unfair if I offered them as proofs. Similar cases could be quoted, in which the results were far less satisfactory. I have one case in mind with complaints like those of Case III, corresponding even to the occupation and age of the patients, in which the result of similar treatment was unsatisfactory. But, on the other hand, the family history as regards neuroses was very bad, and the patient neglected subsequent treatment directed to building up his general health.

CASE I.—Mrs. B., apparently a very healthy, well-nourished woman twenty-one years of age, consult-

ed me in the Boston Dispensary for what she called "nervousness." She complained of constant severe pain in the sacrum and right iliac region, insomnia, and entire lack of control over her emotions, so that she would cry upon the slightest provocation, or without any at all. There was also excessive sexual appetite for the last two years. Menstruation had begun at fourteen, with severe pain in the left iliac region at every period.

A sclerocystic ovary was removed by Dr. Ernest Cushing from the left side when she was fifteen; this gave complete relief to her dysmenorrhœa. She married at eighteen, had a healthy child at nineteen, and for a year after continued to enjoy good health.

For the past year the symptoms of which she now complained had been increasing in severity. Some two months ago she consulted a woman physician, who sent her into the hospital for observation and treatment. There she remained for six weeks, being frequently examined by a number of different doctors. During this time she became more and more hysterical and excitable, and the doctors were unwilling to operate because she was in such a nervous state, and finally discharged her because she became so unmanageable, and referred her to the mental department of the Boston Dispensary. Acting upon her physician's assurance that there was no local cause for her complaints of pain, and upon her obviously unbalanced condition, the eminent alienist who saw her advised her commitment to an asylum, which was to have taken place within a day or two of the time I first saw her. I referred her to the gynæcological clinic, of which I was in charge at that time, and found upon examination a beautifully healed abdominal scar, the result of Dr. Cushing's operation. The tube and ovary on the left side could not be found. The right ovary was prolapsed, enlarged, and exquisitely sensitive. The uterus, three inches and one fourth deep, was retroflexed, and the fundus firmly adherent in the hollow of the sacrum.

I sent her into the hospital at once and operated forty-eight hours later. I very reluctantly removed the whole of the remaining ovary, as it was impossible to find a trace of normal tissue in it. The uterus was curetted, its adhesions broken up, and fastened in place by a ventral suspension. The patient made a perfect recovery and regained her mental balance to a great extent, but suffered severely from hot flushes for the next eight months, when she developed a gastric ulcer, for which I sent her into the Massachusetts Hospital, in the service of Dr. Vickery. She made a good recovery, but meanwhile her husband had acquired gonorrhœa and infected her soon after her return. She had had a slight return of her nervous symptoms during her stomach trouble, and when she developed a severe gonorrhœal endometritis they came back again with many hysterical symptoms. Treatment was neglected and infection was so severe that she was again sent to the hospital. The surgeon under whose care she came felt justified in doing a vaginal hysterectomy, on the ground that the uterus was useless to her and that it was greatly diseased. She again made a good recovery from the operation and all her nervous and mental symptoms disappeared. In the course of the next few months, however, she had an abscess in the external auditory canal and another in

her lip. Both were, of course, extremely painful. With each, the nervous symptoms returned, to disappear as soon as the pain was relieved.

For the past two years and a half nothing new has happened to her and she has been earning her living as a waitress and has enjoyed excellent health except for occasional headaches.

This patient's case is one which, to my mind, illustrates how an exceedingly poor nervous organization could be completely upset, even to the verge of insanity, by persistent pain. Whenever she had a real cause for suffering, and her illnesses were not at all imaginary, her nerves were shattered; but under the ordinary conditions of life she is able to do well enough, at least for the present. What her ultimate fate may be, I should not like to prophesy, but at least what I did for her saved her from an insane asylum for the present, and she has now for some time been able to lead a useful and comfortable life.

An example of hereditary tendency of a marked kind to neurasthenia, where lasting benefit was derived from the line of treatment which I have indicated, is afforded in the following case:

CASE II.—Miss B. S., aged twenty-four years, a well-developed, poorly nourished girl, was first seen by me about four years ago, suffering from vertical and occipital headache. She was very anæmic and had been the victim of marked neurasthenia since she was fourteen years old, when she broke down at school; had been unable since then to study for more than a month or two at a time without bringing on an attack of illness which often caused her to go to bed for several weeks. She had suffered from headaches and from "neuralgic" pains in every part of her body from childhood. She complained of weak digestion, of feeling seasick a great part of the time, of sacral and occipital pains which were aggravated by walking and still more by standing, so that they came on severely if she stood five minutes waiting for a car. She was very nervous and irritable; always felt tired; suffered much from insomnia; was wearing glasses fitted by a prominent oculist of another city, and had had her eyes examined by four different oculists; had had the muscles cut for exophoria and hyperphoria of one eye, in all seven times; and could not read for ten or fifteen minutes without bringing on frontal or temporal headache.

Menstruation had always been regular and of normal amount, with "no more pain than was to be expected," which, however, was usually enough to keep her in bed for two or three days. She had been under the care of several neurologists in New York and Boston, and had never had pelvic examination suggested, had been losing ground year by year in her own opinion. Her treatment had consisted, besides that of the eyes, in hydrotherapy, electricity, massage, gymnastics, nervous tonics, especially large doses of nux vomica and iron, unsuccessful attempts at hypnotism, and a great deal of advice as to the wisdom of "bracing up" and ignoring her symptoms. The dysmenorrhœa had been ascribed to her neurasthenia and anæmia; the headaches were

simply described as neurasthenic, anæmic, and ocular.

These details as to diagnosis and treatment were obtained by me by direct communication with some of the physicians who had previously attended her, and not from her own statement alone. To my mind, the vertical headache might be due to anæmia or to endometritis; the frontal and temporal headache was due to her eyes; the occipital headache to the eyes or to some pelvic displacement.

The pelvic examination revealed two large, tender, prolapsed ovaries, and a slightly retroverted and prolapsed uterus, three inches and one fourth deep, the interior of which felt to the sound as if it were lined with sponge, notwithstanding the fact there was no history of leucorrhœa. The examination brought on a frightful vertical and occipital headache which prostrated her for three days. So soon as she had recovered from this she was referred to Dr. F. I. Proctor, who found about the same amount of astigmatism as previous oculists, but on a different axis, as shown by her previous prescriptions. While still in bed preparing for a laparotomy she began to read with her new glasses without bringing on frontal and temporal headache. The occipital and vertical headaches were not relieved.

The examination of the blood, which was made for the first time, showed marked diminution of red corpuscles, which were about 3,000,000, and 50 per cent. of diminution of hæmoglobin. The urine, which had not, so far as I could learn from other physicians, been systematically examined for the determination of uric acid, showed marked diminution in amount and in percentage of uric acid before one of her bad headaches, and marked increases in both during and after recovery from them. I dilated and curetted the uterus, removed one ovary, which was simply one large hæmatoma, resected the cysts in the other, broke up adhesions, and did an Alexander.

She sat up on the fourteenth day and was taken out for a drive on the twenty-fourth. Examination three months afterward, showed that there was no exophoria, but slight hyperphoria, many of the neurasthenic symptoms and most of the pain had disappeared while she was in bed, with a partial return when she got about again. The treatment of the neurasthenia and anæmia were resumed on very much the same lines as had been followed by her previous doctors, with the addition of carefully watching and keeping up the excretion of uric acid, and with special attention to gymnastics and water treatment. Her progress was slow, but fairly steady; at the end of a year she was able to drop all treatment, and for the past three years she has remained in fair health. Her weight has increased from 105 to 140 pounds. She is doing a considerable amount of intellectual work, using her eyes freely without inconvenience, being able to walk three miles without backache or headache, menstruating without pain, complaining of little beyond return of insomnia when she studies too hard, and of being easily irritated by unnecessary noises while she is menstruating.

To my mind, this case illustrates the importance of a more complete examination in neurasthenic cases, the extreme degree of pelvic troubles which

may be overlooked where only the gynæcologist would see that the symptoms pointed in that direction, the frequency with which the fitting of glasses fails to relieve eye symptoms through the inaccurate determination of the axis of astigmatism, and the frequent dependence of exophoria upon either uncorrected astigmatism or pelvic diseases.

In this case it is impossible to say what was the cause of the exophoria, as it was found to have disappeared after both pelvic displacements and the axes of astigmatism had been corrected.

CASE III.—Mr. D., aged forty years, civil engineer, consulted me two years ago for what he described as indigestion, from which he had suffered for the past ten years. He had been treated by several eminent specialists on diseases of the stomach. Had been told he had no trouble except "lack of nervous strength" in the stomach, and that he was unable to digest food enough to make him capable of doing his work. As soon as he attempts to work, the stomach gets out of order, he complains of anorexia, occasional water brash, heartburn, a feeling of a lump in his stomach, slight nausea, and a great deal of dizziness; bowels move once in two or three days; all these symptoms, including constipation, gradually disappear when he gives up work. He has had to rest for increasingly long periods from year to year; had rested eight months out of last twelve. He never has headaches, eyesight exceptionally good, so that he is depended on in surveying to see distant objects more clearly than any of the party.

At twenty years old he weighed 170 pounds; on giving up work eight months ago, he weighed 127 pounds, but has now risen to 146 pounds. Has had stomach contents repeatedly examined, has taken all sorts of tonics, digestives, and laxatives, and has had gastric lavage tried thoroughly. Referred, much against his will, to Dr. Kilburn, who found slight astigmatism, a different amount on different axes in the two eyes. Returned to work soon after glasses were fitted; has been working steadily since, having taken no vacation at all to make up for lost time.

No treatment was prescribed besides the glasses, except friction with cold water every morning on rising. He now eats anything he wants to and needs nothing for bowels or digestion.

This is a simple case illustrating the effect of constant eye strain upon stomach, bowels, and general health. His work has consisted for years, when not actually using the theodolite in the field, in writing and figuring in the office, involving constant use of his eyes. There was marked family history of digestive troubles somewhat similar to his own. None of his family had worn glasses except in old age.

CASE IV.—Mrs. F. O., aged thirty-three years, teacher, had two healthy children, and a miscarriage with complete placenta prævia at five months, all some years ago; cervix and perinæum repaired with good results. No pelvic trouble for past three or four years, except some dysmenorrhœa lasting one

or two days of flow, which was otherwise normal. Had always had trouble with eyes, including astigmatism and esophoria. Was wearing glasses fitted by Dr. Proctor, which had been satisfactory for several years. In the absence of Dr. Proctor she consulted Dr. Kilburn about vertical, frontal, and temporal headache, which had been almost constant during waking hours for the past five months.

Dr. Kilburn found astigmatism, as indicated by Dr. Proctor, plus 15 degrees of esophoria; referred her to me, suggesting pelvic trouble, about which she was skeptical because of lack of symptoms. Examination showed both ovaries prolapsed and very sensitive. These were easily pushed up into place and supported by ichthyol tampons. Returned in three days, reporting that headache was gone before she got home. Treatment continued for six weeks, at the end of which time headaches had disappeared. The only other treatment was a daily dose of sodium phosphate during the first part of the time. For the past year, practically no headache, no dysmenorrhœa, no trouble with eyesight, still wearing the same glasses. Examination within a few days of this report shows esophoria of five degrees.

My interpretation of this case is that esophoria caused the headache, and that the prolapsed ovaries caused the esophoria and the dysmenorrhœa.

CASE V.—Mrs. C. S., aged thirty-three years. A case illustrating the effect which laceration of the cervix sometimes produces on the mental condition, which I have selected from a number of such cases, because I believe that it is possible in this case to exclude the effect of suggestion in causing the improvement.

She came to me in 1894. A month after the birth of her first child, she became very despondent, was pronounced to be suffering from neurasthenia, was threatened with melancholia; at the same time her local physician examined her and told her that her cervix should be repaired to prevent the local troubles which it might cause, but she was positive that the laceration was not connected with her mental and nervous condition. She came to Boston and was operated upon by Dr. C. B. Porter with perfect result. Soon after returning home, she found that her nerves were improving and the symptoms of neurasthenia and melancholia disappeared within two months after she had left the hospital.

Two years after her first child she had a second confinement, in which the cervix was again badly torn. This time, judging by her previous experience, she suspected the laceration to be the cause of her nervous troubles, which returned in full force a few months after the baby was born. She again came to Boston and the cervix was repaired by Dr. F. B. Harrington with the same result.

In confinement with her third child, three years later, the cervix was badly torn a third time, but, as she was attended by a less careful physician, she was assured that there was no tear of any importance. Nevertheless, she again became despondent, neurasthenic, and extremely irritable, lost considerable weight, and suffered much from insomnia.

I saw her first about three years after the birth of her third child. She had been assured by a neurolo-

gist of prominence that there was nothing the matter with her locally, and had been under treatment for some time for neurasthenia. She was suffering very much at the same time from hæmorrhoids.

By examination I found a considerable bilateral laceration of the cervix and some large external hæmorrhoids. As the latter seemed to me to be enough to justify an operation, and as I wished to test the value of suggestion as an explanation of relief by local operation to neurasthenic symptoms, I tried the experiment upon her in this way. I told her that the cervix was torn, which she immediately said she had been certain of from the way she felt. I suggested that the hæmorrhoids, which I admitted were not the cause of her nervous symptoms, should be first operated on. While she was under the effect of ether, I repaired the cervix, using chromicized catgut, so that her attention need not be drawn to the operation by the subsequent removal of stitches. Nothing was said to her about the cervix, and she returned home, expecting to come back later for the cervix operation. Three months later she reported that, much to her surprise, she had got all over the nervous troubles and had been putting off her return for operation because she was so well.

Here was a case in which suggestion might and probably did play a part in the result of the second operation on the cervix, but where it could not have done so in the first, and where, in the third repair of the cervix, suggestion must have favored the continuance of the nervous symptoms, as the patient believed at the time she was getting well that the cervix was still untouched.

THE RADICAL CURE OF HYDROCELE BY MINUTE (TWO-MINIM) INJECTIONS OF CARBOLIC ACID.*

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The progress that has been made in abdominal and pelvic surgery during recent years has been so great that surgeons have been inclined to devote their entire thought and attention to major operations, to the exclusion of others which, though properly termed "minor," are still of considerable moment to the laity.

A few years ago, at one of the annual meetings of the Harvard Medical Society, Dr. Cheever well expressed this idea in a comment upon the modern surgical text-book, which, he stated, devoted whole pages to graphic descriptions of new and varied methods of intestinal suture, while but a single line was accorded the subject of the treatment of piles. The same would apply with equal force to the treatment of hydrocele. Although very little new has

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been written in recent years as to the treatment of this condition, a good deal which, though old, is still valuable has been forgotten, and it may be well at the start to make a very hasty review of the various methods of operation that have been and are still employed.

Prior to the introduction of antiseptic surgery, the treatment of hydrocele consisted in simple tapping, which occasionally produced cures, and in tapping plus the injection of a great variety of irritating fluids. Tincture of iodine was introduced by Sir Ranald Martin in 1832. In 1878 fifty-four cases were reported as treated by tincture of iodine, with eighteen relapses, the amount of iodine usually injected varying within wide limits from half a drachm to an ounce.

Although the great advantages of carbolic acid over tincture of iodine as an injection material were first shown by Dr. R. J. Levis, of Philadelphia, in 1881 (*Boston Medical and Surgical Journal*, p. 540), and Levis's conclusions were later confirmed by the results of Weir, Abbe, and others, in the most recent Anglo-American text-book of surgery, the *International*, Tuholske states that tincture of iodine is still the most used of all methods of injection. The amount recommended is from one to four drachms of the undiluted official tincture, most of which, after thorough manipulation of the parts, is allowed to come out through the cannula. It is further stated that among the usual results that follow this injection is pain, nauseating in character, extending to the testes and cord; pyrexia may also occur. The patient usually leaves his bed in from four to six days. The swelling gradually disappears.

Moullin, in his treatise on *Surgery*, in speaking of the treatment of hydrocele, states: "Tincture of iodine, half an ounce, pure, or with an equal quantity of water, is commonly used." He also states that carbolic acid, twenty minims, with glycerin, may be used instead. This method, he adds, is chiefly suited to small hydroceles.

Ashhurst, in his *Principles and Practice of Surgery*, 6th edition, states: "Various substances have been employed for injection in hydrocele, the best being the tincture of iodine, as originally suggested by J. R. Martin. Some surgeons use the tincture diluted, allowing the injected fluid to flow out again through the cannula before the latter is withdrawn; but Syme's plan, which I have always followed and which, if properly carried out, almost never fails, is to inject a small quantity, one to three drachms of the pure tincture and allow it to remain in the sac." With regard to after-treatment, he states that the patient should be confined to bed or to a lounge for at least from two to three days.

Treves, in his *System of Surgery*, Vol. ii, p. 977, says that many drugs have been employed, but the

most preferable are carbolic acid and iodine liniment diluted with twice its quantity of water. About one half to one ounce of the iodine solution and one half to one drachm of carbolic acid, crystals (dissolved in five per cent. of glycerin), is a sufficient quantity. He adds that "recurrence takes place occasionally after each method; indeed, hydrocele recurs after every known method of treatment."

In the *American Text-book of Surgery*, 2d edition, 1899, the iodine method is given the preference. Five to six drachms is the quantity advised, and this is allowed to remain in the sac. It is stated that a great majority of all cases of uncomplicated hydrocele are curable by this method when properly employed. Four lines are devoted to the treatment of carbolic acid. Ten to thirty drops of the pure acid, liquefied with the least possible amount of water, or a drachm of a five-per-cent. solution in glycerin of the crystallized acid are recommended.

Levis, who introduced the carbolic-acid method in 1881, after nine years of experience, stated that he employed from 30 grains to 1½ drachm of the pure carbolic-acid crystals, liquefied by just sufficient glycerin to render the crystals soluble. During this entire time, he stated, he had never observed a single failure to cure the hydrocele. He had never observed any toxic effects following the injections and no trace of carbolic absorption was ever shown by urinary analysis. He had had one case of sloughing, but in this the hydrocele was complicated with sarcoma of the testis. His patients were not confined to bed and pursued their daily vocations after treatment.

In 1882 Dr. Weir reported thirteen cases treated with carbolic-acid injections by Levis's method, the same amount, ½ to 1½ drachm, being used. His patients had no pain and were never incapacitated from attending to their usual duties, and every case, with one exception, was reported cured. Weir states that he felt warranted in corroborating the favorable judgment of Levis as to the value of the method.

In 1883 (*New York Medical Journal*, p. 683) Abbe, in a paper based upon 152 cases of hydrocele treated by various methods, reported twelve treated by Levis's method. Abbe used one drachm of the deliquesced crystals of carbolic acid; he stated that on one occasion he used three drachms in a large sac, with the result that acute suppuration with sloughing followed. He concluded that three drachms were too large a dose and that one drachm should always suffice. He also reported one death from acute inflammation in an elderly patient, although the operation had consisted in simple tapping only. Abbe further reported the case of a patient, sixty-six years of age, in whom the injection of only half a drachm of tincture of iodine was followed by

profound shock, perspiration, pallor, and collapse, the patient reviving only after prolonged stimulation. The use of large doses of carbolic acid, as recommended by Levis, while in the vast majority of cases followed by no untoward result, occasionally produces serious trouble.

Wile (*New England Medical Monthly*, Vol. v, p. 435) has reported the case of a farmer, aged forty years, who was tapped at Bridgeport, Conn., and then received an injection of carbolic acid. The patient immediately after went to his home, at Danbury, about twenty miles distant, presumably riding in a farmer's wagon the entire distance. Pain and considerable swelling followed, which increased and were accompanied by pyrexia. Dr. Wile was consulted a week later and found the scrotum very badly swollen, the temperature 102° F., and the pulse 120. The condition becoming worse on the following day, an incision was made, evacuating considerable pus.

Wile's conclusion that the profession should hesitate to adopt the carbolic method is hardly justified by the facts at hand, inasmuch as no mention is made of the amount of carbolic injected or of what precautions were taken in performing the operation. One might readily admit that it would be unwise to inject a large hydrocele with carbolic acid and allow the patient to ride twenty miles directly afterward and at the same time be unwilling to condemn the method when properly carried out.

Horwitz, of Philadelphia (*Therapeutic Gazette*, April 15, 1901), at one time assistant of Levis, is far from enthusiastic over the results of either the iodine or the carbolic method. He states that immediately after the injection of either tincture of iodine or carbolic acid, the sac became enormously distended, a condition which was usually attended with a great deal of pain. In many cases relapse occurred. Extensive œdema of the scrotal tissues has been reported following the escape of either tincture of iodine or carbolic acid into the structures. Suppuration of the sac, abscess of the testicle, and carbolic-acid poisoning have all been noted. In one case treated by means of carbolic-acid injection, an abscess of the testicle followed, involving the cord and giving rise to a lymphangitis, death finally taking place from sepsis. He further adds: "The objections to tapping and injection for hydrocele are so numerous that most surgeons now resort to the open operation." He maintains that it is far safer and less painful, that convalescence is quicker, and that there is a diminished liability to recurrence.

Horwitz, in his paper (*loc. cit.*) on Hydrocele and its Treatment, with a Summary of 338 Operations Performed at the Genito-urinary Department of the Jefferson Medical College Hospital, reports eight

cases treated by the method of inversion of the tunica vaginalis of Doyen, as described in the *Archives Prov. de chir.*, Tome iv, No. 2, 1895, p. 706, and later by Winkelmann in the *Centralblatt für Chirurgie*, Vol. xlv, 1898, p. 1092. This method was first practised in this country by Dr. Keen, at the Jefferson Hospital, on January 16, 1901. He states that the operation required less than ten minutes to perform; no ligature was needed; the highest temperature was 99° F., the patient leaving the institution on the twelfth day. Subsequently Dr. Horwitz operated in eight cases by this method, the largest hydrocele containing a pint and a half. The operations were performed under local anæsthesia, Schleich's infiltration method being used. For a detailed description of this operation the reader is referred to the paper of Horwitz or the original author, cited. Horwitz states that in all cases of operation by this method there is a painless enlargement of the testicle, which gradually subsides in about ten days. He adds that in large hydroceles of long standing, with greatly thickened sacs, the operation would not be feasible, and partial resection of the tunica would have to be resorted to. In other words, the operation is only indicated in the very class of cases in which it has been proved that radical cure may be obtained by the injection methods.

While we have had no personal experience with the inversion method, the statistics of Horwitz himself, giving the results of ninety-four cases treated by the method of resection of the sac (von Bergmann) prove that, if we are going to subject our patient to an operation confining him to the hospital for twelve days, we have in the resection method an operation far more ideal than the inversion method. Of the ninety-four cases treated at Horwitz's clinic by the resection method, in fifteen the hydrocele had been repeatedly tapped. In but one case was recurrence observed. The disadvantages of the inversion method are at once apparent, and while they may at the present moment be somewhat theoretical, they may become very practical by the time a sufficient number of cases have been reported to justify conclusions. Among these disadvantages should be mentioned the danger of sloughing taking place in the inverted and poorly nourished sac, a danger which would increase in proportion to the size of the hydrocele and the thickness of the sac.

At the Hospital for Ruptured and Crippled during the ten years 1891 to 1900, there were treated 2,214 cases of hydrocele. Of these, 103 were hydrocele of the canal of Nuck or hydrocele in the female; 1,603 cases in children under the age of fourteen; 101 in males between the ages of fourteen and twenty-one years; and 613 cases in males over twenty-one years of age.

That nearly all of the patients with hydrocele in infancy and early childhood are cured either by the application of some simple thing like iodine or disappear spontaneously, is shown by the fact that, while we observed 1,603 under the age of fourteen, only 101 were seen between the ages of fourteen and twenty-one, and very few of these gave a history of hydrocele in infancy.

The radical treatment of hydrocele should, then, properly concern itself with the consideration of the cases occurring after the age of fourteen years.

Our routine method of treatment in infants and young children consists in simple daily applications of equal parts of tincture of iodine and tincture of belladonna. Long experience with this method convinces us that it has some effect in hastening the absorption of the fluid, although doubtless spontaneous cure would result without any application. Occasionally, when the hydrocele is very large, the fluid is aspirated and the tunica irritated by the point of the trocar. This, however, is not done more than three or four times in the course of a year. Hydrocele in the adult, however, is a condition that requires more serious consideration. Up to a year ago we had always made use of the carbolic injection method of Levis, with the exception that we never used more than ten minims at one injection. As our cases were mostly in dispensary patients, the after-results were not very carefully traced. A sufficient number of cases, however, were traced to convince us that the great majority of patients could be cured by an injection no larger than the one mentioned. About a year ago, influenced by the fear of a private patient that even ten minims of carbolic acid might possibly cause trouble, one of us determined to try the effect of still smaller doses, and from that time on treated all adult cases that came to the clinic, without selection, with injections of two or three minims of carbolic acid, believing that it would probably be necessary to repeat the injections several times before effecting a cure. These patients were asked to return frequently for inspection and, as far as possible, with the valuable assistance of Dr. Satterwhite, who performed most of the injections, the after-histories have been traced. A number of these patients have consented to present themselves at the academy to-night for your inspection. The histories of some of the more important ones I will briefly narrate:

CASE I.—Mr. X., aged sixty-two; left hydrocele of forty-five years' standing; first tapped two years ago; twelve ounces of fluid withdrawn. Tapping was then performed about every four months, seven or eight ounces of fluid being withdrawn each time. There was slight thickening of the epididymis. On March 20, 1901, seven ounces of clear fluid were withdrawn with a small trocar. Every particle of

fluid was squeezed out as far as possible, and then, by means of the double cannula (see illustration),

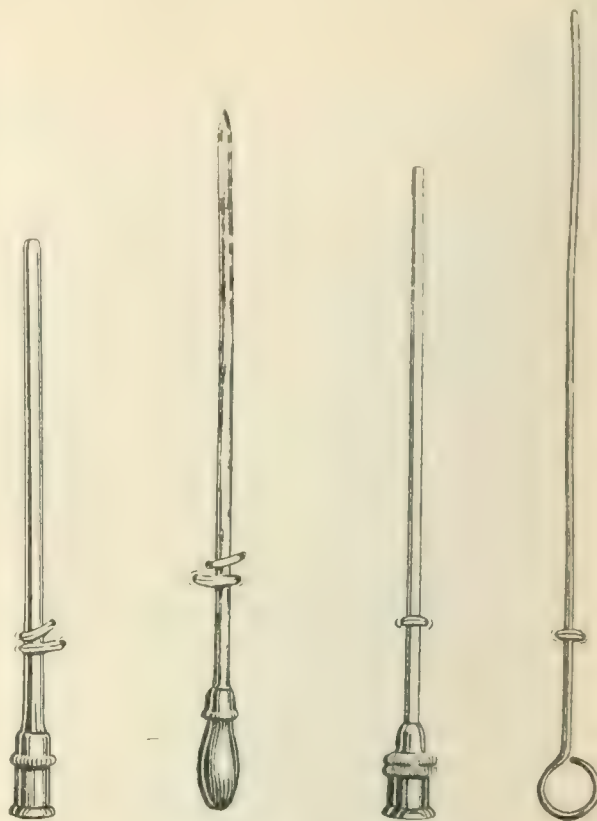


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

2½ minims of Schering's carbolic acid, with just enough glycerin added to render the crystals fluid, were injected. Absolutely no pain followed, but on the next day the swelling had reached or slightly exceeded the original size. There was slight tenderness with some ecchymosis of the skin of the scrotum, but absolutely no pain. The swelling remained about the same for a week, with a marked thickening of the whole tunica vaginalis, apparently very evenly distributed. At the end of this time a large needle was inserted into the tunica vaginalis, and an ounce and a half of dark, bloody fluid withdrawn. This fluid was almost too thick to run, and the lower portion clotted on standing. The swelling slowly subsided. There was absolutely no rise of temperature or increase in pulse rate at any time, nor was there ever any pain in the testis, a slight dragging sensation of the lower end being the only thing noted. At the end of twelve days the needle was again inserted and a drachm and a half of bloody fluid drawn off. The swelling still further subsided, and at the end of three weeks it had entirely disappeared and the left testis and scrotum had become quite normal. This patient I have observed at frequent intervals since the operation, and up to the present time there has not been the slightest reaccumulation.

This case is given at considerable length, inasmuch as it is just the kind that one would not expect to cure by any injection method, much less by such a small injection. The marked swelling, the

uniform thickening of the entire tunica vaginalis, with the subsequent disappearance of the hydrocele, proves that two drops and a half of carbolic acid can produce inflammatory reaction of the tunica vaginalis to effect a cure just as well as sixty drops, without subjecting the patient to any of the risks that, it must be admitted, are incurred when giving the larger doses.

CASE II.—An Italian boy, T. M., aged seventeen, left hydrocele of three years' duration, of the size of an orange, who had had two previous tappings, was injected with two minims of carbolic acid (Schering's) on July 29, 1901, after the removal of four ounces of clear fluid. On August 4th there was considerable inflammatory swelling, and on August 9th the trocar was inserted and three drachms of fluid were removed. No injection was made except the original two minims on July 29th. By the end of August the swelling had almost entirely subsided, and on September 4th it had completely disappeared. The patient has kindly consented to come this evening for examination, and you will see that at the present time he is absolutely cured.

CASE III.—H. E., aged forty-one years, with left hydrocele of the size of a large orange, no previous treatment, was tapped on July 8th; $7\frac{1}{2}$ ounces of clear fluid were withdrawn, and two minims of carbolic acid injected as in the preceding cases. On July 10th the patient returned, and examination showed considerable swelling and some tenderness. On July 29th the swelling had almost entirely disappeared. The patient returned to the hospital on November 15th, with the hydrocele entirely cured, and it has remained so up to the present moment, December 15, 1902. He is perfectly well, with no trace of reaccumulation.

CASE IV.—M. J., aged fifty-four, right hydrocele of eight years' duration. Had been tapped five times at different clinics. On August 25, 1901, he was tapped at the Hospital for the Ruptured and Crippled; sixteen ounces of clear fluid were withdrawn. Three minims of Schering's solution of carbolic acid were injected. On August 30th, examination showed evidence of considerable reaction, thickening of the tunica vaginalis, and slight pain. On January 8, 1902, he replied by letter that he was entirely cured.

CASE V.—W. B., aged forty-five, right hydrocele of six months' standing; no previous treatment. On September 13, 1901, he was tapped, and ten ounces of clear fluid were withdrawn; two minims of carbolic acid were injected. On the 16th he stated that he had had no pain and had attended to his usual duties. On October 28, 1901, he was perfectly well; no reaccumulation. January 10, 1902, the patient remained perfectly cured.

CASE VI.—G. N., aged fifty-five years, right hydrocele of sixteen years' duration. Had not been tapped for fifteen years. Tapped at the Hospital for the Ruptured and Crippled on October 16, 1901; twenty-nine ounces of clear fluid were withdrawn. The tumor extended well up into the canal, showing hydrocele of the tunica vaginalis and cord, both. Two minims of Schering's solution of pure carbolic acid were injected into the tunica vaginalis. No re-

action, pain, or swelling following the injection, the patient continuing his usual work. Examination on October 23, 1901, showed no reaccumulation. On October 30th there was no evidence of return.

CASE VII.—T. D., thirty-two years of age, right hydrocele of eighteen months' duration. Tapped on November 20, 1901; eight ounces of clear fluid were drawn off; two minims of Schering's solution of pure carbolic acid were injected. On November 22d there were moderate reaction, some exudate, and very little pain or discomfort; the patient continued his usual work. A small trocar was introduced and two ounces and a half of bloody fluid were withdrawn. No further injections were made. On the 24th the swelling had slightly gone down. On December 4th the swelling had entirely disappeared. No reaccumulation followed.

CASE VIII.—C. D., aged sixty-four, left hydrocele of five years' duration, of the size of an orange. He had been tapped six months before, without injection. The fluid had rapidly reaccumulated. On December 27th he was tapped; seven ounces of clear fluid were withdrawn. Two minims of carbolic acid were injected into the tunica vaginalis. On January 2, 1902, there was moderate reaction. A trocar was introduced and two ounces of fluid were withdrawn. No further injection was given. On January 11th there was no reaccumulation.

CASE IX.—H. L., aged thirty years, was operated upon for right inguinal hernia in July, 1896. The hernia remained perfectly cured, but about eight months after the operation a small hydrocele developed on the same side, and this gradually increased in size up to November, 1901. The hydrocele was tapped a number of times, and on November 20, 1901, after drawing off eight ounces of clear fluid, we injected two minims and a half of carbolic acid. The patient lived on Staten Island, and returned to his home immediately after the injection. Two days later he returned with a swelling of the right testis, fully as large as, if not a little larger than, before the tapping. There was very marked uniform thickening of the entire tunica vaginalis, with some dragging sensation to the loin, also slight rise in temperature. The patient returned again on December 1st, when the swelling had entirely disappeared.

Comparing these cases with the fifteen cases in which the ordinary commercial carbolic acid was used for the injections—supposed to be 95 per cent., but not specially prepared from the crystals, and probably most frequently used in dispensary practice—we find in the latter series recurrence was very common, and in order to effect a cure several injections had to be given. As an illustration, we cite the following case:

J. D., sixteen years old; right hydrocele, of the size of an egg, of eight months' duration. On April 17, 1901, he was tapped and an ounce and a half of fluid withdrawn; two minims of the ordinary carbolic acid—supposedly 95 per cent.—were injected. On the 19th there was no pain and apparently no reaccumulation. On the 24th there was slight increase in size. On May 1st the same size was noted

as before the injection; an ounce and a half of fluid was withdrawn. On the 24th he was again tapped and an ounce of clear fluid withdrawn; three minims of a similar solution of carbolic acid were injected. On the 27th there was slight pain, with slight reaction. On June 19th the swelling had almost disappeared. On July 29th there was no re-accumulation, but the swelling had not yet entirely disappeared. On August 28th the parts were perfectly normal. On January 3, 1902, the patient remained cured.

A still more striking example of the importance of using the pure crystals is the following case:

W. T., aged twenty-six years; right hydrocele developing from an orchitis a year before. He had been tapped twice before coming to the Hospital for the Ruptured and Crippled. On February 18, 1901, five ounces of fluid were withdrawn and three minims of the ordinary carbolic acid injected. On May 1st the hydrocele had returned and was as large as before or larger. Again he was tapped; six ounces of clear fluid were withdrawn. Three minims of carbolic, the same solution as before used, were injected. On July 2d the hydrocele had returned, and was as large as before. He was again tapped, and seven ounces of fluid, this time dark brown in color, were withdrawn. No injection was given. On August 14th he was tapped for the fourth time; five ounces of clear fluid were withdrawn, and four minims of carbolic acid injected. On September 25th he was tapped for the fifth time; six ounces and a half of clear fluid were withdrawn and five minims of carbolic acid injected.

This case we believe to be typical of the results obtained by the ordinary methods of treating hydrocele by carbolic-acid injections. The striking differences in these two classes of cases explain, we think, the different opinions that are held by various members of the profession as to the merits of carbolic acid in the treatment of hydrocele. They further show that the failure to carry out some seemingly unimportant detail in technique, such, for example, as that of completely emptying the sac of the fluid, or of employing a perfectly saturated solution of the carbolic acid, may cause bad or indifferent results, while, on the other hand, using the proper solution and a perfect technique will secure good or perfect results.

Technique of the Method of Injection.—In the first place, we believe it to be of the utmost importance that the solution of carbolic acid be sufficiently concentrated. A number of our patients were treated by the ordinary commercial carbolic acid supposed to be pure. The results in these cases did not compare with those from the use of Schering's carbolic-acid crystals to which just enough glycerin was added to liquefy the crystals. The reaction obtained from two minims of this solution was more than equal to that obtained from eight to ten of the ordinary carbolic acid.

The instrument devised and advocated by Levis, while very useful when large quantities, from half a drachm to a drachm, were employed, could not be used to advantage when injecting such small amounts as two minims. The instrument which we have used, made by the W. F. Ford Company, at Dr. Coley's suggestion, is very simple, and consists of a double trocar and cannula, the inner trocar closely fitting and projecting slightly beyond the outer and bearing a thread at its proximal end, so that it can be attached to any ordinary hypodermic syringe. The inner cannula, being attached to the syringe, is first filled with the liquefied carbolic acid, and by means of the gauge upon the piston, or barrel, of the syringe, two or three minims can be used with absolute accuracy. After the hydrocele fluid has been withdrawn—and here must be noted the importance of so compressing and manipulating the folds of the tunica vaginalis as to empty the sac as completely as possible—the smaller trocar is introduced into the larger and the injection made. Both trocars are then withdrawn together, the scrotum is thoroughly manipulated in order that the carbolic acid, slightly diluted by a few drops of hydrocele fluid that must always remain, comes in contact with the entire serous surface.

The objection has been made that it is impossible, with such a small amount, to come in contact with more than a limited area of the tunica vaginalis, and hence a cure would be improbable.

The only practical answer to this objection is that careful examination of the cases in which this method has been employed has shown a uniform inflammatory thickening of the whole tunica, which was in some cases more than a quarter of an inch thick. The withdrawal of an ounce and a half of thick bloody fluid a week after the injection, in the case described, certainly proves that a marked inflammatory reaction took place, quite sufficient, one would judge, as a complete cure of the hydrocele resulted.

Conclusions.—After a careful review of the methods at present employed in the treatment of hydrocele, we are convinced that the carbolic-acid injection method of Levis is by far the best. It is easily performed and almost uniformly successful, the only disadvantage being the doubt as to its always being free from risk. While this risk may not be great, a few serious results have followed the introduction of these comparatively large amounts of carbolic acid into the tunica vaginalis, and this risk, slight as it may be, is sufficient to deter many patients, in private practice at least, from having it tried.

Our series of cases, though not a large one, is sufficient, we think, to show that practically just as good results may be obtained by using two minims

of carbolic acid instead of from thirty to ninety. This small amount we believe to be absolutely free from all risk, and if a cure of large and long standing hydroceles may be obtained by this simple procedure, we do not believe it justifiable to perform an operation which would confine the patient to his home or the hospital for a period of ten days, at least not until the simple method has been tried first.

Of course, we must recognize that different cases of hydrocele differ widely anatomically and pathologically; and just as it would be absurd to advocate the inversion method in a greatly thickened sac with

however, have not been selected, and they varied from the recent hydrocele, in a boy of fourteen, to hydrocele of over forty years' duration, in a man of sixty-two, and the results have been almost uniformly good.

While we believe that by the injection method described the great majority of cases of hydrocele may be cured, we also believe that there will always be a certain small number of cases in which the open method of resection should be employed.

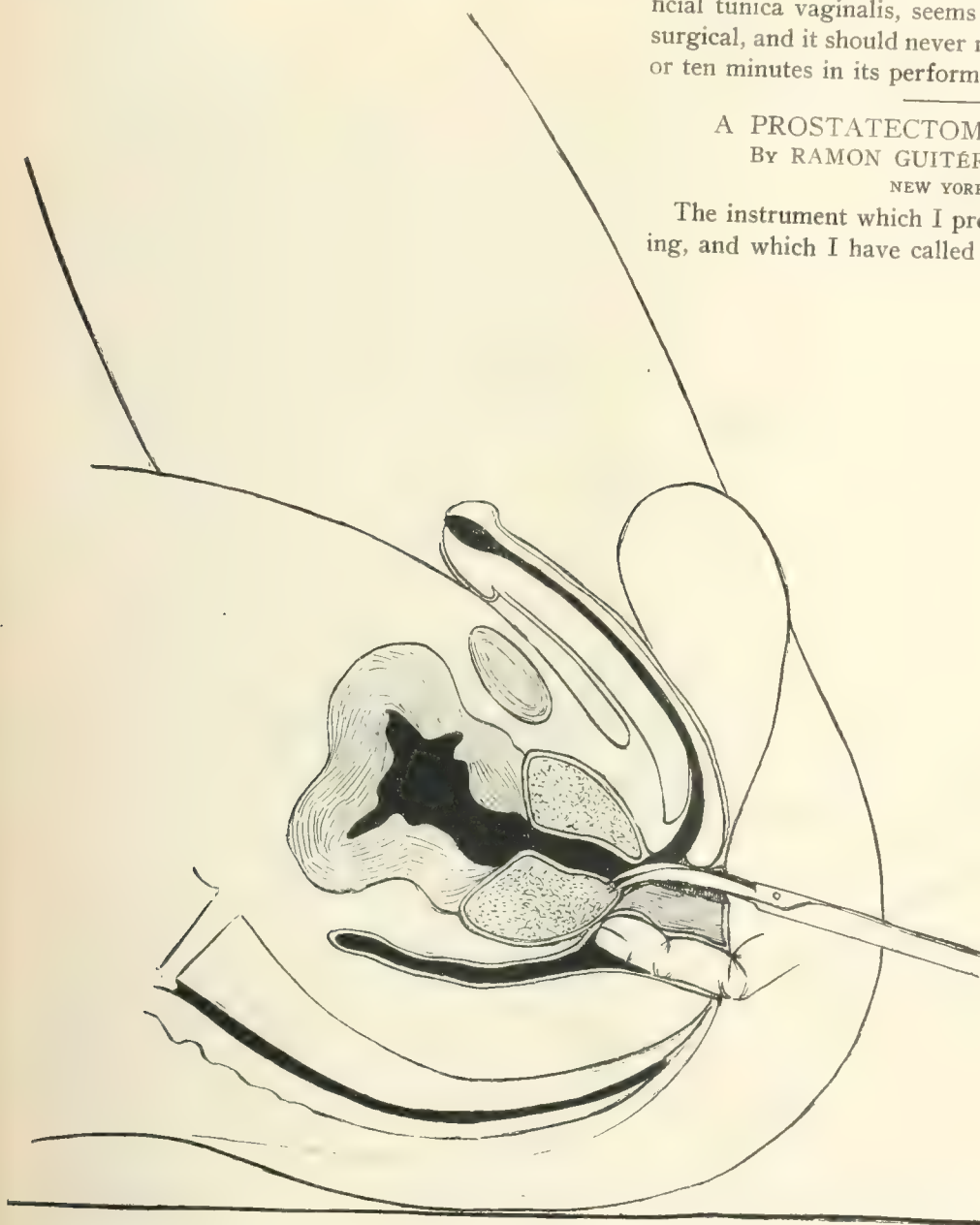
Of all the open methods as yet devised the method of von Bergmann, resection of the superficial tunica vaginalis, seems the best and the most surgical, and it should never require more than eight or ten minutes in its performance.

A PROSTATECTOMY FORCEPS.*

By RAMON GUITÉRAS, M. D.,

NEW YORK.

The instrument which I present to you this evening, and which I have called a "prostatectomy for-



O. A. Jan. 1902

FIG. 1. -Showing the manner of cutting through the floor of the prostatic urethra.

areas of calcification, it would also be absurd to expect a radical cure from two minims of carbolic acid in such a case. The cases that we have treated,

ceps," resembles very much an ordinary tongue for-

*Read before the Genito-urinary Section of the New York Academy of Medicine, February 19, 1902.

ceps, such as is used to catch the tongue and draw it forward during etherization. It has oval blades with fenestræ in the centre; their inner surface is serrated, the outer smooth, and they are about three quarters of an inch wide and an inch in length. The arms are separated so as to leave room for any part of a lobe to protrude between them, and it will thus be seen that, after a lobe of a prostate is grasped, there will be no unnecessary space taken up by the arms. The enucleating finger can therefore easily

I present with this forceps two illustrations. The first represents the manner of cutting through the floor of the prostatic urethra. The second shows how the forceps appears when *in situ*.

In cutting through the floor of the prostatic urethra my procedure is as follows:

1. Perineal urethrotomy.
2. Dilatation of the prostatic urethra by means of the Kollman dilator; then with the forefinger and sometimes with the thumb; then, after inserting the

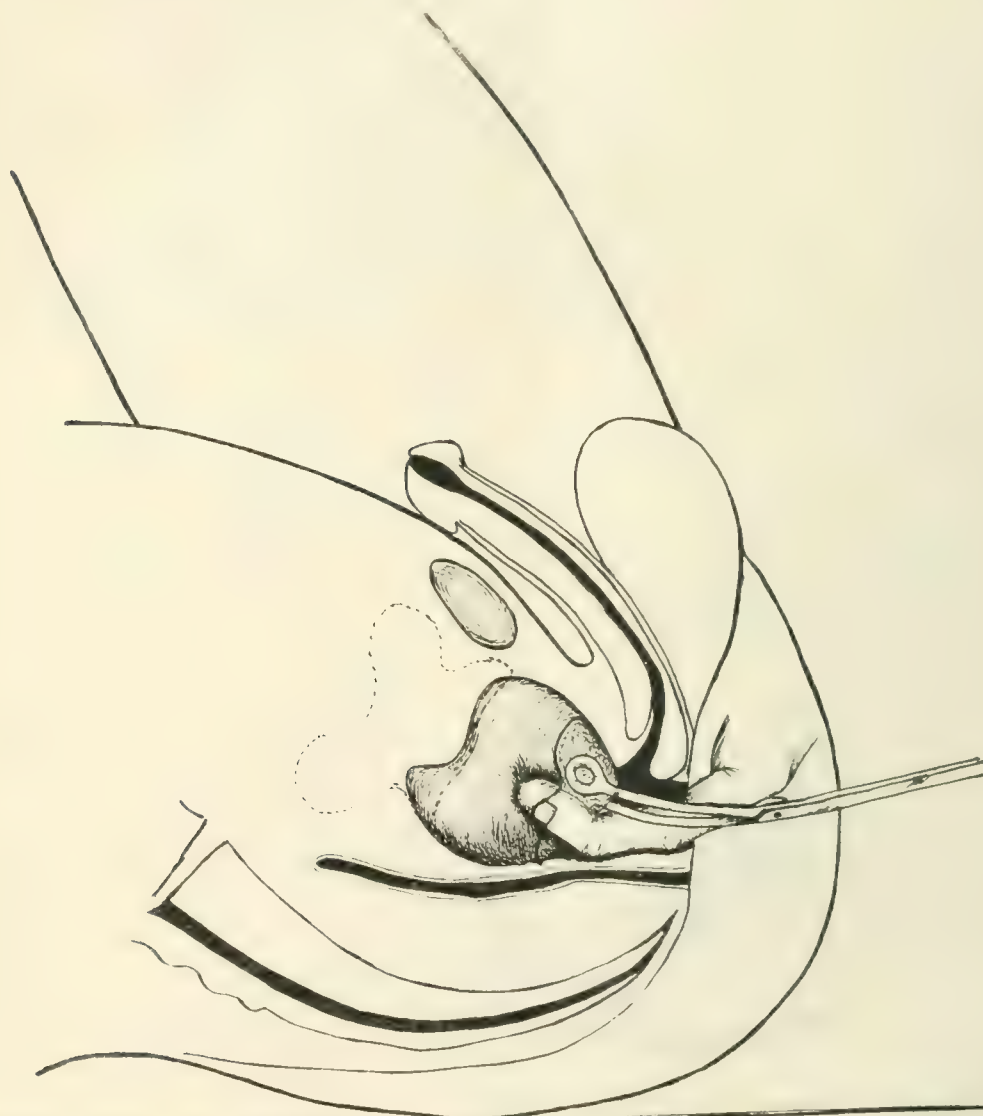


FIG. 2. Showing the forceps *in situ*.

work around the forceps, which holds the lobe without any interference. The handles are the same as those of an ordinary instrument of this class, with the exception that there are eight "catches" in its lock, which facilitates a firm grasp upon different-sized prostates, without crushing or tearing them, and allows of the use of any degree of pressure.

forefinger of the left hand into the rectum and placing it at the apex of the prostate, I pass a thin pair of sharp-pointed curved scissors into the perineal incision until their points have come in contact with the prostatic urethra. I then either cut through the floor or pass the points of the scissors through the mucosa and capsule at this point, and then spread

open the blades so as to tear the tissue at this point. It is now easy to insert the forefinger of one hand, usually the left, into this space, and, having made a few sweeps of the forefinger around the apex of the gland, the forceps can be pushed up alongside the finger and can grasp the lobe. Gentle traction is then exerted by the hand holding the forceps, while the forefinger of the other hand proceeds to sweep around between the gland and its capsule until the former has been loosened and removed. A similar enucleation is then performed on the other lobe, and if any middle lobe is present, it can be grasped by other forceps and removed.

In this way the prostatic urethra is injured less extensively than if it is split down vertically through the middle of its floor by a knife inserted into it. Besides, there is not so much danger of wounding the rectum by my method. It is important to remove the lateral lobes separately, even if the whole prostate can be removed *en masse*; for otherwise the entire prostatic urethra would come away with it.

It is easy to see that this forceps is better than those commonly used, for it is easy to introduce, and allows of the use of any desired degree of pressure upon the lobe, and it does not tear the gland or wound the finger, as does the volsella forceps, or mash or lacerate the prostate, as do some other varieties.

75 WEST FIFTY-FIFTH STREET.

HIPPUS.*

By RICHARD COLE NEWTON, M. D.,

MONTCLAIR, N. J.

CASE.—G. M., a patient of Dr. Lockwood, of Watscensing; aged forty-nine years, black negro; married; a driver; well developed. Has had pulmonary trouble for some months, probably years. Dr. Lockwood says that the patient has had an abscess of the left lung, which broke and discharged pus.

The man has been intemperate. He has not been subject to rheumatism. He has had several attacks of bronchitis or grippe; has probably suffered from syphilis, but no clear history of this is obtainable.

Present illness: Began three or four months ago with "dizzy-headed spells." He would reel and stagger and partly lose consciousness. These would pass off pretty quickly. Is not known to have fallen until a day or two before admission to the hospital. On this day he fell or sat down four times. The last time, he fell off his wagon and struck his head; was unconscious for about a half an hour, then regained consciousness for about ten hours. Complained first of pain over his left ear, then over the right temple. He was taken to his house, where, before the next morning, he had three hard convulsions. His temperature was 103° F., pulse 136. He was brought to the hospital the next day, and, after his arrival

there, had three more severe convulsions. He was more or less actively delirious between whiles, in spite of large doses of bromide. Bowels loose; evacuations copious and involuntary. No control over bladder; passed a good deal of urine, which, upon examination, contained albumin. Temperature, 101° F.; pulse, 112. Respiration, not recorded. Hearing blunted. Was evidently nearly or quite blind. He lay with his eyes closed and made some resistance, usually, to lifting up the eyelids. *When the eyes were held open the pupils dilated sometimes equally, sometimes not; one pupil might be at a pin-head size, the other dilated.* In the left eye there was an adhesion of the lower segment of the iris to the cornea; no nystagmus noted.

At first, the approach of light to the eyes caused him to draw back; and he would expostulate by swearing and demanding to be let alone. After full expansion, the pupils would slowly contract and then expand again. At times it seemed that this expansion and contraction was rhythmical, and not dependent upon the approach of the light (undulatory pupil, "hippus"); but after watching the case carefully, especially at first, I felt confident that the dilatation of the pupils was due to the stimulus of light. Afterward, the expansion and contraction went on more rapidly, the pupils not expanding so widely, and contracting more quickly. They would expand and contract several times in a minute, probably twenty times. I regret that an exact count was not made. The patient gradually became more violently delirious and uncontrollable, although he had no more convulsions after those already mentioned. He would drive an imaginary team of horses, and made so much noise that he had to be moved into a room by himself, where he was tied into his bed. Swallowing was unimpeded, and he would take whatever was offered him in a fluid form. He was ordered potassium iodide in ten-grain doses four times daily, soon increased to twenty and then thirty grains at a dose. Paraldehyde in half-drachm and then in one-drachm doses was administered every two hours. For the first two days this seemed to have no effect in quieting the delirium and producing sleep. Afterward, the patient became quieter, probably as much from the advance of the disease as from the drug. Toward the last of his sickness there was apparently some paralysis of the left arm and leg. From the first there had been complete abolition of the tendon reflexes and marked cutaneous anæsthesia. There was a horrid fœtor to the breath, so that any proximity to him was very unpleasant. Pricking the soles of the feet with a pin would scarcely cause any reflex movement; he might swear and grumble a little, but would scarcely attempt to move the feet, or to draw them away from the pin point. During the last two days of life swallowing became impossible, apparently from paralysis of the muscles of deglutition. The throat was filled with mucus and the patient was incapable of being roused by any effort. He would still mutter and move his head from side to side. The bowels now became sluggish, but could be moved by enemata. Plenty of urine was passed involuntarily. No emesis while in the hospital. He had markedly emaciated during his sickness. Owing to his delirium and violence no temperature record could be kept.

*Read before the Society of the Alumni of the City Hospital, New York.

He died quietly on February 1, 1896, thirteen days after his fall from his wagon.

Autopsy, Five Hours after Death.—Body that of a medium-sized muscular negro. Rigor mortis present, but not extreme. No abrasions or other marks of violence were noted on the body.

Head.—After the scalp had been stripped from the cranium, four red areas, of about the size of a silver quarter, were noted near the sagittal suture, and may have been caused by bruises. After the calvarium had been removed, a quantity of dark, fluid, almost tarry blood escaped, and more continued dripping from the brain, apparently from a number of vessels. The left side of the brain bulged out more than its fellow. As the dura was removed, a quantity of nearly black, partly organized, blood clot fell away, leaving a ragged cavity as large as half of a tennis ball in the cortical portion of the left temporosphenoidal lobe. Under the pia mater, extending over a considerable portion of the convexity of the right hemisphere, was a layer of gelatinous matter, three or four lines in thickness. The brain substance was softened so that it was impossible to remove it without breaking it down. No other gross lesion was observed in the cerebrum or cerebellum, except the ragged excavation already noted. The spinal cord below the medulla seemed to the touch unusually firm.

Thorax.—No pleuritic adhesions present. Both lungs were pale in color and streaked with pigment. They were both somewhat collapsed. At the apices exteriorly were noted areas of cicatricial tissue about as large as a fifty-cent piece, and beneath these were indurated masses of the size of a hen's egg. The mass in the left apex was somewhat larger and firmer than that in the right. These were apparently due to bronchial and peribronchial inflammation. The remainder of both lungs was normal in gross appearance, although pale and bloodless. Several of the bronchial glands were enlarged, indurated, and deeply pigmented. Some of them contained several small excavations, and also some purulent matter. The *pericardium* contained about an ounce of nearly clear serum. The *heart* was rather large, muscular tissue somewhat softened, the cavities filled with dark, fluid blood, and one large chicken-fat clot extended from the left auricle to the left ventricle. The valves were apparently competent and normal in gross appearance. In the ascending aorta were several small patches of atheroma. One or two of these projected into the lumen of the vessel and were sharp and rough to the touch.

Abdomen.—The *liver* was of good size, filled with dark blood; substance streaked with whitish areas. *Spleen* small and very soft, substance dark and almost fluid. *Pancreas.* Firm to the touch, otherwise normal in gross appearance. *Kidneys* of medium size. Capsules stripped easily. Vessels filled with dark fluid blood. Parenchymatous substance normal in gross appearance. The left suprarenal capsule was broken down. It was removed for examination. The *mesenteric glands* not enlarged. The *stomach* and *intestines* were apparently normal; they were inspected *in situ*, but not opened.

The *appendix vermiformis* was about four inches long and of the diameter of a crow quill. Its extremity was enlarged and reddened, and was surmounted by a tortuous vessel filled with dark blood.

The little vessels surrounding this club-shaped extremity were similarly engorged with dark blood. When opened, the extremity of the appendix contained several drops of purulent material and some fecal matter.

Bladder nearly empty; not opened.

Diagnosis.—Death was due to the pressure of an apoplectic clot upon the brain. The condition of the viscera was indicative of a long-standing and partially healed tuberculosis, and perhaps syphilis.

To me, and I presume to others, who saw this case in life, the most interesting phenomenon connected with it was the peculiar action of the pupils. As said above, it was not easy to determine whether the undulatory action of the irides was rhythmical and constant, irrespective of the stimulus of light, or not. But, after carefully watching the case, I concluded that this reaction was due to the approach of the light; or at least was very greatly augmented by it. As the case went on, and a state bordering upon coma supervened upon the active delirium, the rhythmical expansions and contractions of the irides seemed to become more constant, and perhaps independent of external stimulus. It was also noted that the pupils acted more nearly equally, and that the excursions were less extensive. This peculiar undulatory reaction is called, as you know, "hippus," and has been observed in various conditions of the eyes, and in blindness by Wenzel (Guépin, *Annales d'oculistique*, January, 1893).

As Guépin observes (*op. cit.*), this phenomenon was not noted by the exact writers of olden times, or at least it was not described.

Little (*Transactions of the Pennsylvania Medical Society*, 1884) reports meeting with one instance out of a thousand cases of disease in which he studied the pupillary symptoms. Meyer (Guépin, *op. cit.*) has observed it in albinos. It occurs in epilepsy, hysteria, meningitis, chorea, multiple sclerosis, and various central diseases of the brain (Damsch, *Neurologisches Centralblatt*, May, 1890), in which, after an apoplectic seizure, secondary spastic contractions appear in the paralyzed muscles. It is often, but not always, associated with nystagmus, and, from this association, Guépin conjectures that the term hippus arose, vertical nystagmus being easily compared to the trot of a horse.

Schmeicher tells us (*Deutsche medicinische Wochenschrift*, 1885), that, having noticed hippus in a soldier, he pronounced the man an epileptic, and this conjecture proved true.

He asserts that the symptom is somewhat common in women at the age of puberty, and is occasionally seen in healthy young men; never to his knowledge in the old.

After a somewhat extended research through the text-books and the periodical literature of the last ten years, I have found only one case of paradoxi-

cal reaction of the pupils, which was kindly pointed out to me by Dr. Starr. This is mentioned in Kniess's work, *The Eye in General Diseases* (edited by Dr. Noyes, William Wood & Co., 1895, p. 116). This case was reported in full by Oestreicher (*Berliner klinische Wochenschrift*, February 10, 1890), and occurred in a middle-aged man who presented syphilitic lesions, and who was at first believed to be suffering with progressive paralysis. The case, as recited, resembles so closely in some respects my own, that I will give the history in some detail.

The patient's nervous system was in a high degree disturbed. He did not know his name, or recognize his surroundings. He was very restless and noisy and became violently active. There were symptoms of paralysis of the speech and eye muscles. There were cutaneous and glandular syphilitic lesions. Urine clear and acid; it contained a trace of albumin, but no sugar. There were frequent vomiting, obstipation, and anorexia. The pupils were at first very narrow, contracted to the size of a pin head, and reacted neither to light nor to accommodation. There was no movement of the ciliary muscles. Eyeballs moved freely in every direction (nystagmus). The tongue could be tremulously protruded, and inclined somewhat to the right. Knee-jerk was not present. Movement of limbs could not be elicited by blows upon the quadriceps muscle. In a few days peculiar pupillary phenomena were observed. Upon the approach of light the pupils expanded to the size of a pea. There was present hemianopsia in both eyes. In the outer field of vision the line of demarcation was sharp, as though cut with a line through the point of fixation. No alteration in the structure of the eye-ground could be detected. Repeated observations were made. The reaction-phenomena changed often in their intensity. They were best seen when the eyes were fixed to distant accommodation with the sunlight full upon them. The reaction (dilatation) occurred promptly upon the application of light, but it was not easy to determine whether, in every instance, the pupil dilated without a previous contraction. This point was studied by various competent observers, who, for the most part, decided that the mydriasis was not preceded by meiosis. The reaction of the pupils to accommodation became normal. The hemianopsia remained unaltered. Under appropriate treatment the case gradually improved. The eye symptoms lasted for about four weeks, and then disappeared. When the case was reported the patient had returned to his home, in France, in good health.

There are certain marked differences between the case just related and my own. In the former, there was gradual amelioration and recovery; in the latter, an increase in severity and death, no treatment seeming to have any beneficial effect.

In Oestreicher's case the mydriasis appears to have been more permanent than in mine; in other words, it did not so nearly resemble "hippus." His patient, also, was at all times partly conscious; was not blind, and could exercise his ocular accommodation, except at the very first.

The diagnosis of syphilitic meningitis seems plain in this case. Oestreicher even ventures the conjecture that paradoxical reaction of the pupils may be pathognomonic of brain syphilis.

Dr. Starr informs me that Monti, of Vienna, used to teach that "hippus" was pathognomonic of tuberculous meningitis; but that more recent observations have shown that while "it is a sign of serious intracranial disease, it is not pathognomonic of any particular disease." This remark applies only to marked cases of "hippus," inasmuch as a moderate degree of the condition is not very uncommon. In fact, de Schweinitz, in his recent work on the eye, as well as in Dennis's *System of Surgery*, informs us that a slight degree of hippus is normal.

We have all probably observed the momentary contraction of the pupil which follows sudden and wide expansion in eyes to all appearance normal. The beautifully balanced mechanism of the eye must, like the delicately poised scale of the chemist, respond to a very slight stimulus. Naturally, on the other hand, the response to a powerful stimulus may be so great that over-dilatation may occur, which, again, leads to contraction slightly beyond the required point, and this may again be followed by slight dilatation, and so on. Why hippus is not more fully discussed it is hard to say; for one reason, undoubtedly, the pupils are not sufficiently studied clinically. It seems to be the custom in writing a clinical history, either to make no mention of the appearance and size of the pupils, or merely to note that they are normal or dilated, contracted or unequal, without attempting to determine to what degree they differ from the normal and without giving sufficient study to the changes which may take place in them. Unfortunately, also, the clinician may be embarrassed in his observations upon the pupils by want of knowledge of their usual state in the particular case before him. He may not, and probably does not, know whether the patient is myopic, or hypermetropic; whether he has, as a rule, large, small, or immobile pupils. Nor do these remarks apply only to the general practitioner. There is still much confusion in special treatises and in the teachings of learned men upon this difficult question. For instance, one or more of the few authorities I have cited, assert that inequality of the pupils never occurs in health, but de Schweinitz and Osler (*American Text-book, Theory and Practice of Medicine*), and no doubt others, assert that some perfectly healthy people have unequal pupils, as we should certainly expect them to have when we consider that a person may be myopic in one eye and hypermetropic in the other, etc.

To conclude:

In the words of Guépin, whom I have already freely quoted, hippus is a symptom whose value is

only poorly determined. New researches and new facts are necessary before we may write its history.

As observers improve, as more patience, more learning, and more devotion are developed among clinicians, more accurate and satisfying results will be obtained.

As to the anatomical and physiological explanation of this paradoxical reaction of the pupils, we are entirely in the dark. So far as my knowledge goes, no one has as yet attempted to elucidate this intricate problem.

DIABETES AND THE EYE.*

By S. BUSBY ALLEN, M. D.,

NEW YORK,

ASSISTANT SURGEON TO THE NEW YORK EYE AND EAR
INFIRMARY.

That every tissue and medium of the eye, its muscular, nervous, and vascular apparatus, has been attacked by diseases bearing a direct causal relation to diabetes, is well established. Some of these local manifestations of diabetes come early in the disease before lassitude, thirst, polyuria, etc., have called attention to the glycosuria present. They are thus of a diagnostic value. Others appear late in the disease, and are valuable as an aid to prognosis. The uveal tract is so highly organized, so delicate and sensitive, and so open to observation, that changes may be noted here before they can be detected in the coarser organs; for we must not forget that when one looks at the fundus of the eye one is looking at brain tissue, not at a mere expansion of the optic nerve robbed of the white substance of Schwann, but at real brain tissue having independent nerve centers.

Among the earlier affections, and one of the most valuable for diagnosis is nuclear ocular palsy, a loss of power of the ocular muscles. When the muscles external to the eyeball are affected, it is called ophthalmoplegia externa; when the muscles inside the eyeball, the sphincter iridis or ciliary muscles, are affected, it is called ophthalmoplegia interna. If the muscles both inside and outside are involved, we have a mixed, if one eye is affected, a single, if both eyes, a double ophthalmoplegia; while according to the severity of the affection, we have partial or total ophthalmoplegia. Thus, we have external, internal, mixed, single, double, partial, and total ophthalmoplegia. The muscles innervated by the third nerve are most frequently affected. The sixth and fourth nerves come next causing diplopia, always an alarming symptom to the patient. Sometimes the facial, and more rarely the levator palpebrarum, are involved. These paralyses are generally partial, and, if they

occur early in the disease, disappear in a few weeks, perhaps to recur later in the disease, when they are likely to remain, or at least not wholly to disappear. It cannot be said that they have a constant relation to the severity of the disease, for they occur when the disease is slight and when it is severe.

This is particularly true of paralysis and paresis of the accommodation, which come early in the disease and are generally partial, that is, the range of accommodation is restricted rather than abolished. This condition, occurring in persons less than thirty-five and increasing rapidly, should excite suspicion of glycosuria. In these cases the pupils are usually of normal size; and the pupillary reflexes are unaffected. Failure of vision for near work in diabetes, however, may not always be due to loss of accommodation. Diabetes will cause changes in the shape of the eyeball and changes in the lens that will so alter the refraction of the eye as to produce an acquired hypermetropia on the one hand or an acquired myopia on the other; and such changes taking place in a person of forty should put us on our guard. In case of myopia, the myopia may or may not be due to changes in the shape of the globe; it may be due to the crystalline lens having become cataractous. This is the most frequent effect of diabetes on the eye, and here we come to a fact very interesting and full of suggestion.

In comparing the toxic effect of diabetes with the toxic effect of the other toxic diseases, syphilis, nephritis, rheumatism, and with the effect of alcohol, tobacco, lead, carbon bisulphate, etc., we notice that some will cause a part, some will cause the whole, of the diseases caused by diabetes, except cataract; they will not cause cataract *per se*. Like diabetes, they will cause keratitis, iritis, cyclitis, neuritis, papillitis, retinitis, choroiditis, descemetitis, hyalitis, etc., but they do not directly cause cataract, while diabetes causes cataract more frequently than it does any other disease of the eye. It may even cause the lens to become cataractous and spare the rest of the eye. Noyes says: "The lens is never the seat of inflammation, and changes here are of the nature of degeneration."

The question then arises, What peculiar property is possessed by the poison of diabetes that enables it to attack, by preference, the lens, while to the poison of the other toxic diseases the lens is immune. Even syphilis, omnipresent in other parts of the body, is powerless against the lens. It may attack the outer works and so interfere with the nutrition of the lens, but the fact remains that the lens is never the seat of syphilitic inflammation. Zonular cataract and other forms of congenital cataract are thought to be due to inherited syphilis or scrofula, but it may be said that syphilis *per se* does not cause cataract. There is no marked difference in appearance between

*Read before the New York County Medical Association, January 20, 1902, and forming part of a "symposium" on Diabetes.

diabetic cataract and ordinary senile cataract, and we have to ascertain the presence of glycosuria before pronouncing it diabetic. Of course, cataract occurring in the very young and advancing very rapidly, ripening in a few weeks, and appearing simultaneously in both eyes, would almost certainly be diagnosticated as diabetic. But in the middle-aged and the old, the advance is slower, and its history would not lead us to suspect its nature. If cataract is of the nature of degeneration, as stated by Noyes and as generally accepted, then some cases of diabetic cataract stand by themselves; for it occasionally occurs that, the lens having become opaque, absorption takes place, the lens regains its transparency, and no degeneration of the lens fibres results. This singular fact, taken in conjunction with the fact that diabetes is the only toxic disease that causes cataract, provokes curiosity as to the ætiology of diabetic cataract. But, unfortunately, until a more thorough chemical analysis of the blood is made, we must content ourselves with speculation; and as speculations are proverbially cheap, we have abundance of them; thus, it has been suggested that the presence of sugar in the lens acts as an irritant on the nerve fibres, causing degenerative changes; again, that change in the chemical constituents of the aqueous and of the vitreous reacts upon the crystalline lens; and, again, that dehydration of the lens occurs by the loss of fluids from the tissues generally. But we forebear useless speculation; as yet no hypothesis has been advanced that will meet all cases.

The other diabetic diseases cannot be distinguished from inflammation due to other toxic diseases, except by the knowledge that glycosuria is present. For instance, the retinitis of Bright's disease resembles very closely diabetic retinitis, and they are very frequently associated. It occurs late in the disease, affects both eyes, is chronic in its course, does not invade the macular region so constantly as albuminuric retinitis does, the white patches are larger, and there are more hæmorrhages; very often hæmorrhages into the vitreous take place. Its presence always warrants a grave prognosis. Even in mild cases of diabetes it shows an advanced degenerative process in the tissue. In diabetic retinitis the papilla is not commonly affected, but we have an optic neuritis due to glycosuria. It is one of the early complications and is the usual cause of "diabetic" amblyopia, a grave symptom that presages the onset of coma.

Amblyopia, however, occurs sometimes where no inflammation of the nerve can be detected with the ophthalmoscope; here the inflammation is retrobulbar, or the trouble is central. In either case, the blindness may pass off under treatment or may vary according to the diabetic conditions. Complete loss of vision is very rare, but there will be a lowering of

visual acuity and central scotoma for color, particularly for red and green. This amblyopia resembles in all respects the amblyopia induced by the use of tobacco or alcohol. In both, there is defect of vision of varying degree, with central scotoma for red and green, and partially for white and for form. So close is the relationship that it has been maintained that these cases stood in a causal relation to tobacco, even when glycosuria was present. And it is probably true that sufferers from diabetes are especially susceptible to the toxic effects of tobacco. Sufficient evidence, however, has been accumulated to prove that diabetes will cause amblyopia without the aid of tobacco or alcohol, and when no other toxic disease is present.

In operating for cataract in diabetes, a favorable time when there is a lull in the disease should be chosen, and, though iritis is prone to follow the operation, it is not as a rule very severe, and usually yields to treatment. When iritis is not due to traumatism it is usually bilateral in diabetes, and is frequently associated with cyclitis; it is generally of a plastic type. There is, however, a purulent type in which we have a yellowish mucopurulent exudation into the anterior chamber. This exudate, however, does not contain bacteria, as there is not as a rule an intense inflammatory manifestation. This hypopyon is not likely to be large, and under treatment generally is completely absorbed, in which case vision is unimpaired. Sometimes this exudate is fibrous, and, blocking up the pupil, becomes organized into a pupillary membrane, attaching itself firmly on one side to the anterior capsule, and on the other side to the iris; an operation is then necessary to prevent secondary glaucoma. Secondary glaucoma may also be produced in another manner, when the accompanying cyclitis is severe and hæmorrhage takes place into the vitreous. The intensity of the cyclitis may also interfere with the nutrition of the vitreous. The cornea, like the lens, being without blood vessels and getting its nutrition by imbibition, is liable to suffer when the general nutrition is gravely interfered with. So when the disease has advanced or is very severe there is apt to be keratitis, often of a purulent and destructive character. A simple ulcer of the cornea in diabetes, as in nephritis, may lead to the speedy loss of an eye.

55 EAST EIGHTY-SIXTH STREET.

Therapeutical Notes.

Hypodermic Treatment for Amenorrhœa.—

Ιατρική πρόδος for January gives the following:

℞ Crystallized apiol. 20 parts;
Sterilized oil. 100 "

M.

One cubic centimetre (15 minims) to be injected *sub cute* daily.

An Ointment for Pruritus.—The *Gazette hebdomadaire de médecine et de chirurgie* for February 23d attributes the following formula to Brocq:

℞ Lanolin. 1 ounce;
 Petrolatum. 1½ "
 Menthol. 10 grains;
 Carbolic acid. 12 "
 Salicylic acid. 2 drachms;
 Zinc oxide. 5 "

M.

For Burns.—Dr. Héloin (*Bulletin des Sciences pharmacologiques; Revue médicale du Normandie*, January 25th) gives the following:

℞ Sodium naphtholate. 4½ grains;
 Essence of geranium, }
 Essence of origanum, } of each, 6 drops;
 Essence of verbenä, }
 Essence of thyme, }
 White petrolatum. 3 ounces.

M. Pour into wide-mouthed containers.

This unguent, while antiseptic, is non-irritant, and is well adapted for extensive skin wounds, as of burns.

[It is clear from the context, that true essence of origanum is here meant, and not the commercial essence of origanum, which is made from oil of thyme. Both products are included in this formula.]

For Chloro-anæmia.—According to *Progrès médical* for January 25th, a medical commission instituted to simplify the pharmaceutical service in the Vienna hospitals has adopted the following formula:

℞ Artemisine, }
 Crystallized quassine, } of each. . . 1/66 of a grain;
 Iron protoxalate. 1½ grain.

M.

For one lozenge. Four to be taken daily, two before each meal.

The artemisine and the crystallized quassine powerfully stimulate the muscular fibres of the stomach and intestine, which promptly shows itself by an immediate appetite, and affords the iron protoxalate an opportunity for speedy action on the blood corpuscles.

For Foul-smelling Feet.—The *Practitioner* for March says that a lotion made of one drachm of potassium permanganate to one pint of water is said to be very effectual in counteracting the odor of sweating feet.

An Antineuralgic Ointment.—The *Gazette hebdomadaire de médecine et de chirurgie* for February 27th ascribes the following to G. Menier:

℞ Extract of belladonna, }
 Petrolatum, } of each. . . . 180 grains;
 Powdered opium. 30 "
 Perfume, with essence of thyme. . . q. s.

M.

Rub in thrice daily; the frictions should last for from five to ten minutes and be desisted from so soon as the face blanches.

An Emmenagogue.—Dr. J. Wesley Bovée (*Virginia Medical Semi-monthly*, February 21st) in a paper recently read before the Medical Society of Virginia cites the following as a favorite preparation of Dr. Dewees:

℞ Tincture of iron perchloride. 6 parts;
 Tincture of cantharides. 2 "
 Tincture of aloes. 8 "
 Ammoniated tincture of guaiacum. . . 24 "
 Syrup. 58 "

M.

The usual dose of this mixture is a tablespoonful three times daily.

The cantharides in this mixture is often objectionable, and frequently the proportion of aloes has to be increased or reduced. Guaiac does occasionally cause abdominal pain and purging, when its employment should be temporarily suspended.

For Oxyurides.—*Médecine orientale* for March 10th ascribes the following to Delamare:

℞ Mercurial ointment. 1½ grain;
 Benzoated lard, }
 White wax, } of each. 7½ grains;
 Cacao butter. 30 "

M. For one suppository.

For Glaucoma.—Wicherkiewicz (*Klinisches Monatsblatt für Augenheilkunde*, July, 1901; *Polyclinique*, March 1st) recommends, in cases of sub-acute or chronic glaucoma, the instillation every evening of one drop of the following collyrium:

℞ Eserine sulphate. 15/100 of a grain;
 Pilocarpine hydrochloride. 3 grains;
 Cocaine hydrochloride. . . . 1½ grain;
 Distilled water. 150 minims.

M.

In acute accesses two instillations daily may be made.

For Flatulent Dyspepsia.—According to the *Practitioner* for March, the following may be useful in flatulent dyspepsia:

℞ Chloroform water, }
 Distilled water, } of each. 2 ounces.
 Peppermint water, }

M. Sig. One teaspoonful before meals.

For Ascarides.—*Progrès médical* for February 1st attributes the following formula to Comby:

℞ Santonica, }
 Corsican moss, } of each. 30 grains;
 Calomel. 3 "

M.

Divide into two powders and give one in the morning for two days.

It also ascribes this to Smith, of Moscow:

℞ Santonin. 3 grains;
 Oil of sweet almonds. 2 ounces;
 Tincture of santonica. 4 drops.

M. A tablespoonful twice daily.

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HARVARD'S NEW ENDOWMENT.

A twinge of jealousy on the part of us New Yorkers might be pardonable in view of the fact that so much New York money goes to swell the magnificent endowment of the Medical School of Harvard University, amounting to nearly \$5,000,000, but we sink any such sentiment in a feeling of joy that a medical school anywhere in the country has met with such good fortune, and we feel sure that most of us would prefer that it should be Harvard if it had to be any other than a New York school. Harvard is always thought of as associated with Morton's original demonstration of the practicability of surgical anæsthesia, with the delightful Holmes, with Bigelow's exposition of the mechanism of the hip joint, and with the same brilliant surgeon's elaboration of rapid lithotrity with evacuation. Surely there are few other teaching institutions, if there are any, whose men have so raised and sustained the prestige of our calling, and there is none that more thoroughly deserves to be furnished with all the resources that wealth can command.

We are confident that our Boston colleagues realize the tremendous responsibility that has been put upon them. They must speedily make the Medical School of Harvard University the world's greatest institution in the teaching of medicine, and it must become renowned above all others for research as well as for teaching. There is nothing to hinder them; the best men can be attracted from all parts of the country—from the world at large, for that matter—and laboratories, libraries, and clinics can readily be established on a scale hitherto hardly dreamed of. And the work of the school must not be confined to its material territory; commissions

of investigation will have to be sent out from time to time as occasion may arise, tropical medicine will have to be studied and taught, military medicine will have to be highly cultivated, and publications of a high order will have to be issued regardless of the possibility of their being made to "pay." All these things, we feel certain, will be amply provided for.

If we repress our envy of our Boston friends, we may at least indulge the hope that Harvard's good fortune may lead to benefactions on a like scale to the medical schools of the other great cities of the country. New York, Philadelphia, Chicago, and Baltimore already have schools handsomely endowed, but they must be still more richly provided for. Every great aggregation of people in the United States must have its medical school fitted to vie with all others in the cultivation of the grandest science known to man.

VIRCHOW'S RESPONSE.

When he tells us that some eight hundred telegraphic messages were among the congratulatory communications that were sent to him in connection with his eightieth birthday, we cannot wonder that Virchow finds it impracticable to make his acknowledgments otherwise than in print, and everybody will at once concede that the most suitable medium is the *Archiv für pathologische Anatomie und Physiologie und für klinische Medizin*, the great journal that he founded and of which for now more than half a century he has been preserved to be the editor. In conformity to this feeling, Virchow opens the first number of the 167th volume of that publication with an article of his own, entitled *Zur Erinnerung; Blätter des Dankes für meine Freunde*. In this response to the great concert of congratulation Virchow acquaints us with becoming pride with the numbers and nature of the world-wide testimonials of esteem received by him. It is safe to say that never before has a member of our profession been so universally honored for his professional achievements, and it may justly be added that never before has such widespread commendation been deserved.

Virchow seems to rate his deserts less as mere feats in science than as applications of scientific work to the common weal. In his devotion to sanitary work Rudolf Virchow stands preeminent, and the part he has played in politics—true politics, not

party chicanery—will forever stand as an admonition to the members of our profession that the function of a physician should never be restricted to work with the individual sick. The most plodding family doctor has it in his power to do something to advance the welfare of his community, and he is no ornament to his calling if he shrinks from taking some part in public affairs. Sanitation is getting to be more and more recognized as vital to the public interest, and the physician, who is the natural and the only capable cultivator of sanitation, falls short of his duty if he fails to make himself felt as a promoter of the public health.

"Virchow's *Archiv*," as we all familiarly term the *Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, must be continued in perpetuity as the fittest of all monuments to the memory of the great philosopher who has presided over it for all these years. We would not have even its green cover given up or Virchow's orthography in the least changed; let it always be to us a reminder of the great man who founded it, and let us wish him for his declining years "the peace that passeth all understanding."

"FACULTATIVE" STERILITY.

This term is applied by Ludwig Pincus (*Centralblatt für Gynäkologie*, February 22d) to sterility in women induced artificially by destroying the capacity of the endometrium as an organ of nidation. The procedure which he advocates for accomplishing this result is uterine atmocausis, the steam being applied for about a minute at a temperature of from 230° to 233.6° F., and the application repeated in three weeks if necessary. Two cases are reported in which the method was employed, and in neither of them has the menstrual flow ever recurred, although Pincus seems to admit the possibility that the cervical mucous membrane, which remained intact, may eventually take on a menstrual function. Obliteration of the uterine cavity does not necessarily take place, and it is properly regarded as undesirable that it should; when it does not, we may suppose that the resulting sterility is not absolute, for there is still a way open for the spermatozooids to reach the ova, and any form of extra-uterine gestation may be the consequence. Still, the approach to absolute sterility must be so close that practically the lack of completeness is negligible.

"Facultative sterility" strikes us as a convenient term to apply to the virtual sterility of women thus induced, and it strikes us, further, as a suitable term for the sterility of men brought about by occlusion of the vasa deferentia. But we must protest against the terms *castratio mulieris uterina* (the title of Pincus's article) and *castratio uterina atmocausica*. The procedure is not in any sense castration, although in one particular it practically accomplishes what is sometimes aimed at—under the misapplied name of castration—in excision of the ovaries. *En passant*, we may be allowed to remark that the removal of one testicle is not castration; hence the current expressions "single castration" and "double castration" are absurd. A man is not castrated unless he has suffered removal of all the testicles he ever had; there is no "single" or "double" about it.

But sterility is not necessarily the object of Pincus's operation, though it seems to have been in one of the two cases that he reports, that of a phthisical woman who had had alarming and most debilitating uterine hæmorrhage after the birth of each of her children. In the other instance the patient was weakened by chronic renal disease, and her debility was notably heightened by menorrhagia, so it was to put a stop to the menstrual capacity of the uterine mucous membrane rather than to prevent conception that atmocausis was resorted to. In each case the procedure was adopted in order to prolong life, and Pincus rightly insists that it is justified only by a vital indication; for any other purpose—for example, as a step in the carrying out of Malthusianism—he declares it to be reprehensible.

MORE MEDICAL LAWYERS.

In our issue for March 8th we announced the admission of Dr. William Oliver Moore to the Bar, and added that, so far as we knew, he was the only practising physician in New York who was qualified as an attorney and counsellor. Since then Dr. M. J. Burstein has informed us that he, too, although still in the active practice of medicine, was admitted to the Bar in 1898. Another practitioner has informed us that he also is a lawyer, and now we learn that Dr. A. E. Macdonald and Dr. Louis L. Seaman are members of the Bar. Both these gentlemen, as is well known, are still in the active pursuit of medicine. We are glad to learn that so many New York physicians are qualified in law also.

THE MANHATTAN STATE HOSPITALS FOR THE INSANE.

Among the results of recent legislation concerning the government of the New York State hospitals for the insane has been that of reducing the number of superintendents on Ward's Island from two to one, under whose care there are some 4,000 patients, manifestly too great a number to be cared for by any one man, no matter how many assistants he may have. It is to be hoped that, although the bill has received the governor's signature, this particular provision may yet be amended by the legislature or corrected by the State commission, which has power under the act to create new offices, reassign duties, etc. We are glad to learn that the New York Academy of Medicine, the Medical Society of the County of New York, the New York County Medical Association, and the Medical Association of the Greater City of New York have all passed resolutions expressing their objection to the provision as it stands at present.

SOME CURIOUS CONSEQUENCES OF A STAB IN THE NECK.

It is seldom that such curious events follow upon an injury as happened in a case reported by Giss (*Mittheilungen aus den Grenzgebieten der Medicin und Chirurgie*, viii, 4, 5; *Centralblatt für Chirurgie*, February 22d). A young man was stabbed in the back of the neck. The weapon penetrated deep between the sixth and seventh cervical vertebræ, the blade broke, and the portion broken off could not be withdrawn until three days after the blow had been dealt. Then a tremendous flow of cerebrospinal fluid was set up, saturating the dressings and the bedding. It amounted at first to from two to three quarts a day. The wound remained open for five weeks, and it is estimated that during that time the flow was at least thirty quarts. When the wound healed, the young man's character was observed to have undergone a change; from having been surly and irritable, he became obstinate and taciturn.

THE RIGHT TO PRACTISE IN THE STATE OF NEW YORK.

A Providence physician, writing on his own behalf and that of another practitioner, asks us if, in order to begin practice in the State of New York, they would have to undergo the State examination and pay the fee. To the best of our information, they would have to do so. We are continually receiving inquiries of this sort, and ordinarily we answer them by mail, but in this instance we cannot reply in that way because our correspondent signs his letter only with his initials.

News Items.

Society Meetings for the Coming Week:

TUESDAY, April 1st.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, April 2d.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, April 3d.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 4th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, April 5th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Dr. J. H. Girdner has been appointed by Governor Odell a trustee of the State Hospital for Incipient Tuberculosis, to succeed Norman S. Dike, who has been appointed sheriff of Kings county.

The American Association of Pathologists and Bacteriologists convened at Cleveland, Ohio, on March 28th for its second annual meeting. The programme covered two days and embraced some forty papers.

The Kansas City College of Physicians and Surgeons has bought the Simpson block, at Central and Simpson avenues, Kansas City, Kans., at a cost of \$15,000, and will probably utilize the entire building for college purposes.

A Physician Fined for Removing a Quarantine Notice.—A physician of Cincinnati has been fined \$25 and costs for interfering with the health department by removing an official notice of the presence of a case of diphtheria in his house. The patient, a child of the physician, has since died.

Malaria and Mosquitoes.—According to press telegrams from Tokyo, a series of military experiments have been carried out by the Japanese Government on the Island of Formosa, the results of which furnish a most conclusive demonstration of the relations between mosquitoes and malaria. A battalion of soldiers who were completely protected from mosquitoes for 161 days during the malarial season, escaped the disease entirely, whereas there were 259 cases of malaria in another battalion, in the place and during the same length of time, which was not protected from mosquitoes.

A Second Pan-Hellenic Medical Congress will be held, according to *Ἰατρικὴ Πρόσδος* for February, at Athens, in May, 1903. This is the natural consequence of the success that attended the first congress.

The Eastern Medical Society of New York City held its annual dinner at the Broadway Central Hotel Saturday evening, March 22d. The attendance was the largest in the society's history. After the dinner was served the following toasts were responded to: "Man and Mind," by Rev. Dr. G. Gottheil; "Our Specialties," by Dr. Emil Gruening; "Our Hospitals," by Dr. Arpad G. Gerster; "Our Sister Societies," by Dr. Parker Syms; "Our Own Society," by Dr. R. Abrahams. Dr. William S. Gottheil acted as toastmaster. The dinner was concluded by a dance.

The Chicago Health Department Wins a Gold Medal.—The health commissioner of the city of Chicago has received from the directors of the Buffalo Exposition a certificate awarding to the Chicago Health Department the gold medal on the exhibit of means used in sanitation and the handling of contagious diseases. The department had on view maps, charts, samples of the literature circulated by the department, specimens of the postal cards used, and other articles used by the department in its work against disease, and the superior jury was unanimous in giving the palm to the Chicago department. The department won a similar prize at the Paris Exposition. Many large cities made exhibits at the exposition.

Resolutions of the Board of Managers of the Manhattan State Hospitals.—The following resolution was adopted by the Board of Managers of the Manhattan State Hospitals at the meeting held on March 12th:

Resolved, That the thanks of the board be and are hereby extended to Dr. A. E. Macdonald, Dr. E. C. Dent, and Dr. G. A. Smith and their assistant superintendents and the physicians of the various hospitals, for the able, efficient and satisfactory discharge of the duties that have been committed to them, which the board recognizes as having conducted largely to the successful administration of its duties. The board recognizes the harmonious relations that have existed between the board and the various officers mentioned, from the time the board entered upon their duties in 1896 until the present time, and this deserved tribute is paid to them without any qualification or reservation whatever. The board desires to express, in parting with them, its best wishes for their continued success in their careers and regrets that such pleasant relations as have existed must of necessity be severed.

Changes at the Cook County (Ill.) Hospital.—The several Cook county (Chicago) institutions located at Dunning, Ill., have been the subject of investigation for some time past, all sorts of charges having been made as to the faulty methods pursued in the management of the institutions. Two of the recommendations formulated by the investigating

committee were the appointment of a medical director and of a superintendent of nurses. These recommendations have been carried out by the appointment of Dr. John R. Neely as medical director and of Helen Scott Hay as superintendent of nurses. The appointment of Dr. Neely will in no way affect the position of the general superintendent. It is intended to relieve the superintendent entirely of the responsibility for the medical management of the institutions, and in the future he will be able to devote himself entirely to the arduous duties of the business management. Dr. Neely is an Illinois man and was educated at the State University. He is a graduate of the medical department of Harvard University and of the University of Georgetown. He was among the first to take the Federal civil service examination, and for a number of years was in the office of the surgeon-general of the United States army. In 1897 he took the examination to enter the medical service of the city of Chicago, passing at the head of the list with an average of 98.76 against 141 physicians who took the test. Upon Dr. Garret's death he became acting chief medical inspector until the position was filled by the appointment of Dr. Spalding. To accept the medical directorship of Dunning, Dr. Neely resigns his connection with the city health department. He is a member of the Chicago Medical Society, of the Medical Society of the District of Columbia, of the American Medical Society, and of the Association of Military Surgeons.

Damage Suits in the St. Louis Tetanus Cases.—Michael and Lena Novack, by a suit filed in the Circuit Court, on March 15th, ask damages of the city of St. Louis, the board of health, Dr. Max Starkloff, Dr. Amand Ravold, and Dr. Hyman Brooks for the death of their son, Joseph, who, it is alleged, died from the use of poisoned antitoxine furnished by the city. Dr. Brooks, the petition states, attended the child, and was instructed to buy antitoxine other than that prepared by the city, but did not obey the request. The city, the board of health, and Dr. Starkloff are specifically charged with responsibility for the preparation and issuance of the impure serum.

John Fuerst brought suit against the city for damages for the death of his four-year-old daughter Flora from the administration of antitoxine. The city's attorney filed a demurrer reciting that the city is not responsible, for the reasons that the acts of the board of health in the matter were of a charitable nature, and that the city acted for the State, against which an action cannot be sustained.

Judge Fisher has handed down a decision in the Circuit Court upholding both contentions. He states there is no case exactly like this to be found in the statutes. The board of health, he states, is a charitable institution. It is not, he says, the duty of the municipality to protect and preserve the public health. Its action in the present instance, he states, was the exercising of a part of the sovereign power of the State, and it acted for the State. No pay was received for the antitoxine by the board of health. The State cannot be held liable for the acts of negligence of its officers,

nor can the city, acting for the State, be held liable for neglect of the board of health or its agents or employes. Fuerst's attorney contended that the city, in assuming the responsibility of caring for the public health, became responsible for any harm which might result.

The Marine-Hospital Service.—An adjustment has been reached between the Marine-Hospital Service and the medical fraternity of the country concerning the scope of that service. The announcement was made by Dr. Wyman, surgeon-general of the Marine-Hospital Service, at the session of the Senate Committee on Public Health, and was received with pleasure by all the members of the committee, before whom the controversy has been urgently pressed for many years.

Dr. Wyman's announcement was to the effect that the State boards of health had agreed to the following substitute for the seventh section of the bill introduced by Senator Perkins:

That when in the opinion of the surgeon-general of the United States health service the interests of the public health would be promoted by a conference with the State, Territorial, or District of Columbia boards of health or health authorities or on the application of five State boards of health or quarantine officers the surgeon-general of the United States health service is authorized to invite representatives of such State boards of health and quarantine officers to send delegates, not more than one from each State or Territory to said conference, and when thus convened said delegates shall be entitled to reimbursement for their necessary expenses of travel and maintenance not exceeding five days at the place of conference in accordance with such regulations as may be made by the Secretary of the Treasury.

The bill, which it is proposed to amend, changes the name of the United States Marine-Hospital Service to that of the United States Health Service, so as to make it more comprehensive. The section for which the substitute is offered originally gave to the Secretary of the Treasury exclusive control of the matter of calling conferences, and to this the boards of health object on the plea that in case of epidemic they should have a voice in the conduct of affairs.

Having heard this report, the committee indicated a willingness to report the bill, but some other amendments of the section were in dispute. Some of these amendments were accepted and others were referred to a sub-committee for more careful consideration. One of the changes in the amendment which was agreed to by the committee yesterday makes it obligatory instead of optional, as suggested, upon the surgeon-general to call a conference when a request for such conference is made by the boards of health of five States. There was, however, controversy over the point as to how general this conference should be, and this is the principal point to be determined by the sub-committee. Another amendment, which was agreed to, relieves the United States of all expense for such conferences.

Dr. Loeb Lectures on the Dynamics of Living Powers.—Dr. Jacques Loeb, of the University of Chicago, delivered a course of three lectures on vital phenomena at Columbia University last

week, in which he presented the results of his studies of the subject in an interesting and suggestive manner. In his first lecture he endeavored to show that the source of physical energy was chemical, in the second to show that protoplasm in liquid form was necessary for the manifestations of life, and that when coagulation took place the manifestations of life became impossible, and in the third lecture he discussed the question whether the forces that were active in protoplasmic motion were the forces characteristic of liquids. An active muscle that contracts produces heat with a very slight rise in temperature. This rise, however, is so slight that when thermodynamics came to be understood it was doubted whether heat could produce this mechanical action. How heat can bring about this muscular contraction is a problem. Some scientists say that the essential parts of muscles that do the work are solids, and that they contract on the application of heat. This is directly opposite to the theory advanced by Dr. Loeb, that for manifestations of life protoplasm must be in liquid. He points out that in certain winged insects there are a number of muscles that contract or relax more than one hundred times a second, so that if this contraction were caused by a rise in temperature the muscle must cool off, and the temperature rise again after each contraction. This would have to occur one hundred times a second and would be physically impossible. This heat hypothesis is, in Dr. Loeb's opinion, untenable. The source of energy in the muscles is, he believes, chemical and is transformed to surface energy, and this in turn is transformed to mechanical energy or motion energy that does the work. Dr. Loeb then went on to explain the way in which chemical energy was transformed to surface energy and this energy to motion energy. "We must prove," said Dr. Loeb in conclusion, "that if protoplasm must be in liquid to insure manifestations of life, there is no discrepancy in our theory of chemical, surface, and mechanical energies."

Meetings of National and State Medical Societies for the Ensuing Month.—Medical Association of the District of Columbia (semi-annual), Washington, April 1st; Tri-state Medical Society (annual), Chicago, April 3d and 4th; Texas State Medical Society (annual), Dallas, April 6th; Medical Society of the State of Tennessee (annual), Memphis, April 8th; Florida Medical Association (annual), Tampa, April 9th; Western Ophthalmologic and Oto-laryngologic Association (annual), Chicago, April 10, 11th, and 12th; Medical Association of the State of Alabama (annual), Birmingham, April 15th; Medical Society of the State of California (annual), San Francisco, April 15th; Medical Association of Georgia (annual), Savannah, April 16th; Mississippi State Medical Association (annual), Jackson, April 16th; South Carolina Medical Association (annual), Spartanburg, April 16th; Medical and Chirurgical Faculty of Maryland (annual), Baltimore, April 22d; Association of American Physicians (annual), Washington, April 29th and 30th; American Association of Genito-urinary Surgeons (annual), Atlantic City, N. J., April 29th and 30th.

Dr. M. D. Lederman has been elected adjunct professor of laryngology and rhinology at the New York Polyclinic School and Hospital.

Summer Sanitary Work.—The health commissioner of this city states that the special corps of 150 physicians who work among the children of the tenements during the summer will begin work on June 15th this year, which is a month earlier than has heretofore been customary.

The Tri-state Medical Society of Iowa, Illinois, and Missouri will meet at the Great Northern Hotel, Chicago, on April 3d and 4th. Dr. J. C. Murphy, of St. Louis, is president of the association, and Dr. W. B. La Force, of Ottumwa, Ia., secretary. The printed programme includes the titles of some forty papers.

Vaccination in New York City.—The vaccination returns for the week ending March 26th were 34,000 for Manhattan, and it is estimated by the board of health that the returns from the other boroughs will bring the total up to 47,000. This is as against 41,000 for the previous week, and is the high-water mark.

The Health of the Army in the Philippines.—Surgeon-General Sternberg has received the health report of the military division of the Philippines for the month ending January 15th. It is signed by Colonel B. F. Pope, chief surgeon, who died a few days after making the report.

The strength of the command on January 15th was estimated at 41,116 and the percentage of sick was stated as 6.16 per cent. There were 2,534 cases of sickness, and during the month 59 deaths. The sick and death report shows a decrease over that of the preceding month.

Increase of Insanity in Indiana.—The rapid increase in the number of insanity cases in Indiana is calling for large additions to the four asylums. At the Northern Indiana Hospital, at Longcliff, 200 rooms were added in the last eighteen months. All of these are filled but seven, and there are many more than enough cases in the counties from which that institution draws to fill the seven. At least 100 more rooms are urgently demanded there. About 100 epileptics at Longcliff ought to be provided with separate quarters, and an effort to get the legislature to make the necessary appropriations will be made. Practically the same conditions are said to prevail in the other asylums.

The New York Academy of Medicine.—A stated meeting will be held on Thursday evening, April 3d, at 8 o'clock. The following papers will be presented: The Modern Treatment of Fractures of the Lower End of the Radius as It is Dictated by the Relations Shown by the Röntgen Rays, by Dr. Carl Beck; The Common Error in Treating Fractures of the Lower End of the Radius, by Dr. I. B. Roberts, of Philadelphia. Papers on the same subject will be presented by Dr. E. M. Foote, of the Vanderbilt Clinic, and by Dr. F. L. Taylor, of the Hudson Street Hospital

out-patient department. The method of treatment used at the New York Hospital out-patient department will be described by Dr. B. T. Tilton, and that used at the Roosevelt Hospital out-door department by Dr. W. C. Clarke and Dr. J. P. Fiske.

Compromise with Osteopaths in Ohio.—It is reported that the State Board of Medical Registration and Examination and the osteopaths of the State have agreed to compromise on the legislation asked of the general assembly by the men of the two schools. The osteopaths will not insist upon the passage of their bill to create a State board for the examination of osteopaths, and the State Medical Board has agreed not to oppose an amendment to the Love law, to provide for the appointment by the State board of a commission of three osteopaths to examine candidates of their own school. All these applicants will be examined by the State board in anatomy, physiology, and physical diagnosis. The preliminary qualifications for admission to examination are to be left unchanged.

A Post-graduate Course at the University of Pennsylvania.—Beginning on April 28th, the University of Pennsylvania will open a spring course in medicine, designed especially for practitioners, but open also, in the laboratory courses, to advanced students in medicine. It embraces almost the entire curriculum of medicine, and has been devised to meet the requirements of a wide group of practitioners and students of medicine. The course will extend over a period not exceeding six weeks. The laboratory course will begin on April 28th and close on June 14th, and the clinical course will begin on May 12th and close on June 28th. This arrangement will permit the anticipation of clinical courses by work in the laboratories and concentration, toward the conclusion of the term, upon the clinical branches.

Hospital Buildings and Endowments.—It was announced recently that the Hartford Hospital had a debt of \$74,800, and popular subscriptions were started to pay it off. When \$40,000 was realized, J. Pierpont Morgan, who is a native of the city, offered to give \$25,000 if the other \$50,000 was raised before January 1st. The amount has been completed and Mr. Morgan has made his gift of \$25,000.—At a recent meeting of the alumnae of the Women's Medical School of the Northwestern University at the Sherman House, Chicago, it was decided to establish a hospital to perpetuate the memory of the school that has been sold by the Northwestern University. The new hospital will be entirely under the management of women physicians. All the different branches of medicine, including surgery, will be practised. Alumnae of the school which has been sold will act as its physicians. No man can enter this hospital except as guest, janitor, or patient. There will be an advisory board composed of women also. This board will probably be formed largely of the alumnae who live outside of Chicago.—The lowest bid received for the erection of a new contagious ward to be added to the City and County Hospital at St. Paul was offered by

a firm which does not employ union labor, and as a consequence there has been considerable comment in local labor circles.—Under the will of Mrs. Laura Currier, widow of Nathaniel Currier, the Presbyterian Hospital, of New York, is to receive \$5,000 for a free bed, in memory of Nathaniel Currier, to be called the Nathaniel Currier bed; the New York Society for the Relief of the Ruptured and Crippled, \$5,000 for a free bed, to be called the Walter Currier bed, and the Home for Old Men and Aged Cripples, \$5,000 in memory of Nathaniel Currier.—The new addition to the Norton Memorial Infirmary, at Louisville, Ky., representing a year's work on the part of all concerned with the institution and the expenditure of over \$70,000, was thrown open to the public on March 6th. The building itself is of red brick and four stories high. The dimensions are 140 feet by 75 feet, while it is joined to the old infirmary by a wing seventy-five feet long. The addition contains fifty rooms.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 22, 1902:

DISEASES	Weekend'g Mar. 15		Week end'g Mar. 22	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	22	6	21	6
Scarlet fever.....	360	26	351	33
Cerebro-spinal meningitis.....	0	5	0	4
Measles.....	850	18	814	25
Diphtheria and croup.....	327	38	350	39
Small-pox.....	65	11	66	13
Tuberculosis.....	243	163	265	170

Army Intelligence.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending March 22, 1902:

ASHBURN, JAMES K., Contract Surgeon, is granted leave of absence for one month, to take effect on or about April 1st.

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon, will proceed to Fort Totten, New York, for duty.

CURRY, JOSEPH J., Contract Surgeon, will report to the commanding officer of the United States General Hospital, Fort Bayard, New Mexico, for duty.

DE NIEDEMAN, WILLIAM F., Major and Surgeon. The leave of absence granted him is extended one month on account of sickness.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon, is granted leave of absence for two months.

GARDNER, FLETCHER, Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

HICKS, GEORGE L., Contract Surgeon, is relieved from temporary duty at Fort Totten, New York, and will proceed to San Francisco for transportation to the Philippine Islands.

ROBERTS, WILLIAM M., First Lieutenant and Assistant Surgeon, will proceed to Fort Sill, Oklahoma, for duty.

STEWART, WILLIAM J. S., Captain and Assistant Surgeon, will report to the commanding general, Department of the East, for duty with recruits or troops that may be sent to San Francisco, for temporary duty and assignment to duty on a Government transport when a vacancy occurs.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending March 21, 1902:

Smallpox—United States.

Alabama...	Birmingham...	Feb. 1-28...	12 cases	
California...	Los Angeles...	Mar. 1-8...	1 case.	
"	Sacramento...	Mar. 1-8...	1 case.	
"	San Francisco...	Mar. 2-9...	6 cases.	
Colorado...	Denver...	Mar. 1-8...	5 cases.	
Florida...	Jacksonville...	Mar. 8-15...	9 cases.	
Illinois...	Belleville...	Mar. 8-15...	2 cases.	
"	Chicago...	Mar. 12-19...	7 cases.	
Indiana...	Elkhart...	Mar. 8-15...	1 case.	
"	Evansville...	Mar. 8-15...	4 cases.	
"	Indianapolis...	Mar. 8-15...	13 cases.	
"	Michigan City...	Mar. 10-17...	1 case.	
"	Terre Haute...	Mar. 8-15...	2 cases.	
Iowa...	Clinton...	Mar. 1-8...	3 cases.	
Kansas...	Wichita...	Mar. 8-15...	2 cases.	
Kentucky...	Covington...	Mar. 8-16...	11 cases.	
"	Lexington...	Mar. 8-15...	1 case.	
Louisiana...	New Orleans...	Mar. 8-15...	3 cases imported.	
Maine...	Portland...	Mar. 8-15...	2 cases.	2 deaths.
Maryland...	Baltimore...	Mar. 8-15...	1 case.	
Massachusetts...	Boston...	Mar. 8-15...	21 cases.	4 deaths.
"	Cambridge...	Mar. 8-15...	5 cases.	
"	Chicopee...	Mar. 8-15...	1 case.	
"	Haverhill...	Mar. 8-15...	1 case.	
"	Holyoke...	Feb. 22-Mar. 15...	25 cases.	
"	Malden...	Mar. 1-15...	2 cases.	
"	Newburyport...	Mar. 8-15...	2 cases.	1 death.
"	Somerville...	Mar. 8-15...	1 case.	
Michigan...	Detroit...	Mar. 8-15...	6 cases.	
"	Ludington...	Mar. 1-15...	13 cases.	
Minnesota...	Minneapolis...	Mar. 8-15...	29 cases.	
Montana...	Butte...	Mar. 2-9...	1 case.	
Nebraska...	Omaha...	Mar. 8-15...	45 cases.	
"	South Omaha...	Mar. 8-15...	80 cases.	1 death.
New Jersey...	Camden...	Mar. 8-15...	3 cases.	
"	Newark...	Mar. 8-15...	32 cases.	6 deaths.
New York...	Binghamton...	Mar. 8-15...	1 case.	
"	New York...	Mar. 8-15...	65 cases.	11 deaths.
"	Yonkers...	Mar. 7-14...	1 case.	1 death.
Ohio...	Chillicothe...	Mar. 8-15...	2 cases.	
"	Cincinnati...	Mar. 7-14...	25 cases.	
"	Cleveland...	Mar. 7-14...	3 cases.	
Pennsylvania...	Allegheny City...	Mar. 8-15...	6 cases.	
"	Lebanon...	Mar. 8-15...	2 cases.	
"	Norristown...	Mar. 8-15...	1 case.	
"	Philadelphia...	Mar. 8-15...	53 cases.	6 deaths.
"	Pittsburgh...	Mar. 1-15...	9 cases.	
Rhode Island...	Providence...	Mar. 8-15...	1 case.	
"	Warwick...	Mar. 7-14...	2 cases.	
Tennessee...	Memphis...	Mar. 8-15...	14 cases.	
Texas...	San Antonio...	Feb. 1-28...	9 cases.	
Utah...	Salt Lake City...	Mar. 8-15...	1 case.	
Washington...	Tacoma...	Mar. 2-9...	9 cases.	1 death.
Wisconsin...	Green Bay...	Mar. 9-16...	5 cases.	
"	Milwaukee...	Mar. 8-15...	2 cases.	

Smallpox—Insular.

Porto Rico. Ponce... Mar. 3... Several cases reported

Smallpox—Foreign.

Austria...	Prague...	Feb. 15-Mar. 1...	11 cases.	
Belgium...	Antwerp...	Feb. 15-Mar. 1...	34 cases.	8 deaths.
Brazil...	Pernambuco...	Jan. 15-31...	65 cases.	65 deaths.
Canada...	Halifax...	Mar. 8-15...	1 case.	1 death.
"	Quebec...	Mar. 8-15...	20 cases.	1 death.
Colombia...	Panama...	Feb. 24-Mar. 10...	15 cases.	15 deaths.
France...	Paris...	Feb. 22-Mar. 1...	2 cases.	2 deaths.
"	Rheims...	Dec. 1-8...	1 case.	
"	Roubaix...	Feb. 1-28...	1 case.	1 death.
Great Britain:				
England...	Liverpool...	Feb. 22-Mar. 1...	6 cases.	
"	Liverpool...	Mar. 1-8...	27 cases.	
"	London...	Feb. 15-Mar. 1...	1,881 cases.	139 deaths.
"	Sheffield...	Feb. 22-Mar. 1...	1 case.	
Scotland...	Dundee...	Feb. 22-Mar. 1...	7 cases.	
"	Edinburgh...	Feb. 15-22...	1 case.	
"	Glasgow...	Feb. 28-Mar. 7...	22 cases.	10 deaths.
India...	Bombay...	Feb. 11-18...	8 deaths.	
"	Calcutta...	Feb. 8-15...	2 deaths.	
"	Karachi...	Feb. 9-16...	2 cases.	1 death.
Italy...	Rome...	Jan. 11-18...	1 case.	1 death.
Mexico...	Mexico...	Mar. 2-9...	3 cases.	1 death.
Russia...	Moscow...	Feb. 8-22...	18 cases.	12 deaths.
"	Odessa...	Feb. 15-Mar. 1...	1 case.	
"	St. Petersburg...	Feb. 8-15...	7 cases.	1 death.
Uruguay...	Montevideo...	Feb. 5...	32 cases.	

Yellow Fever.

Dutch Guiana.	Paramaribo...	Jan. 1-31...	5 cases.	2 deaths.
Mexico...	Vera Cruz...	Mar. 1-8...	8 cases.	4 deaths.

Cholera.

India...	Bombay...	Feb. 11-18...	6 deaths.	
"	Calcutta...	Feb. 8-15...	61 deaths.	

Plague.

India...	Bombay...	Feb. 11-18...	663 deaths/	
"	Calcutta...	Feb. 8-15...	120 deaths.	
"	Karachi...	Feb. 9-16...	60 cases.	47 deaths.
Japan...	Nagasaki...	Mar. 13...	Present.	

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending March 20, 1902

- BAILHACHE, PRESTON H., Surgeon. Granted leave of absence for five days from March 13th, under paragraph 179 of the Regulations.
- CUKRIE, D. H., Assistant Surgeon. Relieved from duty at the Hygienic Laboratory, to take effect March 29th.
- HARRIS, B. Y., Acting Assistant Surgeon. The leave of absence granted him for fifteen days by the Department letter of February 19th, is revoked.
- HOBBS, W. C., Assistant Surgeon. Detailed as inspector of unserviceable property at Savannah Quarantine.
- HOLT, J. M., Assistant Surgeon. Granted leave of absence for seven days from March 14th.
- MAGRUDER, G. M., Surgeon. Granted extension of leave of absence, on account of sickness, for one month from February 22d.
- MCCORMAC, J. F., Acting Assistant Surgeon. Granted leave of absence for fifteen days from March 28th.
- PARKER, H. B., Assistant Surgeon. To proceed to Mobile, Alabama, for special temporary duty.
- RICHARDSON, T. F., Assistant Surgeon. To proceed to Philadelphia for special temporary duty.
- RUSSELL, H. C., Assistant Surgeon. Granted leave of absence for five days from February 13th, under paragraph 181 of the Regulations.
- WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for five days from April 8th.
- WETMORE, W. O., Acting Assistant Surgeon. Granted leave of absence for fourteen days from April 3d.
- WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Lincoln, Nebraska, for special temporary duty.
- WHITE, M. J., Assistant Surgeon. Relieved from duty at the Marine Hospital, San Francisco, and assigned to special duty at San Francisco from March 19th.

Appointments.

- WALTER L. SAVAGE, of New York, appointed acting assistant surgeon for duty at Buffalo, March 18th.
- ALBERT F. STUART, of Maine, appointed acting assistant surgeon for duty at Portland, Maine, March 18th.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 22, 1902:

- DICKSON, S. H., Medical Inspector. Commissioned a medical inspector from January 26, 1902.
- FEREBEE, N. M., Medical Director. Commissioned a medical director from January 26, 1902.
- GROW, E. J., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from June 8, 1901.
- OMAN, C. M., Assistant Surgeon. Detached from the *Constellation* and ordered to report to the commandant of the Marine Corps, Washington, to accompany a detachment of marines to the Asiatic Station.
- PARKER, E. G., Passed Assistant Surgeon. Commissioned a passed assistant surgeon from January 10, 1902.

Births, Marriages, and Deaths.

Married.

REYCRRAFT—CORNELL.—In South Bend, Indiana, on Wednesday, March 19th, Dr. John J. Reycraft, of Petoskey, Michigan, and Miss Metta J. Cornell.

Died.

BISHOP.—In Brentwood, N. Y., on Sunday, March 16th, Dr. Henry M. Bishop, of Brooklyn.

CHURCH.—In New York, on Monday, March 24th, Dr. Eloise I. Church.

CLARKE.—In San Francisco, on Monday, March 10th, Dr. John J. Clarke, in the fifty-eighth year of his age.

CUTTS.—In St. Paul, Minnesota, on March 20th, Dr. Rollin E. Cutts, in the thirty-fifth year of his age.

ELLEGOOD.—In Laurel, Delaware, on Saturday, March 22d, Dr. Robert Ellegood, in the seventy-fourth year of his age.

EVANS.—In Malden, Massachusetts, on Thursday, March 20th, Dr. Reuben O. Evans, in the forty-second year of his age.

GILLMER.—In Philadelphia, on Monday, March 17th, Dr. Mauricio W. Gillmer, in the fortieth year of his age.

GOODELL.—In Lynn, Massachusetts, on Wednesday, March 12th, Dr. J. W. Goodell, in the seventy-second year of his age.

JOHNSTON.—In Washington, on Saturday, March 22d, Dr. William Waring Johnston, in the fifty-ninth year of his age.

LEVINGSTON.—In San Francisco, on Friday, March 14th, Dr. Marc Levingston, in the forty-fourth year of his age.

LOELING.—In Philadelphia, on Sunday, March 23d, Dr. Gerhard Loeling, in the sixty-ninth year of his age.

MORGAN.—In Oshkosh, Wisconsin, on Sunday, March 10th, Dr. L. H. Morgan, in the fifty-second year of his age.

NICHOLS.—In Hamilton, N. Y., on Tuesday, March 18th, Dr. Harry F. Nichols, in the thirty-fifth year of his age.

OLIVER.—In Saranac Lake, N. Y., on Tuesday, March 18th, Dr. Edward S. Oliver, in the thirtieth year of his age.

RICHARDSON.—In Brooklyn, on Sunday, March 23d, Dr. John E. Richardson, in the fifty-first year of his age.

SKILLMANN.—In Lexington, Kentucky, on Friday, March 21st, Dr. Henry Martyn Skillman, in the seventy-eighth year of his age.

SMITH.—In Clyde, N. Y., on Tuesday, March 11th, Dr. Jarvis E. Smith.

STAFFORD.—In Washington, on Monday, March 17th, Dr. John J. Stafford.

THOMPSON.—In Seattle, Washington, on Saturday, March 22d, Dr. F. H. Thompson, United States service.

OBITUARY NOTES.

DR. JOHN E. RICHARDSON died at his residence, in Brooklyn, on March 23d, at the age of fifty-one. Dr. Richardson was born in this city, was educated in Brooklyn, and graduated from the College of Physicians and Surgeons in 1877. After spending a year and a half in the Brooklyn Hospital, he went to Europe, studying in the hospitals of Vienna, Berlin, and London. He entered upon the practice of his profession in Brooklyn in 1880. He served for five years as police surgeon and had also held appointments as surgeon to the Brooklyn Orthopædic Infirmary, physician to the Sheltering Day Nursery, the Baptist Home, and surgeon to the Long Island Railroad Company. He was a member of various medical organizations. The immediate cause of his death was a cancer on his neck.

DR. W. W. JOHNSTON, of Washington, D. C., died at Atlantic City, N. J., on March 22d, at the age of fifty-nine. He was born in Washington and graduated from the medical department of the University of Pennsylvania in 1865. Since 1871 he has been a member of the faculty of the medical department of Columbian University, occupying the chair of clinical medicine at the time of his death. He took an active part in the affairs of both the local and the national medical associations and was a frequent contributor to current medical literature.

Pith of Current Literature.

*Journal of the American Medical Association,
March 22, 1902.*

The Prostate. By Dr. John B. Murphy.—(*To be continued.*)

Prolonged Intubation. By Dr. Edwin Rosenthal.—Intubation of the larynx has taken the place of tracheotomy in the treatment of diphtheria. It is now used to a greater extent than ever before. Those best versed in its use should define certain rules of practice, and these should be sufficiently plain for a novice to follow. The rule the author lays down is: The tubes should be clean; if metal, they should be regilded; if rubber, a new one should be provided for each case; if the tubes are smooth, clean, and correctly applied, the greatest part of the operation is attained, and that is a clean, smooth surface, undefiled, which can remain in the larynx a week, or even two, and do no harm. Hence, if the intubation is prolonged, the reason will be found in the type of the disease, and not in any fault of the operator.

An Operation for Spina Bifida, with Report of a Successful Case. By Dr. Leonard Freeman.

Case of Thomas B. Boden, the Consumptive Irish Immigrant; Its Medical, Sociological, International, and Humanitarian Aspect. By Dr. S. A. Knopf.—The author expresses the hope that the wise judges of the Supreme Court, who, it is to be hoped, will soon be called upon to consider this matter, may view the case in all its aspects and decide it in the light of our present knowledge, which makes the consumptive, not a hopelessly ill individual, afflicted with a dangerously contagious disease, whose contact we have to fear, but one only suffering from a communicable, easily preventable, and in many instances very curable, disease.

The Use of Tropococaine in Spinal Anæsthesia. By Dr. William P. Illing.

Our Hospitals. By Dr. H. D. Niles.—The author puts a few pertinent questions. How shall the financial and professional relations between our hospital men and our general practitioners be so adjusted that all may be interested in the welfare and participate in the benefits of specialized hospital work? There is no reason why the Code of Medical Ethics should not extend to hospital men. Shall there be a place in the hospital of the future for the general practitioner, and shall the specialist have any place out of it? Do we not need more hospitals and fewer colleges; better doctors and fewer graduates? Is it not about time that the professional mind began to dominate in the control of these institutions?

A New Method of Dealing with Bowel Perforations Communicating with Pelvic Abscesses. By Dr. Thomas W. Huntington.

A Case Illustrating Plastic Surgery of the Eyelids. By Dr. Cassius D. Wescott.

The X Ray in Determining the Limits of the Frontal Sinus. By Dr. John Harold Philip.

Two Uncommon Cases of Nasal Tumors. By Dr. Richmond McKinney.

Medical Record, March 22, 1902.

Are Vessels Infected with Yellow Fever? Some Personal Observations. By Dr. Henry R. Carter.—The author's observations indicate that vessels infected with yellow fever have not been rare, at least at Southern quarantine stations. The number of such vessels, however, has greatly diminished since the year 1893. According to the author, the diminution of the number of infected vessels reaching United States ports is due mainly to the sanitary measures for avoiding exposure to infection in the foreign port, and to the substitution of steam for sailing vessels. To some degree the falling off of the vessels from Brazilian ports is also a factor. A case of yellow fever developing on board a vessel plying between southern ports of the United States and the tropics will probably infect the vessel, so that other cases can, if time is given, be contracted aboard her. When such vessels are short-trip vessels, not more than ten or twelve days *en route* after the occurrence of the case of yellow fever, they will, as a rule, be disinfected at Southern quarantine stations before any other cases have been contracted.

Pathology of Appendicitis, with Special Reference to Foreign Bodies in the Appendix. **New Surgical Points.** By Dr. J. Coplin Stinson.—The author concludes that, as appendicular inflammation is strictly a surgical disease, the earlier it is operated upon, the better, especially as the mortality for early operations is *nil*. The appendix should be removed during all appendicular operations, provided irreparable damage is not done in attempting to find or remove it. Where there is a local or general infection the abscess cavities should be freely opened, all pus shreds, etc., cleaned out, all pathological omentum excised, and all pathological intestines and infected portions of the abdomen should be freely irrigated with hot saline solution until the fluid comes away clear; the intestines, etc., are then dried with sponges and returned to their normal positions. Fæcal concretions are more frequent than foreign bodies as exciting causes. Operations, such as for appendicular inflammation or somewhat similar ones, *i. e.*, those involving laparotomy, can be as readily, quickly, safely, and cheaply performed at the patient's home as elsewhere.

The Disadvantages of Gauze Packing in Appendicitis Work. By Dr. Robert T. Morris.—According to the author, it is not safe to teach that gauze packing is to be given up at once; it is too closely a part of the methods of to-day. It is better to say that one should work to the point of giving up gauze drainage as rapidly as experience proves that it can be done safely. The differences in the statistics of various operators is a matter to be given the most grave consideration, and the questions bearing upon the influence of the methods employed must be squarely met and not evaded.

A Plea for Specific Plans of Treatment other than by Single Drugs. By Dr. Louis Faugères Bishop.

What is Chronic Rheumatism? By Dr. Edwin M. Merrins.—The author believes that the term ought to be applied only to those rare cases in which there is a clear and unbroken connection, with an attack of acute rheumatic fever.

A Simple Test for Equilibrity of Eye Muscles in Binocular Vision. By Dr. Frederick C. Riley.

Static Wrinkles. By Dr. Henry G. Piffard.

Hyperemesis Gravidarum. By Dr. Enrico Castelli.

What are the Best Solutions for Use with Wet Dressings? By Dr. George G. van Schaick.

A Case of Double Tongue. By Dr. Albert Seitz.

Intraperitoneal Rupture of the Bladder. By Dr. James Pederson.

Report of an Unusual Case of Deafness. By Dr. Donald M. Bristow.

Philadelphia Medical Journal, March 22, 1902.

The Use of Methylene Blue as a Sedative. By Dr. D. E. Hughes and Dr. Elizabeth Lovelace.—The use of methylene blue in the diagnosis of nephritis has been studied by several clinicians. In fourteen cases of mania with frenzy Bodoni's results were such that he proposed to place methylene blue in the list of sedatives with trional, sulphonal, chloralamid, and like drugs. The results in twenty-two cases in the insane and detention wards of the Philadelphia Hospital, while not so uniformly good as in Bodoni's observations, have led the authors to hope that a greater number of trials may demonstrate that, in particular cases, the value of the medicament as a sedative may be established.

The Implantation of the Tubercle Bacillus. By Dr. Lawrence F. Flick.—The author concludes that the seed supply for new implantations of tuberculosis is derived, almost entirely, from human sources, and that the bacillus enters a host through the lymphatic system in the alimentary canal, the respiratory tract, and the skin. The place of deposit is no indication of the port of entry of the tubercle bacillus, except when the deposit has taken place in the bronchial or mesenteric lymphatic glands. Interference with the circulation of a part, whether by traumatism, inflammation, or vasomotor disturbance, prepares the part for tuberculous deposit. Germination and colonization do not always follow tuberculous deposit.

The Various Methods of Vaccination and their Results, with a Suggestion as to Best Methods. By Dr. F. M. Wood.—The method suggested by the author is to (1) cleanse the arm with alcohol alone, or with soap and boiled water; (2) rub the arm to bring the blood to the surface; (3) make one scratch not so deep as to bring blood, with a cambric needle previously sterilized by heat; (4) apply the virus and rub in well with the ivory point; (5) apply a piece of plain sterile gauze, two inches square, fastening it to the arm by non-irritating zinc oxide adhesive plaster; (6) so soon as the sore is made uncomfortable by the discharge, apply a new dressing. The author believes, however, that, carried out by a physician who understands surgical cleanliness, the hypodermic method is perhaps the safest and best, and is rapid and accurate in its results.

Finger Amputations. By Dr. H. C. Deaver.—The author points out that it is upon amputations of the fingers that the surgeon should practise con-

servationism, in the highest degree, for a fraction of an inch saved may mean a great deal to the patient.

The Young Physician. By Dr. Emil Amberg.—The author objects strongly to the large number of medical colleges with inadequate facilities, to the low entrance requirements, to the fact that the laity are pauperized by free clinics, and that the young physician, on this account, walks long and wearily on the borderland between inanition and starvation. He speaks pertinently of the spirit of commercialism and advertising, and advocates reciprocity and uniform medical legislation. He proposes that medical schools shall become State institutions, and believes that much hope rests in the reorganized American Medical Association.

American Medicine, March 22, 1902.

On the Diagnosis of Bilateral Cystic Kidney. By Dr. William Osler.—The author presents two cases which illustrate the features of polycystic kidney. These are: First, the presence of bilateral tumors in the flanks. Polycystic kidney is rarely unilateral. There is no difficulty in recognizing that the tumors are renal. This circumstance alone should at once arouse suspicion, as other forms of bilateral renal tumor are excessively rare. Secondly, the cardiovascular changes of interstitial nephritis, the sclerosis of the arteries, the dislocation of the apex beat to the left, and the accentuation of the aortic second sound. Thirdly, the condition of the urine, which is that of advanced interstitial nephritis, the low specific gravity, the slight trace of albumin, a few red blood corpuscles and scanty tube casts. Fourthly, hæmaturia, which may recur in paroxysms and be associated with much pain. As a rule, in polycystic disease operation is contraindicated since removal of one kidney simply takes away one half of the already reduced kidney tissue available for excretory purposes. Even in unilateral cases it is stated that the remaining kidney may become cystic after a few months.

Skin Eruptions in Malaria, with Report of a Case of Urticaria. By Dr. David Riesman.—The author concludes that skin eruptions are not rare in malarial infection, and that the most frequent are herpes and urticaria, neither of which presents any specific characters. Both may occur in any stage of the malarial paroxysm, although urticaria is most frequent in the febrile, and herpes in the sweating, stage. In obscure cases, herpes and urticaria, especially the former, may have considerable diagnostic value. Three types of urticaria are recognizable: That accompanying the paroxysm, usually the febrile stage; that taking the place of the chill, and that substituting the entire paroxysm. In cases of urticaria of obscure aetiology, the blood should be examined for plasmodia. Whether found or not, quinine is worthy of a trial.

A Simple Exploratory Laparotomy as a Palliative, and Perhaps Curative, Measure in Inoperable Carcinoma of the Breast. Preliminary Report of a Case. By Dr. Eugene R. Corson.

Some New Facts in the Chemistry of the Stomach, with Special Reference to the Qualitative and Quantitative Analysis of Organic Acids in the Stomach. By Dr. Mark I. Knapp.

Respiratory Gymnastics; Methods. By Dr. Albert Abrams.

Pneumogalactocoele of the Breast, with an Unidentified Organism. By Dr. J. Milton Mabbott.

Notes of an Army Surgeon in the Recent War. The Devitalization of the Fifth Army Corps. By Dr. C. L. G. Anderson.

Boston Medical and Surgical Journal, March 20, 1902.

Osteo-arthritis of the Spine; Spondylitis Deformans. (*Second Paper.*) By Dr. Joel E. Goldthwaite.—Of osteo-arthritis the author asserts with definiteness that the disease is a local one, influenced or caused, perhaps, by general conditions, but that it can be corrected, the pain relieved, and the patient made, for all practical purposes, well.

Privileged Medical Communications: A Rejoinder. By Dr. David W. Cheever.—The author suggests that it shall be considered unprofessional and improper for a physician to divulge anything confided to him by a patient, unless, (1) With the patient's consent; (2) to defend himself when accused; (3) to expose crime. In all other cases, such professional confidences shall be classed as "privileged communications." It shall be a question of honor whether a physician shall ever feel it his duty to repeat such a "privileged communication"; if he conscientiously declines, he shall be protected; if he conscientiously testifies, it shall be before the judge or referee only, in private; and no such revelation shall be published.

Cases of Extra-uterine Pregnancy Illustrating Difficulties in the Diagnosis of the Condition. By Dr. Edward Reynolds.

Cases of Combined Extra- and Intra-uterine Pregnancy. By Dr. H. P. Perkins.

Acute Lymphæmia with Æstivo-autumnal Malaria. By Dr. Philip King Brown.

Medical News, March 22, 1902.

Malnutrition as Shown in Congenital Syphilis. By Dr. Charles Gilmore Keeley.—The author's experience has taught him to look with suspicion upon puny, delicate children of parents who have average good health, when there is no discoverable reason for the malnutrition, and who persistently resist well-directed hygienic and supporting measures. He adds bichloride of mercury or iodide of potassium to the treatment, regardless of the social standing of the parents, and is always gratified, but never surprised, at the satisfactory outcome.

The Necessity for Sanitary Safeguards on the Central American Canals. By George A. Soper, Ph. D.—The study of the sanitary aspects of the two lines which the author has made leads to the conclusion that, while it is within the bounds of practicability to keep either comparatively free from epidemic diseases, the Panama route would entail less risk and less expense.

A Report on the Use of Antiphthisic Serum T. R. By Dr. Earl Sprague Bullock.—In the author's opinion, the results obtained with this treatment are nearly comparable to those obtained with-

out it, and, for this reason, he believes that those who have spoken favorably of this agent have unwittingly interpreted as the effects of the serum what occurs naturally as the result of proper hygienic surroundings in a large proportion of tuberculous cases.

Simple Traumatic Synovitis of the Knee. By Dr. William S. Thomas.—If the patient is seen within the first twenty-four hours, massage should be used over the joint, and also to the thigh above, to clear the way for absorption of the effusion. There must be rest during the stage of active inflammation. When the active symptoms are subsiding, tight strapping and counter-irritation are of real service. Aspiration is required only in rare cases. There seems to be no royal road to recovery, but, provided the case is uncomplicated, there is a sure road and that road is rest.

The Therapeutics of Cutaneous Diseases. By Dr. Albert E. Carrier.

British Medical Journal, March 15, 1902.

Cases Illustrating the Aid of the Röntgen Rays in the Diagnosis of Intrathoracic Tumors. By Dr. J. M. Finny and Dr. E. J. M. Watson.—The authors report two cases of aneurysm of the aorta and one of malignant disease (sarcoma of the lung) occurring within the chest, in which the x rays were utilized as an aid in diagnosis. In all, the x rays were a help, more or less, in removing doubts and in explaining anomalous symptoms, while in one they furnished the only means of detecting an aneurysm of the thoracic aorta.

Posture and Heart Murmurs. By Dr. W. Gordon.—The author has made a study of the respective effects of the recumbent and erect postures upon the loudness of heart murmurs, and concludes as follows:

1. Recumbency tends to increase all "hæmic" murmurs except the venous hum, which it tends to obliterate; to increase the murmurs of mitral regurgitation, tricuspid regurgitation, and aortic stenosis; to decrease the murmur of mitral stenosis, and to leave little, if at all, affected, the murmur of aortic regurgitation. 2. The effects of gravity and of change in chest-depth seem to account for the influence of recumbency. 3. Therefore, in describing and discussing murmurs which posture modifies, the patient's position at the time of observation should be stated.

Two Cases of Congenital Disease of the Left Side of the Heart. By Dr. T. Fisher.—The author reports two cases which illustrate the fact that congenital disease of the left side of the heart may exist, although very rare; the first case was one of congenital mitral stenosis occurring in a child aged fifteen months; the second one of congenital aortic stenosis in a child aged four months and a half. But it does not follow that there is any foundation for the theory that a valvular lesion, such as mitral stenosis, when found in a young adult, has probably been present since birth. The great mass of *post-mortem* experience is decidedly opposed to such a view. The interest of the cases lies in their rarity.

On the Treatment of Traumatic Aneurysm by Proximal Ligation, with Six Successful Cases.

By Dr. C. Birt.—The author reports six cases of traumatic aneurysm due to bullet wounds, in all of which, proximal ligation of the artery brought about recovery, the patient regaining power in the limbs involved. In all the cases, the wounds ran an afebrile and aseptic course, kangaroo tendons being used. The limbs were sterilized with one in five hundred potassium-mercuric-iodide in fifty-per-cent. alcohol.

Case of Acute Exophthalmic Goitre. By Dr. A. J. Campbell.—The author reports the case of a young woman, aged twenty-seven, who, when first seen on September 26, 1901, had a small goitre which she had had for a long time, and which had given rise to no symptoms whatever. On October 14, 1901, she had several teeth removed, but was otherwise perfectly well. A few days later she developed tachycardia and complained of great excitement and pain around the heart. On October 19th there was distinct exophthalmos with von Graefe's sign. The patient's condition grew steadily weaker; on November 19, 1901, she developed general jaundice, and died on November 27, 1901. No necropsy was made.

The Difficulties of Preventing Enteric Fever in Warfare. By Dr. C. Childs.

Puerperal Insanity. By Dr. R. Jones.—(*Continued*).—*Prognosis and recovery.* Puerperal insanity is considered by all authorities to be the most likely to be recovered from. As to prognosis in the different types, that occurring in early pregnancy is favorable; that in later gestation is apt to continue in an exaggerated degree until after confinement and during the puerperal period, and may afterward become chronic. Most of the puerperal patients get rapidly well, but acute mania may pass into acute dementia. Relapses are more common than is generally believed. Albuminuria in puerperal insanity is not common, and when it occurs the prognosis is grave. A return of menstruation is a satisfactory symptom. The death rate is highest among the insanities of pregnancy and lowest among the puerperal cases.

Pathology. It is uncertain and improbable that all forms of puerperal insanity are due to the presence of bacterial poison, though unquestionably some are of septic origin, the sudden and violent symptoms favoring the theory of septic absorption, but an elevation of temperature usually accompanies septic infection, and in some cases there is no fever, the temperature remaining normal through an acute delirium lasting for several days. There is no doubt, however, judging from the analogy of poisons and of alcohol, that some morbid material—animal, vegetable, or mineral—circulating in the blood is able to cause disordered energy in the cerebral cortex, with consequent mental aberration, and, if the uterine surface is not at fault, other toxic influences are found in the uræmia or other hæmic states.

Treatment. Puerperal insanity is the form most easily recovered from, and well-to-do women, if suffering from the first attack, should not be sent away from home within the first six weeks of the onset of symptoms. The free administration of liquid, easily assimilable nourishment, is a necessity. The essence of general treatment may be summed up in

"compulsory super-alimentation." Refusal of food is the most serious symptom in all cases of puerperal insanity, and must be combated at all cost, as, when bodily improvement occurs, it is not infrequently the forerunner of mental recovery. Alcoholic stimulants appear to be absolutely necessary in these cases. Sleep must be obtained; for this both opium and morphine are unsuitable; sulphonal and paraldehyde are both useful, but more so are chloral and the bromides in combination. Before recovery is complete, relapses and a return of mental confusion after apparent convalescence are frequently noticed. This pathological periodicity appears to be the equivalent of the physiological periodicity occurring in normal sexual and reproductive life. It is at this stage that a change from the asylum to home surroundings may prove beneficial; or, if the patient is treated at home, a change from home is attended by marked improvement. If this is neglected, an incurable dementia may set in and become progressive. In cases where an offensive discharge occurs and the temperature points to the retention of membrane or clot, it may be necessary to dilate the cervix and curette the endometrium of the uterus. Insanity is and ever will be the product of two factors—stress and heredity, and the greater the inherited vital resistance of the tissues the greater will be the strain required to overcome it. This resistance against the action of selective toxins is to be raised by combined effort, and growth thus rendered more perfect, life more vigorous, and death more remote.

On a Convenient Terminology for the Various Stages of the Malaria Parasite. By E. R. Lankester, F. R. S.—The scheme of onomatology proposed by the author is as follows, taken in the order of the development of the parasite:

1. Exotospore, free in human blood.
2. Amœbula, in red corpuscles.
3. Enhæmospore, in red corpuscles and in blood.
4. Crescent, in human blood (*a*) male, (*b*) female.
5. Sperm-mother-cell, in gnat's stomach.
6. Egg-cell, in gnat's stomach.
7. Spermatozoon, in gnat's stomach.
8. Zygote or embryo cell in gnat's stomach.
9. Vermicule in gnat's stomach.
10. Spore cyst, in blood sinus outside of gnat's stomach.
11. Spore-mother-cells in cyst, in blood sinus outside of gnat's stomach.
12. Exotospores in cyst in blood sinus outside of gnat's stomach.
13. Free exotospores in gnat's salivary duct.

Lancet, March 15, 1902.

Certain Diseases of the Blood Vessels. By A. P. Gould, F. R. C. S.—In the second of the Lettsomian lectures on the above-mentioned subject, the author discusses obliterative arteritis. He regards it as a pathological effect of many causes, and gives its chief features as follows: 1. The disease originates in the subendothelial layers of the tunica intima of the smaller arteries. In its early stages it is marked by a small-cell infiltration which, later, organizes into a loose and vascular connective tissue. 2. This growth narrows the lumen of the vessel and may entirely obliterate it; more often, however, thrombosis occurs and the organization of the clot completes the permanent occlusion of the artery. 3.

The disease beginning in the smaller arteries tends to spread in a centripetal direction, and may reach even the largest arteries. The thrombosis it excites also often extends rapidly and far toward the heart, much faster and farther than the changes in the vessel-wall, and the clot may thus spread as far as the aorta. 4. The earliest effect of this diseased artery is pain, then follow other evidences of local ischæmia, and these may pass on to gangrene. These effects vary with the extent of the vascular obstruction and the efficiency of Nature's means of compensation. 5. The disease may be very chronic, slowly progressing for years, or it may run a much more rapid course. Having reached a certain point, arrest may occur and the symptoms may gradually pass away as the unaffected vessels become more and more efficient substitutes for those that have become occluded. 6. The disease arrested for a time may afterward recur in the vessels of the same limb or elsewhere, and it may attack more than one vascular area simultaneously. 7. The vascular changes are not always limited to the arteries and endophlebitis may precede, or accompany, the endarteritis, and the venous obstruction then modifies the effects produced on the tissues.

The author reports nine cases of the affection, which illustrate the various points mentioned above. The disease is one of adult life and is more common in men than in women. The process may be extremely chronic, and the pain is often agonizing. Fever is usually present when the disease is active. The gangrene may be a slow mummification or a rapid sphacelation.

Syphilis is the most certain of all known causes; other factors are influenza, alcoholism, erythromelalgia, and previous thrombosis.

Rest and warmth for the affected part are called for, with anodynes for the pain. Cautious massage is of value. For extensive gangrene amputation is necessary.

The Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. By W. McA. Eccles, F. R. C. S.—(The third of the Hunterian lectures.) *Pathology*—(Continued).

There are four varieties of cysts that may be developed in connection with a testis that has failed to reach the scrotum. These are:

1. Cysts in connection with the epididymis: (a) small; and (b), large.
2. Cysts in connection with the testis proper—cystic fibroma of the testis.
3. Cysts in connection with fœtal remains. These may be subdivided into those derived (a) from the hydatid of Morgagni; (b) from the Wolffian tubules; (c) from the vasa aberrantia; and (d), from the paradidymis.
4. Dermoid cysts, teratomata.

Malignant new growths. Both sarcoma and carcinoma may attack an imperfectly descended testis. While sarcoma is the more common of the two, yet both are rare.

Chondrosarcoma, lymphosarcoma, and melanosarcoma have not been observed in connection with a partially descended testis—only the round-celled and spindle-celled forms and myxosarcoma. The round-celled form is the most common.

While sarcoma occurs most usually between the ages of twenty and forty years, carcinoma is a dis-

ease of rather later life, namely, between the ages of thirty and fifty years.

Hydrocele in connection with imperfect descent of the testis. 1. Inguinal hydrocele with the testis in the canal is the commonest form.

2. Hydrocele due to distention of that portion of the processus vaginalis which lies in the canal, and the consequent formation of a secondary sac in one of the planes of the abdominal wall.

3. Hydrocele consisting of a secondary sac lying in the extraperitoneal tissue behind the os pubis in the pelvis.

Hernia in association with the imperfectly descended testis. A hernial protrusion is the most frequent pathological condition associated with imperfect descent of the testis. There are at least five varieties of inguinal hernia in this connection: (1) Bubonocoele, (2) scrotal, (3) interstitial, (4) cruro-scrotal, and (5), superficial perineal.

Neurological Fragments. By Dr. J. H. Jackson.

Some Remarks upon "Internal Derangement" of the Knee-joint Based upon Fifty-nine Cases in which Operation was Performed. By H. W. Allingham, F. R. C. S.—The fifty-nine cases of "internal derangement" of the knee-joint here tabulated, all of which presented either the characteristic symptoms with locking of the joint, or else weakness with recurrence of pain and swelling, illustrate the following conditions: (1) Semilunar cartilage, internal or external, split, loosened or displaced, torn from either or both extremities or from coronary ligaments; (2) loose bodies; (3) a torn or hypertrophied alar ligament or hypertrophied fringe of synovial membrane; (4) rheumatoid arthritis; and (5), no obvious derangement.

Viewed generally, these cases show that operation for internal derangement of the knee-joint is in most cases highly satisfactory. There is generally quick recovery with no recurrence of the trouble; but failure is probably inseparable from a certain proportion of all serious cases. Even short of the unhappy event of permanent stiffness, considerable trouble may be caused in convalescence by profuse secretion of synovia and by a tendency to stiffness of the joint.

A Case of Acute Myasthenia Gravis. By Dr. C. A. Hingston and Dr. W. H. B. Stoddart.

Milk or Whey in Enteric Fever? By A. T. Pridham, M. B.—The author reports a very severe case of typhoid fever occurring in a man aged twenty-three years, in which whey was given as a staple food instead of milk. The most noticeable points in the case were the following:

1. Distention of the abdomen was entirely absent.
2. There was an absence of delirium almost throughout the illness.
3. There was an absence of serious diarrhœa in spite of severe ulceration.

These three symptoms are often much aggravated by, or due to, toxins formed by decomposing milk curd.

Centralblatt für Gynäkologie, February 15, 1902.

Deportation of Chorionic Villi.—Dr. R. Scholten and Dr. J. Veit record the results of their investigations. The serum of pregnant women shows in

general no hæmolytic properties on the blood of men, or of pregnant or non-pregnant women, except in some instances upon the blood of the last. The serum of rabbits treated with human placenta, is not toxic for other rabbits. The serum of two eclamptic women showed no hæmolytic action on any human blood. The urine of rabbits previously treated with human or rabbit placenta, showed, in from twenty-four to forty-eight hours, decided albumin which soon disappeared. Pieces of fresh human placenta which were placed in fresh serum of rabbits the blood of which had been previously treated with human placenta, showed, in twenty-four hours, a solution of the nuclei of the syncytium, which was more marked than when placed in ordinary rabbit-serum. The authors regard the albuminuria above spoken of as corresponding clinically to the albuminuria of pregnancy by the deportation of chorionic villi, and hope that further researches may lead to a solution of the ætiology of eclampsia. The treatment of the rabbits with human placenta was accomplished by the insertion of placental tissue into the peritoneal cavity after it had been freed of all fetal and maternal blood.

Case of Doubtful Sex in an Adult Woman. By Dr. Franz Neugebauer.

Anterior Uterine Incision (Rühl) in Complicating Labor Due to Deep Fixation of the Vagina; Enucleation of Fibromata. By Dr. F. Stähler.

Riforma medica, December 24, 1901.

Extensive Resection of the Ribs; Decortication of the Lung; Musculo-pleurectomy, and Pneumonectomy. By Dr. Ernesto Picone.—A woman, aged thirty-three years, with a thoracic fistula resulting from an operation for empyema two years previously, was subjected to the operation outlined in the title in order to cure a chronic empyema. The ribs from the second to the eighth were resected, beginning at the mammary and extending to the posterior axillary lines. In this manner the lung was exposed, and was found almost atelectatic, and closely adherent to the vertebral column. The pericardium was thickened and adherent. It was impossible to adopt Estlander's method, because the thoracic muscles were rigid and sclerosed, and the parietal pleura so thickened that it could not collapse and approach the lung surface. The visceral pleura was therefore incised longitudinally and the lung partly decorticated. A copious hæmorrhage at this point, which threatened to cause asphyxia by the infiltration of blood into the lung capillaries, rendered the postponement of the succeeding steps of the operation necessary. A few days later the muscles and parietal layer of the pleura were removed for two reasons: First, in order to obtain more room for the pulmonary decortication; and, second, so as to cover by means of the remaining skin applied plastically, the denuded area of lung. The decortication of the lung had to be completed under great danger of hæmorrhage in a number of sittings without anæsthesia. A few tuberculous cavities being thus exposed, they were scooped out with curettes or forceps. During this procedure the patient's condition several times approached syncope, and blood mixed with air bubbled through the

severed bronchioles, so that prompt tamponing alone saved the patient's life. The cavities were thereupon treated with iodoform, silver nitrate, iodine, etc., until they healed. The thoracic wall was closed with skin, by means of a plastic operation. The patient's condition improved rapidly; the fever and the cough disappeared; the appetite returned, and the woman was enjoying comparatively good health, but she died later of tuberculous enteritis.

December 27, 1901.

A Clinical Contribution to the Cheyne-Stokes Respiratory Rhythm and other Associated Phenomena. By Dr. E. Grande.—The author reports the case of a man who had received numerous severe injuries to the head, and in whom the Cheyne-Stokes type of breathing was observed for some time before death. His chief symptoms were coma of a profound character, hemiparesis and hemianæsthesia on the right side, disappearance of the cutaneous reflexes, myosis, and corneal insensibility. The Cheyne-Stokes respiration was observed in this case in its complete form, *i. e.*, with its two periods of dyspnœa and apnœa. During the latter period the thorax of the patient, as well as the rest of his body, remained completely immobile. His face was very pale and he appeared like that of one dead. This period lasted about forty seconds. The duration of the dyspnœa was about fifteen or twenty seconds. During the period of apnœa there were no changes noted in the pupil and no movements of the eyeballs. The pulse gradually became irregular, small, and frequent, so that it was difficult to count. The author concludes that the Cheyne-Stokes phenomenon is of diagnostic importance only when accompanied by other symptoms, for it is observed in physiological states. The exact nature of the injuries in this case was revealed at the autopsy. They included hæmorrhages in the left temporal and occipital regions of the cortex. The squamous portion of the left temporal bone was fractured. The medullary substance was found to be profoundly anæmic and an accumulation of bloody serum was found in the ventricles.

December 28, 1901.

Septic Eczema; Pyogenic Urticaria. By Dr. R. Campana.—The author reports a case in which there was a series of successive eruptions of various kinds. First came urticaria, then an eczema, then furuncles. He examined a specimen of skin removed from one of the vesicles and found that, by appropriate methods, he could demonstrate a number of micrococci which flourished in the epidermis. Similar parasites were found in the exudates from the vesicles, especially in those from the face. No cultures could be prepared with the exudate from the urticaria because of the difficulty of obtaining it without accidental contamination. The bacteria found in the eczematous lesions were in all respects similar to those seen in ordinary pus, namely, *Staphylococcus pyogenes aureus*. The urticaria in this case depended upon the sepsis.

January 2 and 3, 1902.

The Action of Antiperiodic Drugs upon the Parasite of Malaria. By Dr. D. Monaco and

I. Panichi.—The researches of Binz, Marchiafava and Celli, and others, on the action of quinine in malaria have not determined the initial phases of the effect of the drug upon the parasites. The authors, therefore, undertook to study these in detail. They found that when a drop of solution of quinine bisulphate in distilled water was placed on the edge of a coverglass bearing a dry preparation of malarial blood, certain changes occurred in the parasites, which were in proportion to the strength of the quinine solution. Thus, if this solution was very weak, the parasites rapidly contracted, and after a few minutes, expanded again, to give exit to a number of pseudopods. Greater concentrations of the solution brought about more marked degrees of stimulation in the parasites, and the latter ended by detaching themselves from their red cells. If the solution was very strong, however, the parasite contracted permanently and remained in the red cells.

Having administered to a malarial patient a dose of quinine which corresponded to the amount of quinine contained in the strong solution used above *in vitro*, the authors calculated the therapeutic dose of the drug which could be expected to produce the same results *in vivo*. The dose required varied in the different forms of malarial infection. The results obtained by the authors have been assailed by Bignami and Capogrossi, who maintain that the distilled water with which their quinine solutions were prepared caused the detachment of the parasite. In reply, the authors show that the effect of distilled water upon the malarial parasite has been studied by other observers and has not been found to cause the phenomenon which the former observed.

January 4, 1902.

On a New Method of Isolating the Bacillus of Typhoid Fever. A Preliminary Note. By Dr. U. Biffi.—This new method consists essentially in the inoculation of the suspected material upon broth, to which has been added a serum which is strongly agglutinating for the *Bacterium coli*, and which is contained in a test tube provided with a small Berkefeld filter. Supposing that the material under examination contains both germs, the *Bacillus coli* and that of typhoid, the latter will become agglutinated as it develops, while the former will soon begin to advance through the diaphragm of porous earth, where it can be found and isolated in the pure state. The serum which serves to agglutinate the *Bacterium coli* is prepared by the method devised by Pfeiffer for the preparation of a serum which agglutinates the bacillus of typhoid. Only care must be taken to inject into the rabbit employed in the process, cultures of various types of the *Bacterium coli*, so that the agglutination in the culture will hold good for all the types of the *Bacillus coli* that may be present in the suspected substance. The amount of agglutinating serum which is to be added to the broth varies according to the agglutinating power of the former. In all cases, the proper dilution of the agglutinating substance should be secured, for an excess thereof may influence also the bacillus of typhoid, while a deficiency may allow some of the colon bacilli to pass through the filter.

By the same method the *Bacterium coli* may be isolated simply by omitting the addition of aggluti-

nating serum; for the *Bacillus coli* grows more rapidly than that of typhoid, and so will pass through the filter first. A better method, however, consists in the addition to the broth, of a serum which agglutinates the typhoid bacillus. The author concludes that this modification of Candier's method is of the greatest practical importance in the differentiation of the two germs.

January 7, 1902.

The Auto-neuro-therapeutic Method in Bronchial Asthma. By Dr. Benedetto de Luca.—The author reports very satisfactory results with a new method, and an abortive and preventive method of treatment in bronchial asthma which he has devised as a result of his studies upon the pathogenesis of this disease. He believes that the cause of the asthmatic paroxysm lies in a temporary state of irritability of certain bulbar centres, particularly the vasomotor centre, a part of the pneumogastric centre which supplies the bronchial muscle, and of the respiratory centre. The treatment of the bronchial spasm, therefore, consists in allaying, if possible, this irritability. The various drugs recommended for asthma produce but very limited effects upon the paroxysm, for they do not possess a selective action upon the centres involved, at least not in doses which can be given with safety. In order to depress the centres of the medulla oblongata, the author recommends the stimulation of the nerve endings in the labyrinth, by means of vibrations transmitted through the endolymph. The effect of these vibrations is similar to that observed in the accesses of vertigo, in a case of Menière's disease. The method of producing these vibrations is very simple, and consists in making the patient, while seated, execute rapid and energetic rotatory movement of the head, with as long a radius as possible, and without interruption, until a sensation of dizziness and a feeling of nausea come on. The motions are only interrupted when the first signs of vomiting appear; then the patient is allowed to rest for a few minutes, after which he resumes the rotation until he feels nauseated, etc. The patient first experiences a sense of heat in the head, then, when nausea comes on, there is perspiration, pallor, a rapid and weak pulse, and a marked relief in the respiratory difficulty, which increases with a repetition of the rotation. If the patient for any reason cannot execute the rotary movements described, he may rotate his entire body on its axis, or other similar expedients may be resorted to. The method described is also an excellent preventive of the asthmatic paroxysms, and a few minutes daily spent in rotating the head will help to prevent their onset.

Roussky *Archiev Pathologiyi, Klinitcheskoy Meditsiny i Bakteriologiyi*, December 31, 1901.

The Pathology of the Corpora Lutea of the Ovary. By Dr. W. Grouzdief. —Two cases, one of cystic degeneration, the other of prolapse of the corpora lutea, formed the basis of the present study. The pathogenesis of cysts of the corpora lutea has never been studied before, the reported cases merely having been investigated morphologically. Judg-

ing by the recorded observations, cystic degeneration occurs usually in corpora lutea that are comparatively young. Contrary to this, the author found in a woman who had long since passed her climacteris, a formation of multiple cysts of the yellow bodies, which he was able to follow through all the stages of their development. He found that these cysts did not originate from the corpora lutea proper, but from the corpora albicantia, the stroma which surrounds the latter retaining for a long time the property of forming yellow cells. The latter, in multiplying, form conglomerates of considerable size, which degenerate in the centre while their periphery is invaded by connective tissue and vessels. As the result, there arise cysts which are surrounded by a connective-tissue wall and lined by yellow cells. These cysts may also be formed from ovarian follicles through their degeneration, in which case the cysts are surrounded by a basilar membrane, lined with a layer of yellow cells, and very probably cysts lined with epithelium may also originate in the same way.

The second case studied by the author was said to be unique in gynecological literature. He observed a complete prolapse of corpus luteum from the ovary, the former being completely detached from the latter. On microscopical examination, it was found that this prolapse had taken place in the beginning of the third week of the development of the corpus luteum. This prolapse occurred in a woman, aged thirty-nine years, who had been operated on for ovarian cyst. The ovary whence the prolapse took place had remained perfectly normal, and the prolapse did not occasion any hæmorrhage.

The Toxicity of some Organic Bromides. By Dr. D. Tcherbacheff. — The author has experimented with bromoform, ethyl bromide, and ethylene bromide, with a view of determining their relative toxicity in experimental anæsthesia on animals. He has found that bromoform narcosis is distinguished by the absence of any period of excitement; that bromoform acts as a violent poison, especially on cold-blooded animals; that bromoform narcosis is accompanied by a progressive lowering of the arterial pressure, but that a sudden arrest of the respiration or of the heart is never observed. In frogs, a rigidity of the muscles was seen before death from bromoform narcosis, this rigidity not taking place if the animal died slowly. In warm-blooded animals the cooling of the body probably plays a certain rôle among the causes of death. No unpleasant after-effects were noted after bromoform narcosis.

In anæsthesia with ethyl bromide, convulsions occasionally occurred, but they were rare, and only supervened when the vapor was given in too concentrated a form. In frogs, the author found no unpleasant after-effects from ethyl bromide anæsthesia, while mice usually died from the administration of this anæsthetic. No case of death was observed in dogs and rabbits. Death from ethyl bromide occurred as the result of paralysis, and was accompanied by a pulmonary cedema.

Ethylene bromide was so toxic, that fifteen minutes' inhalation was sufficient to cause death. Symptoms of ethylene-bromide poisoning, however, only appeared after a certain time, and the symptoms observed in animals were closely analogous to those observed in man. A clouding of the

corneæ was observed among other symptoms, and death took place by paralysis of the heart.

Leucocytosis in Hanot's Disease. By Dr. Kiri-kow and Dr. Korobkow. — Systematic studies on the morphology of the blood in six cases of Hanot's cirrhosis (hypertrophic cirrhosis with chronic jaundice) showed that in most cases there was a hypoleucocytosis, particularly of the ortholeucocytes.

A Tumor of the Mesentery and Intestinal Obstruction in a Case of Melæna. By Dr. V. P. Joukowsky. — A newly-born child became constipated after having passed a few bloody stools. The constipation lasted until the infant died, and its establishment was accompanied by hæmatemesis. The absence of tympanitic percussion indicated an obstruction in the small intestine. The temperature began to rise, and blood began to flow from the nose, continuing so till the end. Blood also flowed from the mouth as a result of pulmonary hæmorrhage. The child became gradually weaker, and, on the third day, death occurred in collapse, with a subnormal temperature. The autopsy showed an obstruction of the small intestine, at the beginning of the ileum, and in the corresponding part of the mesentery a large cystic tumor of the size of an apple, with thin walls. The portion of intestine above the constriction was distended and contained a blackish substance. The mesenteric glands at that point were enlarged. The portion of intestine below the obstruction was perfectly empty. There was an extensive hæmorrhage in the left lung. The histological examination of the tumor showed that it consisted of a cystic degeneration of the glands of the mesentery, which the author styles a lymphangeiectatic cystic glandular angioma.

The Diagnosis of Vesical Calculi by Means of the Röntgen Rays. By Dr. Tcheremouchine. — The cystoscope and sounds do not always enable us to make a diagnosis of stone in the bladder, and they are contraindicated in the presence of such conditions as stricture of the urethra, atresia of the urethra, hypertrophy of the prostate, tumors, and diverticula of the bladder. A number of cases are recorded in literature, where the death of the patient was due solely to the use of sounds or to cystoscopy. Every examination with the stone searcher or with the cystoscope, moreover, causes suffering. Hence the Röntgen rays should be used, whenever possible, in the diagnosis of vesical stones. A study of the literature of the subject, and of personal cases, shows: (1) That calculi composed of urates, phosphates, and oxalates, arrest the x rays and give photographic shadows. The skiagraphs of these stones show the size, shape, and sometimes also the number of stones in the bladder, and allow us to determine the best procedures for their removal. The use of the x rays in cases of vesical stones is without discomfort to the patient. (2) That a skiagraphic picture which shows distinctly the shadows of the pelvic bones, and which does not show the shadow of a stone, shows clearly that no stones are present in the bladder. If the results of skiagraphy are negative, one may resort to the stone-searcher and the cystoscope, but the author considers these procedures barbarous. He reports four cases in which he was able to obtain excellent skiagraphic pictures, which are given on a plate accompanying the article.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

*Eleventh Annual Meeting, held in Chicago on
December 18 and 19, 1901.*

The President, Dr. A. F. JONAS, of Omaha, in the Chair.

(Continued from page 349.)

The Use of the Gall-bladder as a Suspensory Ligament for Prolapsed Liver.—This was the title of the presidential address. Dr. JONAS said that the liver was sometimes displaced downward to a considerable degree; that there was usually modified function with a well-defined clinical picture belonging to this change of position. A woman, aged forty-one, had for three years suffered from paroxysms of severe pain in the hepatic region. These pains, always sudden in onset, sometimes subsided in the course of one or two hours, but occasionally continued until relieved by opiates. Whether they were relieved spontaneously or by anodynes, they were always succeeded by nausea and an aversion for food lasting for a few days or a week. During the intervals she had a dragging pain in the right hypochondriac region. A year previously she had had a moderate degree of jaundice. Otherwise her history was negative. On examination, her abdomen was found distended, tympanitic, the abdominal walls were pendulous, soft, and flabby and covered with numerous striæ, the result of child-bearing. On palpation, pain on pressure was elicited over the region of the gall-bladder, but no enlargement of that viscus could be made out. A movable lump was found between the right costal arch and the iliac crest, which proved to be the right kidney. The diagnosis was that of biliary calculi in the gall-bladder and movable right kidney. Cholecystotomy and nephrorrhaphy were recommended and agreed to by the patient.

After the usual preliminary preparations, a vertical incision was made, beginning at a point over the sternal end of the ninth rib and extending down four inches. On opening the abdominal cavity, the lower margin of the liver was found three fingers' breadth below the costal arch. The liver could very easily be elevated to its normal position, but it descended very slowly when pressure upward was released. In appearance it was normal. The gall-bladder was easily found, and several calculi could be felt through its walls. The displaced and movable kidney could be made out. The liver could be held in place by little effort, particularly when an ordinary amount of traction was made on the gall-bladder, so the question presented itself, Why not use the gall-bladder as a suspensory ligament? Accordingly, it was sutured in the uppermost part of the wound, snugly against the costal arch, the sutures passing through the gall-bladder wall, the parietal peritonæum, and muscles. Before closing the peritoneal cavity, an exploration was made for the movable kidney, but it had receded to its normal position and could not be displaced. The peritonæum was then closed and the remaining wound sutured in the usual way, save to allow for opening the bladder. This was done, and several calculi

were removed. A long drainage-tube was introduced, and the wound was then dressed with an antiseptic hygroscopic pad. The drainage-tube was removed in a week. The wound closed at the end of four weeks. The patient was directed to wear a snugly fitting abdominal band. Subsequently several examinations were made. On percussion, the liver had remained in its normal position and the dragging pain had disappeared. No displacement of the kidney could be made out, although she assumed several positions, straining in various ways. It was evident that the descent of the kidney had been dependent on that of the liver. In this case, unfortunately, it was not ascertained whether there was associated a downward displacement of the stomach and colon. The author concluded that the cause of hepatoptosis consisted in a modification of one or more of its normal supports or an increase in the size and weight of the liver; that it was impossible for the liver to descend without producing a descent of the hollow abdominal viscera; and that the utilization of the gall-bladder as a suspensory ligament to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seemed practical.

Heart Suture.—Dr. B. MERRILL RICKETTS, of Cincinnati, made some remarks on this subject. He referred to malposition, displacement, and malformation of the heart, and then detailed a series of experiments which he had conducted on animals with reference to suturing the heart. He stated that there were twenty-seven cases of suture of the heart for wounds in human beings reported up to the present time, with recovery in seven instances. In this work it was necessary to use a suture that was longer-lived than ordinary catgut, and he had employed kangaroo tendon in ligating the coronary arteries and fine silk sutures in the walls of the heart. The sutures should be applied during systole of the heart, and not during its expansion. Certain hearts were softer than others; they broke down under the use of forceps, and forceps should not be used in this work. The indications for suturing the heart had to be worked out; but it was interesting to see how readily the chest could be opened with the right kind of forceps. He had used a kind of pruning forceps in his experimental work. He had opened the chest, reached the heart and sutured it in forty seconds, and he did not think it would require much more time to do this in the human being. The aspirator should not be used for anything about the heart, because injury to the coronary arteries would often result in hæmorrhage and death. The time had arrived when surgeons should no longer hesitate to open the chest for injuries of the lung and of the heart in cases of emergency.

Fracture of the Metacarpal Bones and Oblique Fracture, Simple or Compound, of the Bones of the Forearm.—Dr. W. W. GRANT, of Denver, spoke of the application of Buck's extension to fractures of the forearm and hand, although the application was as appropriate in certain inflammatory conditions of the wrist and elbow joints. He then detailed a case in which the second and third metacarpal bones were fractured near the metacarpophalangeal articulation; the third had a second fracture near the proximal end, and the fourth metacarpal also near the wrist was fractured; the ulnar artery

was severed at the wrist, and the pisiform and cuneiform bones were so badly damaged that they were removed. He obtained a very good result in this case.

Dr. JOHN P. LORD, of Omaha, narrated in an interesting manner some of the observations that he had made during a trip in Europe.

Total Extirpation of the Prostate Gland through a Median Incision in the Perinæum.—Dr. ALEXANDER HUGH FERGUSON, of Chicago, read a paper on this subject. In several cases his results had been better than he had ever secured by the suprapubic route. Speaking of the advantages of the operation, he stated that it was the most direct route to the organ, and that the prostate could be removed without injuring any important structure; that it was easily performed, though in cases in which the gland had been repeatedly inflamed, it was more difficult to operate, but not so difficult even then to remove the prostate from below as by the suprapubic operation; that the removal of the gland piece by piece enabled the surgeon to work through a small opening and prevented the bruising of the surrounding parts by the finger; and that hæmorrhage was avoided, so long as one was careful to work within the capsule. The hæmorrhage in suprapubic prostatectomy or in the combined method was often very alarming. On one occasion the writer had had to leave pressure forceps on blood vessels and keep the bladder packed tightly with gauze for twenty-four hours. The patient narrowly escaped death from either hæmorrhage or sepsis. Perineal drainage after suprapubic prostatectomy was not so complete as when the prostate was attacked from below. It had been found by the writer that the danger from septicæmia was not at all prominent after perineal prostatectomy, and so far had given no anxiety whatever. There was less danger of uræmia. The operation took the shorter time, the anæsthesia having therefore less effect upon the kidneys, and a minimum opportunity for sepsis made it easier for the kidneys to perform their functions. The suprapubic operation was accompanied with far more shock than the author had found following perineal prostatectomy.

Prostatic Hypertrophy.—Dr. LEWIS SCHOOLER, of Des Moines, Iowa, read a paper in which he spoke of the symptoms, signs, diagnosis, prognosis, and palliative treatment of hypertrophy of the prostate. The palliative treatment was divided into massage, aspiration, catheterism, dilatation, and cystotomy. In considering all these methods, none were intended to be radical, none were calculated to remove the cause. All were intended to partially at least restore functional activity and to produce results sufficiently satisfactory to prevent the need of more radical procedures, and until within the last five years they had been the best that the profession possessed. The dissatisfaction with them was clearly shown by the constant aim to discover something that would give better results. In a few cases they had served the purpose well, and in the future would be resorted to in very few selected cases. But the better knowledge of the anatomy of the prostate gland and its pathology called for an advance in therapeutic resources that did something more than to secure relief with a constant menace to the life of patients through infection, as well as a method

that did not require eternal vigilance and a knowledge of the fact that the life of the individual depended upon the mechanics of artificial urination.

The Pathology and Ætiology of Prostatic Hypertrophy, and Suprapubic Drainage as a Method of Treatment.—Dr. A. C. BERNAYS, of St Louis, dealt with this phase of the subject. Suprapubic cystotomy was an operation which found its application in stone in the bladder, tumors and growths, hypertrophy of the prostate, foreign bodies, exploration of the bladder, and drainage of the bladder. It was a recognized and effective method of treatment in all these conditions. The technics varied with the object in view. Some ten years ago the speaker had had the notion that suprapubic drainage would cure prostatic hypertrophy. He reasoned that by the drain he could give complete physiological and mechanical rest to the bladder and could prevent the unrest due to the alternate filling and emptying of that viscus. He had hoped that the hypertrophied prostate under the influence of rest would undergo absorption and atrophy, and that a decrease in size, which might be permanent, would take place. In this latter hope he had been doomed to disappointment. In all cases of hypertrophy of the prostate in which he kept up free drainage for from three to ten weeks, the urine became normal in color, the cystitis was much improved, and in some cases it was entirely cured. He was convinced that as a radical cure of prostatic hypertrophy suprapubic drainage was a failure. He spoke of hypertrophy of the prostate as a form of neoplasm, or tumor. It was either a diffuse myomatous hypertrophy or it was a localized formation of nodular myomata except in rare instances. Myoma could not be made to disappear by castration, either in men or in women, nor could it be made to do so by giving the parts in which the myomata were located physiological and mechanical rest by means of suprapubic drainage. His training and feelings were so much opposed to operations in the dark that the Bottini operation and even the popular internal urethrotomy could receive no support from him.

Suprapubic Prostatectomy.—Dr. C. H. MAYO, of Rochester, Minn., discussed this subject. Prostatic surgery had developed from suprapubic cystotomy. Statistics should only be considered in a general way, as representing the developing stage of prostatic surgery. One half of the enlarged prostates could be reached either from above or below equally well, one fourth better from above, and one fourth better from below, and a few would require a combined operation. The method of operation was influenced by the condition of the gland and by other known and oftentimes unknown conditions. The lateral lobes were glandular and encapsulated; the middle might be glandular and encapsulated, or there might be a muscular bar or hypertrophy of mucous glands and bladder tissue. Of known conditions which influenced one's choice, the fleshy, thick perinæum, with a long prostatic urethra and high-lying prostate, was one for the suprapubic or combined operation. Large, dilated bladders were easily reached from above, and small, contracted bladders more easily from below. Those with stone present and enlarged prostate were best approached from above. Of unknown conditions which influ-

enced one's choice, he had had cases of symptomatic stone not found by search, and emergency operations done in the country. These were the cases in which the suprapubic incision was the most satisfactory. Those with cystitis and old or acute secondary changes in the testes would often improve after castration. There was still a large class of prostatic sufferers in whom there were no symptoms of stone, little or no cystitis, and short perineal distance, in which a perineal operation was unquestionably the better method. The ease of operation, perfect drainage, and earlier recovery in chosen cases no doubt justified this choice. The special retractors of Sims and Fergusson simplified the accessibility of the gland from below, and it was quite possible from present indications that this method would be developed into the operation of the future by making possible an earlier diagnosis of the conditions and enabling an operation to be done before the patients reached the stage requiring a suprapubic incision. Before a suprapubic operation, a hypodermic of morphine was given to reduce the amount of the anæsthetic. Usually chloroform was indicated, but ether was preferred. The Trendelenburg posture should be used, with air inflation of the bladder and finger enucleation of enlargements after incising the capsule. Suprapubic drainage should be established by closing the bladder over the tube by Witzel's method.

(To be concluded.)



Letters to the Editor.

THE CITY BOARD OF HEALTH'S ANTITOXINE HORSES.

NEW YORK, March 5, 1902.

To the Editor of the New York Medical Journal:

SIR: Your correspondent, "X," seems to have misapprehended the purport of my letter, in which I stated that I did not believe, after careful investigation, that tetanus had followed as a consequence of vaccination. In order to put him and myself straight as to what I think of the manner in which the antitoxine supply is obtained by the New York city board of health, you will perhaps allow me to say that I still hold the opinion that the system followed by that body is altogether wrong. Although the antitoxine horses have been moved from the basement to the floor above in the veterinary hospital where they are boarded, on East Fifty-seventh Street, other things remain the same. The situation is bad, it is in a crowded neighborhood, the horses can only be exercised on the street, and when they have to be bled it is necessary to take them down to the laboratory, at the foot of East Sixteenth Street, and after the operation is performed they are led back a distance of two miles along crowded streets. This is a state of affairs which compares very unfavorably with the methods followed by other boards of health and manufacturers. In fact, I have no hesitation in saying, while fully recognizing the merits of Dr. Park and the other eminent men connected with the board, and acknowledging the excellence of their technics, that the New York city board of health has the worst arrangements for

the manufacture of antitoxine of any of the establishments I visited, and I have recently visited them all.

I still hold the opinion that boards of health should not engage in the manufacture and sale of antitoxine, no matter how well they may be equipped. To thus engage in mercantile pursuits is beneath the dignity of professional men, is an interference with those who are legitimately so engaged, and the wrong is intensified when those members of the board of health who have to do with the manufacture of sera are permitted to read papers before leading medical societies in which they incidentally, though not intentionally, extol the qualities of the wares they are purveying. I have the highest respect for Dr. Biggs, Dr. Park, and the other gentlemen connected with the board, as men of science, and I do not think they wish to be known as commercial men.

I am sorry that I cannot oblige "X" by giving him an account of the relative sanitary surroundings and care of the animals employed in the manufacture of antitoxine, because of the demands on your space, but I should be pleased to do so either publicly or privately, as he may suggest or arrange.

W. R. INGE DALTON, M. D.

THE ATTITUDE OF THE NEW YORK PROFESSION TOWARD REVACCINATION.

414 ST. NICHOLAS AVENUE,

NEW YORK, March 10, 1902.

To the Editor of the New York Medical Journal:

SIR: Referring to your editorial in the *Journal* of February 22, 1902, entitled Vaccination under Indirect Compulsion, I should like to say a few words. Is it possible that the majority of the physicians of the city of New York are opposed to revaccination? From my experience in the Department of Health I am strongly inclined to believe so. They rarely, if ever, advocate revaccination. They give certificates to school children upon request, provided there is a scar, without any reference to when the child was last vaccinated.

It is surprising how many certificates are offered to the school vaccinator that have no value whatever as showing protection.

This looks very much, if it looks like anything, as if the practising physician of this city rather opposed revaccination.

Much of the difficulty in getting revaccinations performed and in educating people to the necessity of such revaccination is due, I think, to this very fact.

A revaccination every five years would certainly protect any one against small-pox, no matter what the exposure. Isn't it worth the while,

L. C. POTTER, M. D.

A Correction.—In Dr. Eveleth's article on The Treatment of Gall-stone Colic, published in our issue for March 8th, a prescription (page 435) is preceded by the sentence "The patient should take a tablespoonful," etc. For "tablespoonful," *teaspoonful* should have been printed.

Book Notices.

Anatomy in its Relation to Art. An Exposition of the Bones and Muscles of the Human Body, with especial Reference to their Influence upon its Actions and External Form. By GEORGE McCLELLAN, M. D., Professor of Anatomy at the Pennsylvania Academy of the Fine Arts, etc. Illustrated by Three Hundred and Thirty-eight Original Drawings and Photographs made by the Author and expressly prepared for this Work. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 142. [Price, in cloth, \$10.]

This handsome folio volume, elaborately illustrated, is intended to serve as a guide for the art student in his studies of the human figure and to offer an exposition of the bones and muscles of the body, with special reference to their influence upon its actions and external form. The method employed by the author is essentially a combination of demonstrations from dissections of the superficial muscles with poses of specially selected male and female models, many of them in the attitudes made familiar by classic masterpieces of sculpture. Photography has been relied upon to teach the lessons of the palæstra and gymnasium of antiquity and to provide a short cut for the laborious studies in the dissecting-room and mortuary which played so large a part in the art education of many of the mediæval masters of art. This method of reproduction has one great drawback from the didactic viewpoint, in that the camera does not individualize. Individualization and accentuation are, however, of great importance in the analysis and representation of living structural forms. One good line drawing from a dissection, even exaggerating certain important features, is more instructive for the art student than multitudes of photographs, and the same may be said of the full-length cast. By far the best illustrations in this work, so far as its teaching purpose is concerned, are those of Houdon's *Écorché*, a plaster cast representing a full-length male figure, stripped of integument, and showing the superficial muscular system in marked and impressive relief. The cartoons for David's classical scene from the French Revolution, in which many of the figures were drawn by the master *in puris naturalibus*, are similarly instructive. The author's drawings of superficial muscles show the anatomical relations perfectly, but what is needed most by the draughtsman is the plastic guide.

The photographs of living models show a young man of perfect proportion and harmonious development. They are of great interest and of some value to the trained artist, but less so to the student who has not been taught what to look for. How much more valuable for him the studies of an arm, a hand, a torso by some one of the masters of drawing, studies which are the artistic daily bread of Continental ateliers, and which may be had in the greatest variety of styles, periods, and complexity of execution.

The female figure represented in the work is by no means a model in detail, however well proportioned. In addition to the defects mentioned by the author, she presents a number of structural peculi-

arities which are decidedly inartistic, noticeably a hollow thigh, flat insteps, and a certain coarseness of ankles and wrists. Let us add that even a perfect living model will lose in photographic reproduction, while the plaster cast retains most of its value for art instruction. This is shown most strikingly in plates 52 and 53, showing the hand of a man in various positions, and plate 70, showing the female foot in standing, dancing, walking, and so on. The reproductions are on much too small a scale and so lacking in modeling that the effect of underlying structural forms practically disappears. The foot of the discobolus, on the contrary, is so striking a piece of plastic work that an understanding of the muscular basis of the form fairly takes hold of us. We do not need to grope for it.

To turn from the illustrations to the text itself, full credit must be given for a very complete and able presentation of the subject.

The descriptive matter relating to the skeleton and muscular system is accurate and full, while not being exhaustive, and the concluding chapter on the proportions of the human figure presents the results of numerous measurements and a summary of traditional rules in a concise and intelligible way.

The press work of this volume deserves the highest praise. The type is unusually large and clear, the paper of exceptionally fine quality and, fortunately, free from the glaze which but too often characterizes the modern art work. In conjunction with the author's lectures on anatomy, this work will undoubtedly be of service to the student of art, as it is to the medical man who is interested in the æsthetic relations of his calling.

Atlas and Epitome of Special Pathological Histology. By Dozent Dr. HERMANN DURCK, Assistant in the Pathological Institute in Munich, etc. Authorized Translation from the German. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology in Rush Medical College, Chicago. With 123 Colored Illustrations on 60 Lithographic Plates. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 192. [Price, \$3.]

One of the marked features of this work is the liberal number of handsome and accurately drawn illustrations. In nearly every instance the structural details are so well brought out that the practised eye has little or no difficulty in making a diagnosis at a glance from the drawing alone. Until a better method for the reproduction of photomicrographs is found, it seems that drawings such as these, even though they are somewhat diagrammatic at times, are as satisfactory and instructive as possible. The drawings have been reproduced with an accuracy and faithfulness that, it is quite safe to say, have not previously been approached.

The present volume completes the theme of special pathological histology, but one volume dealing with general pathological histology is in course of preparation. The text has been carefully translated from the German by Dr. Hektoen, who has added many notes of much value and liberal references to recent monographs. This volume includes a consideration of the lesions of the liver, urinary organs, sexual organs, nervous system, skin, muscles, and

bones. Diseases of the pancreas have hardly received the amount of consideration warranted by the importance of the subject. The work is a good one, free from defects, and one which we feel sure is sure to receive recognition by all interested in pathological histology.

First Aid to the Injured and Sick. An Ambulance Handbook. By F. J. WARWICK, B. A., M. B. Cantab., M. R. C. S., Associate of King's College, London, etc., and A. C. TUNSTALL, M. D., F. R. C. S. Ed., Surgeon-Captain, East London Volunteer Brigade Bearer Company, etc. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. xiii-232. [Price, \$1.]

No dilettanteism characterizes the make-up of this pocket manual, so replete in all the aspects bearing on first aid methods. The anatomical and physiological facts for an essential intelligent application of these methods are tersely given, and the book is very graphically illustrated.

The authors would have "first aid" imply "immediate temporary assistance until the arrival of a doctor"; but their recommendations not infrequently transgress this limitation. For instance, we believe that the elaborate toilet of a wound and the reduction of fractures both come within the doctor's sphere of action. The booklet is better adapted to the wants of a well-drilled hospital corps than to the itinerant Samaritan, and the title-page, as well as the preface, gives ground for this impression.

A Text-book of Surgery. By Dr. HERMANN TILLMANN, Professor in the University of Leipsic. Translated from the Seventh German Edition by BENJAMIN T. TILTON, M. D., Instructor in Surgery, Cornell University, and JOHN ROGERS, M. D., Instructor in Cornell University. Edited by LEWIS A. STIMSON, M. D., Professor of Surgery, Cornell University. Volume I. The Principles of Surgery and Surgical Pathology. With Five Hundred and Sixteen Illustrations. New York: D. Appleton & Company, 1901. Pp. viii-841.

The very favorable reception accorded the first English translation is reflected in the prompt appearance of a second edition based on the recent seventh edition in German. The innovations are chiefly in the field of pathology and bacteriology, and whereas much that has become obsolete has been rejected, only that which is of historical interest has been retained. Since it is thus fully equipped in the more recent advances, a new wave of popularity should be in store for this excellent translation of Tillmann's systematic treatise on the principles of surgery.

Miscellany.

A Simple Rule for Estimating the Amount of Solids in the Urine.—Dr. L. Duncan Bulkley (*Journal of Cutaneous and Genito-urinary Diseases; Cincinnati Lancet-Clinic*) gives the following: "Multiply the last two figures of the specific gravity of the urine by the number of ounces voided

in twenty-four hours, and add 10 per cent. to the product. Thus, if the amount passed in twenty-four hours was 36 ounces, and the specific gravity 1.021, it would be $36 \times 21 = 750 + 10 \text{ per cent.} = 831$, the number of grains of solids in the whole amount. By comparing this with the table, it can readily be ascertained if the amount is above or below the normal standard for the body weight of any patient." Dr. Bulkley says that the method is Haines's modification of Hassler's.

Word-blindness Discriminating against Certain Languages.—The following very extraordinary case was related at a meeting of the Glasgow Medico-chirurgical Society, on November 1, 1901, by Dr. J. Hinshelwood (*Glasgow Medical Journal*, January): A man, aged thirty-four years, had an attack of complete aphasia, motor and sensory. The motor and auditory aphasia rapidly passed off, but the word-blindness persisted for some time. The patient knew four languages—Greek, Latin, French, and English—and it was found that while the word-blindness extended to English, French, and Latin, it did not affect Greek, which the patient read fluently; nor did the word-blindness affect in equal degree the other three languages, but was greatest with English, less with French, and least with Latin. The patient gradually recovered his power of reading, and in about three months' time all trace of the word-blindness had disappeared.

Dr. Hinshelwood thought that this case confirmed in a very high degree the views he had expressed in previous papers and in his book on *Word-blindness*, viz., that our past visual impressions were arranged in the visual memory centre, in the left angular gyrus, in definite and ordered groups, and hence that a patient, knowing several languages, might lose the visual memory of one or some only, while others might escape. The degree and extent of the word-blindness would depend upon whether the lesion affected the whole or only a part of the visual memory centre. In confirmation of this view, he also quoted a case from his own experience where a Frenchman, with a brain lesion, became word-deaf to French and not to English. This could be explained in the same way, viz., that in the auditory word-centre the word-memories of different languages were arranged in different groups.

Cost of the English Army Medical Service.—The estimate for the expenses of the British army for the ensuing year, which have been presented in the House of Commons, as a basis for the annual appropriations, shows the total cost for "the medical establishments, pay, etc., of the army" for the year, to be £1,025,000 this year, as against £1,088,000 for last year. There is an increase of £92,700 against an apparent saving of £156,300, which is really only a saving of £56,300 in medicines, etc., the nominal saving of £100,000 being the sum voted last year for the reorganization of the army medical service, which is not yet complete. The total number of officers on the medical establishments is placed this year at 1,045, against 978 last year; but the true effective strength of active medical officers in this total only comes out on analysis. From the total of 1,045 must be deducted, first, 88 "acting medical officers," but better known as retired medi-

cal officers employed on £150 a year, *plus* retired pay; secondly, 5 medical officers of Indian native battalions at colonial stations; thirdly, 35 quartermasters, R. A. M. C. These deducted leave a total of 917 active medical officers; but genuine deductions do not stop here. A further deduction of 335, borne on the Indian establishment, whose pay is not provided for in these estimates, must be made; which reduces the true effective strength of active medical officers for all duties at home, and in the colonies and dependencies other than India, and for all relieving, including Indian reliefs, to 582; but even here we cannot halt, for, from the latter number at least 5 or 6 per cent. should be deducted for officers seconded or sick, and therefore immediately non-effective, at least for all purposes of foreign reliefs. The strength of the Royal Army Medical Corps, non-commissioned officers and men, is shown as 3,045; and the pay, £10,000. The "cost of medicines," etc., is given at £160,000 against £216,000 last year. A few other medical items spread over the votes for clothing, army medical school, head-quarter staff, etc., give a total of £20,358.

The Question of an International Language of Science.—Dr. Joseph Dulberg, of Manchester, in a letter to the *British Medical Journal* for March 1st, in which he champions the claims of Latin as an international language of science, urges that journal to use its influence in establishing an agitation on that line, and adds the following bold suggestion:

"In the meantime, may I venture to make a suggestion to you, sir, and to ask you to give it your careful consideration? How would it be if you were to make a beginning by publishing the *Epitome* of the *British Medical Journal* in Latin? Culled as it is from medical journals written in different languages, it appears to me particularly adapted for such an innovation, which would have, moreover, the additional great advantage of serving to refresh the memory of those whose Latin has become somewhat rusty since they have left the school benches for the armchair of the consulting room."

We await with interest the *Journal's* action on this point.

The Various Military Hospitals in the Peking Expedition are described in the December number of the *Archives de médecine navale* (cited by the *British Medical Journal*) by Dr. Machenaud, the chief medical officer of the French military hospital at Peking. The first hospital visited was that belonging to the American troops who were cantoned in the Palace of Agriculture, opposite the Palace of Heaven, which was occupied by the British, the terminus of the Peking and Tientsin Railway separating the two continents. The American hospital was accommodated suitably enough in one of the pavilions of the palace, and contained 100 beds, the staff consisting of Chief Surgeon-Major Yves and two assistants. On the day Dr. Machenaud paid his visit there were forty-three patients, and among them he was told that there was not a single case of typhoid fever. The establishment and everything connected with it seem to have met with the visitor's unqualified admiration, the installation and equipment being as near perfection as possible. In the first place Dr. Machenaud

was shown the dispensary, and the drugs, which were all compressed, were found to be in perfect condition; chloral and salol alone, among a complete assortment of medicines, being found liable to deterioration after the opening of their containers. In a little case, the same size as the volume containing the regulations for his service, Dr. Machenaud saw the pharmaceutical and surgical supply of a battalion for three months. In addition to thermometer, hypodermic syringe, "and all the usual instruments," there were about forty little flasks full of compressed tablets, besides "pastilles" for subcutaneous injection. Nothing could be more portable. The case might be carried in the pocket of the medical officer who could not but feel satisfaction at having an adequate armament available at the shortest notice. Compressed tampons, sterilized silk and catgut, an apparatus for distilling and aerating water on a large scale, a portable kitchener, portable table equipment, a petroleum stove for keeping foods and drinks warm, folding chairs, besides several other things which struck the visitor as exceptionally meritorious, are described at considerable length. Dr. Machenaud was also favorably impressed by a hypodermic syringe which seems well adapted for the rough usage of military service. It consists of two metal cylinders, one hollow and the other solid. The latter fits the former accurately and is graduated to show the amount of fluid injected. There is no glass to break or piston to get out of order, and perfect disinfection can be assured by plunging into boiling water. The British "ambulance," which was the objective of Dr. Machenaud's second visit, had the advantage of being splendidly housed, but the visitor has little to say that is complimentary. While he deals chiefly in generalities, evidently the British hospital at Peking was far from perfect in his estimation. The material sent from India appeared to him to be incongruous and to be composed of old trash. The ventilation of the wards was defective and the warming by means of stoves could not be commended. Dr. Machenaud also says that there was no operating room and adds that no one showed him a bath-room, or a kitchen, or any reserve of material. In the Japanese hospital, with a strength of 3,500 men, there were only 33 patients, mostly convalescents from typhoid fever and bronchitis. The equipment, surgical as well as medical, was very complete, all the instruments and appliances having been manufactured in Japan, although the drugs were imported from Hamburg. Hory's apparatus for detecting cheating in recruits by means of prismatic glasses and colored letters was included in the ophthalmic armament, which in other respects was very well supplied. When leaving the hospital Dr. Machenaud and his companions were much interested in the care their Japanese *confrères* took to wipe their feet on wet mats at the doors of the building. These mats, it seemed, were impregnated with a germicide solution, and the object was to free the feet from any noxious microbes that might have been picked up while walking through the hospital. The fourth and last establishment on the list was the German Field Hospital, No. 2. Here, in the opinion of the French visitor, everything was comparatively good, although not equal to the perfection of the American ambulance.

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ON THE TREATMENT OF FRACTURE OF THE ANATOMICAL NECK OF THE HUMERUS BY THE AID OF THE RÖNTGEN RAYS.*

By CARL BECK, M. D.,

NEW YORK.

The great difficulties which used to obstruct the rational treatment of fracture of the anatomical neck of the humerus or its epiphysial separation, are now materially lessened by the Röntgen method. The following case may serve as an illustration:

A boy, aged twelve years, while playing football, was violently thrown on his left shoulder. Dr. W. T. Alexander, who saw the patient immediately afterward, diagnosed fracture of the anatomical neck of the humerus, and suggested examination with the Röntgen rays. When I saw the patient I found the swollen arm shortened; there was

(Fig. 1), where a sharp prominence could be palpated. Abnormal mobility and crepitus were present to a moderate degree, and, on rotating the arm by grasping the elbow, the head of the humerus



FIG. 2.—Right-angled displacement of fragments in fracture of anatomical neck of humerus

was found not to participate in the motion. These signs appeared to me to indicate a fracture of the anatomical neck of the humerus. So far as the detailed features of the fracture were concerned, it seemed to me that there was a lateral displacement of the transversely broken fragments, which was corrected to some extent when outward rotation was attempted.

How much I was mistaken in this assumption was illustrated by the skiagraph. To be sure that my memory would not deceive me later, I drew an anatomical sketch of my silent diagnosis. Let me take this opportunity of advising this method of self-examination, which translates the old *Τρόπος σκαυρὸν* of the Delphian temple into practice. Thus we learn, on the one hand, that we cannot always depend on even a highly cultivated palpatory talent, and, on the other, we are taught to improve the power of our judgment by comparing our sketch with the lifelike picture as it is given to us by the Röntgen rays.

As the skiagraph (Fig. 2) shows, the axes of the fragments are found to be in a right angle, and also the diaphysis is pushed upward alongside the upper fragment, thus forcing itself between the latter and the integument. This explains the inversion of the skin as shown in Fig. 1.

In order to reduce the small fragment I tried extension and abduction. The latter procedure relieved the integumental tension, but it did not result



FIG. 1.—Dr. Beck's case of fracture of anatomical neck of left humerus showing inversion of integument just below acromion.

also considerable deformity, especially a deep inversion of the integument just below the acromion

*Demonstrated to the Surgical Section of the New York Academy of Medicine, October 14, 1901

in reposition. Even under anaesthesia, it was impossible to appose the small to the diaphysial fragment. Now since the mountain would not come to Mahomet, Mahomet had to go to the mountain, and so, instead of approximating the little fragment to

idea of fixing the arm in any of the usual positions, and immobilized it in the vertical, as soon as I was satisfied that there was thorough approximation again. This was done by a thoracic plaster-of-Paris dressing, supported by the addition of mod-



FIG. 3. Dr. Beck's case of fracture of the anatomical neck of the humerus. Extension discarded after two weeks.

the large one, I tried to appose the large fragment to the anatomical head. Accordingly the arm was lifted vertically until I could feel the apposition of the fragments in the axilla. The replacement seemed in fact to be so successful that I lowered the

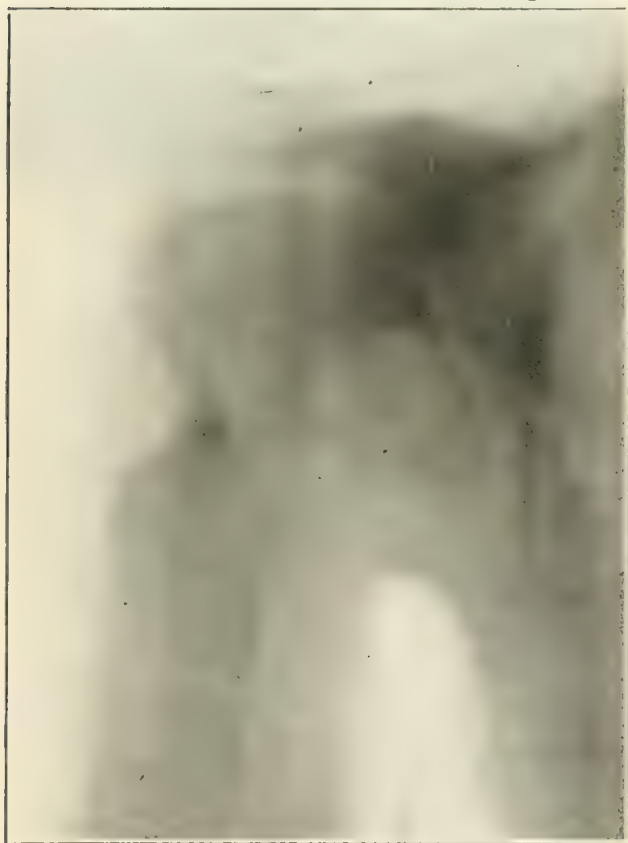


FIG. 4. Complete apposition of fragments in Dr. Beck's case of fracture of anatomical neck of humerus. (C. P. 2)

arm slowly, feeling confident that I should then be able to fix it in a triangle. But, so soon as the arm had left the vertical direction, the fragment escaped again in the old position. I therefore gave up the



FIG. 5. Dr. Beck's case: Condition of shoulder joint seven weeks after accident.

erate weight-extension. That the fragments were in blameless apposition was proved by the Röntgen rays.

After two weeks I made a trial of lowering the arm, under anaesthesia, and the extension was discarded (Fig. 3). After another two weeks the arm could be brought into a rectangular position without any difficulty, and it appeared that perfect agglutination had taken place. The arm was immobilized again in a thoracic plaster-of-Paris dressing, this time in the rectangular position. The skiagraph (Fig. 2), taken through the plaster-of-Paris dressing, shows the fragments in complete apposition. After two weeks this dressing was removed and a plaster-of-Paris splint applied. Seven weeks after the accident the function of the arm was perfectly restored. The skiagraph (Fig. 5) shows the condition of the shoulder joint at that time. Without the knowledge obtained by the Röntgen rays in this case, no such result could have been expected.

Civil Service Examinations will be held by the United States Civil Service Commission in all the principal cities of the United States on May 6th and 7th for the following positions in the Philippine service, the salary named being that given for the first year: Agricultural college, \$1,500; analytical chemist, \$1,500; physical chemist, \$1,800; physiological chemist, \$1,800, and pharmacologist, \$1,800. The degree of M. D. is a prerequisite in the last two vacancies named.

THE DIFFERENTIAL DIAGNOSIS
BETWEEN
DISEASE OF THE GALL-BLADDER AND
DISEASE OF THE VERMIFORM APPENDIX;
WITH A REPORT OF TWO CASES.

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Typical uncomplicated cases of empyema of the gall-bladder, as well as other pathological conditions of the same organ calling for surgical interference, are familiar to all. The same may be said of diseases of the vermiform appendix; but to distinguish between the two at times is a matter of no little difficulty, if not entirely impossible in the absence of an anæsthetic, and even then, when tympanites presents itself to a marked degree the diagnosis cannot always be made. Many cases might be cited bearing out this fact, but the ones herein mentioned will speak for the many others occurring in my hospital and private practice, and will offer a sufficient excuse for their publication.

CASE I.—Patient, a Mrs. D., married; no children; age fifty-six years. Two days previous to her admission to St. Catharine's Hospital she complained of pain in the abdomen, which radiated, but was most severe in the right iliac region. Temperature 102° F.; constipation and vomiting. *Examination:* No pain, on left side, contour of the abdomen normal, right rectus muscle rigid, right iliac fossa hard and painful. Vaginal examination showed nothing; rectal examination, nothing except pain when pressure was made in the direction of the right iliac fossa. Diagnosis doubtful—an appendicular abscess thought of. Operation at St. Catharine's Hospital, June 6, 1896; when patient was anæsthetized, a distinctly movable tumor was noticed on palpating the space about the lower border of the right lobe of the liver. The incision was kept well over the tumor, which necessitated hugging the outer border of the right rectus muscle. On entering the peritoneal cavity, evidences of peritonitis were present, as shown by the congested and thickened peritoneal surfaces.

Cholecystotomy was performed by first stitching with fine silk the gall-bladder to the parietal peritonæum by a continuous suture, after which the exposed part of the gall-bladder was carefully packed around with sterilized gauze, so as to protect the peritoneal sac. The patient was then turned on her right side and an incision made through the fundus of the gall-bladder, when a large quantity of a thick, viscid fluid, mixed with pus, escaped. On passing the finger into the bladder, the walls of which were very much thickened, an immense number of gall-stones was encountered and removed; it was then thoroughly irrigated with a normal salt solution, its thickened edges united by means of silk sutures to the abdominal wall, a large drainage tube introduced, the abdominal wall closed with silkworm

sutures up to, or near, the drainage tube, and an antiseptic dressing applied. A biliary fistula remained for some weeks, but gradually closed under appropriate treatment. The woman, up to date, is in the enjoyment of good health.

The point of interest in this case is purely a diagnostic one. The patient's previous history was negative—the suddenness of the attack, the severity and persistence of the pain, as well as its diffuseness, and finally its localization in the region of the right iliac fossa. The temperature, vomiting, and constipation, all of which without jaundice, would justify almost any physician or surgeon, no matter how familiar with the disease, in making a diagnosis of acute appendicitis. The larger biliary calculus closed the mouth of the cystic duct; the hepatic and common ducts were healthy, hence the absence of jaundice.

CASE II.—Patient, Mr. K., aged twenty-four years, married, a German. *Previous history:* Had several attacks of supposed biliary colic, which lasted for a day or two, and then passed off. When I saw him he was in great agony from abdominal pains; nothing, not even large doses of morphine hypodermically, seemed to relieve him. Temperature varied from beginning of attack between 101° and 102° F.; he vomited continuously; bowels could not be moved; no jaundice. Facial expression was one of great suffering. *Examination:* Abdomen was intensely tympanitic and painful to the touch almost at any point; the greatest point of tenderness, however, was about the lower border of the right lobe of the liver, where a well-defined swelling was noticeable. Considerable tenderness was found just above the anterior superior spinous process of the ilium. Diagnosis doubtful. Gall-stone; ileus in mind because of the patient's supposed cholelithiasis. From the beginning of attack to operation was sixty-three hours. Operation at St. Mary's Hospital. Classical incision lines for appendicular and biliary troubles were disregarded, and an opening was made between them, so that it might be enlarged either way, depending upon the findings. On entering the peritoneal cavity there was a gush of pus from every direction, the finger was pushed up in the direction of the gall-bladder, where the only thing discovered was torrents of pus. The incision was enlarged both ways, the gall-bladder was sought, and found to be healthy; the appendix was then picked up, thoroughly diseased with a large concretion crowded into its base, and perforated just above the appendicular extremity of the stone. This was thought to be a gall-stone which had escaped from the gall-bladder by a process of ulceration. The diseased appendix was removed at its base; the cæcum was removed for some little distance on its walls; a purse-string suture of very fine silk was introduced, sutures of the same material after the method of Lembert were then put in. Not only was the peritoneal cavity filled with pus, but so also was the pelvic cavity. The abdominal cavity was flushed with normal salt solution and drained through the lumbar region with rubber tubing; a

glass drainage tube was passed into the pelvis through which strips of iodoform gauze were pushed. Iodoform wicking drain was placed over the stitched cæcal wall where the base of the appendix was, and brought out through the abdominal wound. The patient made a good recovery.

Points of interest in this case were: A previous history of gall-stone colic, which, perhaps, the patient never really had; constipation; vomiting; peritonitis; tympanites; tumor well up in the region of the gall-bladder; suddenness and fury of the attack; apparent symptoms and history of gall-stone ileus. In fine, it was a case of disease of the vermiform appendix, due to an intestinal concretion (enterolith) weighing sixty-three grains, and on section composed of concentric layers of ammonium and magnesium phosphate with some inspissated mucus. This concretion was not, in my judgment, formed in the appendix itself, because it was partially in the gut, with the greater half firmly pressed into the mouth of the appendix, which was ballooned at this



CASE II.—An intestinal concretion weighing 63 grains, removed from the appendix vermiformis.

point only, as though it had been crowded from without. This statement is made because there are excellent authorities who contend that concretions of this character are always formed in the appendix, to say the least. The position in this case argues strongly against that theory.

Under these circumstances it would not require a very great stretch of the surgeon's or physician's diagnostic powers to mistake this condition for an intestinal obstruction due to a migrating gall-stone, or a perforation due to the same cause or an infection of the peritoneal cavity by the wandering bacteria that are ever ready to crowd into an antrum.

When a patient who has peritonitis is to be examined, and a diagnosis is to be made between the above-named diseases, the medical attendant is at once handicapped by the loss of localized points of tenderness, on account of the peritoneal pain; the

various abdominal organs cannot be palpated for the same reason; they are also hidden by the generally existing tympanites. Histories, as all physicians know, are indefinite and unreliable as a rule, hence the diagnosis under these conditions should be guarded.

In all such cases operation should be urged, and, in the absence of a well-defined tumor, the small exploratory incision should be made between the biliary and appendical incision's points, so as to enable the surgeon to enlarge his wound either way as circumstances indicate, because all surgeons agree that the smallest incision through which good work can be done is not only to be recommended, but is in every way preferable.

When we remember the many infective diseases, the pathological conditions of which render the common duct of the gall-bladder a ready receptacle for bacterial invasion; when we remember that the cardinal symptom, *pain*, is here often misleading, since the cystic plexus, which supplies the gall-bladder, is intimately connected with other important plexuses of the sympathetic system, and thus causes the pain to be widely distributed (and, indeed, in clean-cut cases of gall-bladder disease I have more than once found well-marked points of tenderness in the right iliac fossa); when we reflect that the gall-bladder contains calculi in about 10 per cent. of the adult subjects (Joseph Bryant), we might upbraid ourselves with too often slighting this organ and its appendages in our physical examination.

The inference which might be drawn from the report of the above cases is perhaps that, when very similar symptoms are present in both diseases, the ailments of the appendix too often get the benefit of the doubt.

The pathological changes to which the gall-bladder and its ducts are susceptible, the secondary predisposing causes, due to coexisting diseases of neighboring organs, as well as bacterial incursions due to the various fevers and intestinal troubles, are the sentinels which should ever sound a warning of caution to the careful physician or surgeon while making his searching investigations, because a suppressed horror nearly always follows the medical attendant's announcement that appendicitis is present. A concealed disappointment proportionately great accompanies the statement, after operation, that the appendix was found healthy, but a condition of the gall-bladder or its ducts, equally dangerous, was relieved. A distinction or a reasonable and substantial doubt, expressed at the proper time, would have prevented the depreciated confidence which now is sure to crowd into the minds of the patient and his friends.

PULMONARY EMBOLISM AFTER OPERATIONS UPON THE BLADDER AND PROSTATE.

BY EDWARD L. KEYES, JR., M.D.,

NEW YORK.

In the present unsettled state of surgical opinion concerning the treatment of prostatic hypertrophy, many of our most specious arguments are founded upon no more solid basis of fact than the personal views of some one or two observers, or the unfinished reports of some more than usually daring or lucky surgeon. That this should be the case is inevitable. We are only just emerging from the surgical gloom so aptly expressed by Guyon's words of a decade since: "For prostatic hypertrophy there is no radical cure."

Even then there was here and there a voice of protest, an occasional report of successful operations performed by this or that method. And since then there has been a steadily increasing tendency toward the ideal treatment—the surgical removal of the obstruction. But no giant has arisen to dispel the darkness by a single stroke of his scalpel, and though we have scattered the phantoms of iliac ligation, perineal puncture, testicular injections, etc., the various forms of prostatomy and prostatectomy, Bottini's operation, castration, and vasectomy are each of them realities to some, but mere misty spectres to others. Report clashes with report and statistics are opposed to statistics. It is with the greatest difficulty that any opinion can be formed, and no opinion can have any practical weight unless founded upon a considerable clinical experience, for the surgical principles of operations upon the prostate are only beginning to crystallize and have not yet assumed a sufficiently definite form to command universal acceptance. Any clinical fact capable of general application to this subject is, therefore, well worth consideration, even though it be rare and relatively unimportant, for every point of this sort definitely determined is so much to the good in the advancement of our knowledge.

It has been my fortune to encounter personally and in the literature a number of cases bearing a striking similarity to each other; all of them emphasize a danger connected with operations upon the prostate, to which little attention has been paid heretofore. To make some effort at estimating the importance of this danger, swift, fatal, and entirely unheralded as it is, is the object of this paper.

Ever since the nature of pulmonary embolism was first recognized, it has been known as a cause of instantaneous death arising without provocation or warning, and attacking alike young and old, strong and feeble, with but little discrimination. Welch's¹

description of the symptoms of pulmonary embolism deserves quotation. He says:² "Death may be instantaneous from syncope. More frequently the patient cries out, is seized with extreme precordial distress and violent suffocation, and dies in a few seconds or minutes. Or, when there is still some passage for the blood, the symptoms may be prolonged for hours or even days before the fatal termination. The symptoms of the occurrence of pulmonary embolism are the appearance of a painful sense of oppression in the chest, rapid respiration, intense dyspnoea, pallor followed by cyanosis, turgidity of the cervical veins, exophthalmos, dilatation of the pupils, tumultuous or weak and irregular heart's action, small, empty radial pulse, great restlessness, cold sweat, chills, syncope, opisthotonos, and convulsions. The intelligence may be preserved or there may be delirium, coma, and other cerebral symptoms. Particularly striking is the contrast between the violence of the dyspnoea and the freedom with which air enters the lungs, and the absence of pulmonary physical signs; unless in the more prolonged cases it be the signs of œdema of the lungs."

Three types of pulmonary embolism may be considered:

First.—Simple syncope. The patient dies immediately and without a struggle. This is mentioned by Welch as a possible mode of death. It is certainly rare and in none of the authenticated cases that I have studied did death occur in this manner. Indeed, sudden post-operative death by simple syncope would suggest cardiac rather than pulmonary embolism. As Trousseau³ has it, "There is a cardiac embolism producing syncope, as well as a pulmonary embolism producing dyspnoea and asphyxia."

Second.—The ordinary type of suffocation soon terminating in death. This is the classic pulmonary embolism, which Welch describes in detail.

Third.—The cases in which death does not take place.

For our present purposes it is convenient to group together all cases, from those that show in a mild form all the symptoms of pulmonary embolism and yet the patient survives, to those that are disturbed little or not at all by the embolus.

Indeed the third class of cases does not concern us at all, for the reason that I have not found any recorded recovery from pulmonary embolism after operations upon the male bladder or prostate. That such recovery may occur is evident, but it is futile to discuss the matter theoretically.

The first class, viz., simple syncope, is represented by only one case, not confirmed by autopsy, which

¹Albutt's *System of Medicine*, 1896, vii.

²*Op. cit.*, p. 261, 262.

³*Chronicle médicale*, 1868, iii, 7, 8.

may therefore have been of a different nature. The common run of cases follow the classical lines of sudden dyspnœa, precordial pain, and almost instantaneous asphyxia. They have occurred almost uniformly when the patient was doing well, often when his cure was considered complete.

The most striking idiosyncrasy of this sort of pulmonary embolism is that it arises from a thrombosis of the pelvic veins, usually the internal iliacs, and thus may well escape detection until the fatal accident occurs. There is rarely any definite evidence of phlebitis. Since the external iliac and its tributaries are not involved, there is no swelling or pain in the thigh or leg. Movements of the thigh may be exquisitely painful, there may be continued intense pain within the pelvis, there may be more or less rise of temperature. Yet, any of these symptoms occurring shortly after operation is easily explained, especially if the patient is old and enfeebled, on the theory of uræmia, mild sepsis, hysteria, or what not. As a matter of fact, in none of these cases has the diagnosis of thrombosis been made before the patient died of embolism.

In searching for the recorded cases of embolism after operations upon the male bladder and prostate, I have encountered certain records which have an indirect bearing upon the subject. Wyder⁴ reports nine cases of fatal pulmonary embolism after gynecological operations, several of them of a minor character, such as cervical cauterization, exploratory laparotomy, ventro-fixation, and uterine tamponing. It is notable, however, that of these four cases, two were suffering from extensive carcinoma, and the last from septic endometritis. All of the other fatal cases were uninfected and uncomplicated. The patients died on the sixth, seventh, eighth, ninth, tenth,⁵ eleventh, fourteenth,⁵ and twenty-ninth day. Wyder also cites Mahler's⁶ report of 22 cases of pulmonary embolism, 10 *post partum* and 12 after gynecological operations. Welch¹ mentions four cases of thrombosis of the left leg occurring among 131 cases of appendicitis seen by Halsted; and George P. Biggs⁷ reports five autopsies selected from a series of 350. In each case of Biggs's series death was due to pulmonary embolism, subsequent, once to fracture of the neck of the femur, once to fracture of the acetabulum and spine of the ischium, and three times to operation, viz., one herniotomy, one appendectomy, and one cystotomy. This last I shall incorporate in the series below. In the other cases death occurred on the fifth, sixth, eighth, and forty-first day. I witnessed the death in this last case. The patient had been struck on the back by a barrel of flour, which

broke several ribs and dislocated his right hip. The dislocation was reduced, but he lay in bed for six weeks suffering continuously and totally unable to walk. At last he began to improve; but one day, immediately after the attending physician had said a cheering word to him, he suddenly sat up in bed, seized with a violent dyspnœa. To the surgeon's questions, the patient answered that he did not feel short of breath (although his breathing was shallow and hurried), but was suffering from a pain over his heart and was overpowered by fear of some unknown danger. In a few minutes he was dead.

Some inferences may be drawn from the above cases. None of them were diagnosticated before death. All of Wyder's and Biggs's cases were confirmed by autopsy, excepting one of Wyder's, in which no cause of death was found *post mortem*, although the symptoms had been characteristic of pulmonary embolism. Death usually occurred in the second week; once as late as the sixth week. In Wyder's cases, those patients that succumbed after relatively unimportant operations had, in three cases out of four, either sepsis or carcinoma as a predisposing factor to sluggishness of the circulation.

The cases of embolism after operations upon the male bladder or prostate, those cases namely with which we are directly concerned, are not numerous. Fatal embolism has followed suprapubic cystotomy twice.

CASE I (Biggs) "*Suprapubic Cystotomy for Vesical Calculus; Pulmonary Embolism*."—G. W., aged sixty-three years, United States, barber. The patient did particularly well after the operation, and had been told that he could go home the following week. On the tenth day after the operation he suddenly developed marked dyspnœa and severe precordial pain and distress. Death resulted in about twenty minutes."

"At autopsy the pulmonary artery and its main branches were found to be packed full of soft, red ante-mortem coagula, which were not adherent to the vessel walls. A similar coagulum, five centimetres long, was found free in the inferior vena cava. The diameter of all these coagula suggested their probable formation in the iliac veins, but no thrombi could be found in these vessels."

CASE II (Horsley⁸).—Suprapubic lithotomy was performed on a patient thirty-two years old. Suppression of urine threatened on the third day, but was averted by diuresis. On the fifteenth day he was, for the first time, lifted into a sitting posture. He gasped, turned purple in the face and complained of precordial pain. The doctor was summoned and arrived in five minutes. The patient's heart was faintly fluttering and his face still bluish. Two minutes later the heart stopped. No autopsy.

Bottini's operation is not without its casualties:

⁴Samuelson, *Uterine Pterygia*, N. Y., 1891, 1892, 1893, 1894.

⁵Alburtus, *New York Medical Journal*, 1869, vii, 11, 291, 292.

⁶Leopold, *Contributions to Obstetrics*, 1861, ii.

⁷New York Medical Journal, 1890, lxx, 185.

⁸New York Medical Journal, 1890, lxx, 185.

CASE III.—Freudenberg⁹ reports, without details, a death from embolic pneumonia after a Bottini operation.

Two of Willy Meyer's cases (IX¹⁰ and XXII¹¹), though not confirmed by autopsy, are possibly examples of pulmonary embolism.

CASE IV (Willy Meyer).—The patient was sixty-four years of age. Had suffered from his prostate nine years and been infected two years. Bottini's operation: Three cuts, the posterior one 3.75 centimetres long; the lateral ones 3.5 centimetres long (the prostate was "about the size of an apple"). The patient, who had only employed the catheter three times a day before operation, was seized with a chill six hours later. The temperature rose to 104° F., pulse 120. Catheterization every six hours being inadequate to cope with the increasing tenesmus, a permanent catheter was introduced, but without avail. Eventually suprapubic cystotomy had to be performed on the tenth day for the relief of spasm. The operation was "done in a few minutes under incomplete general anæsthesia." "Scarcely five minutes after he had left the table, he suddenly turned deep blue in the face, and his eyes bulged forward. Then he rose in bed gasping for air, and fell back dead." No autopsy. As the patient's pulse had been intermittent before the first operation, though he was "of strong physique," Dr. Meyer is inclined to attribute his death to "a real heart failure." "The ten days of more or less fever, combined with the necessity of administering general anæsthesia, were too much for the heart, already affected by myocarditis; the organ simply gave out. Another explanation would be embolism of the pulmonary artery." The symptoms would seem to favor the latter supposition.

CASE V (Willy Meyer).—Patient seventy-two years of age. Urinary symptoms for three or four years. Lately absolute retention; regular catheterization. Two months before operation he had a cellulitis of the right hand, treated by incisions and requiring six weeks to heal. Three weeks later Bottini's operation. Before operation the patient was emaciated, the bladder catarrhal, the temperature varying between 100° and 101° F.; pulse not over 100. Although the tip of the finger could not reach above the prostate before operation, the beak of the incisor "was palpable about one inch above the anus." Posterior incision, 1.5 centimetres; lateral incisions, 1 centimetres each. After a succession of chills, a phlebitis of the left saphenous vein declared itself on the third day. Meanwhile, the patient had regained his ability to urinate and the general condition was good; the "spasms at the neck of the bladder had discontinued." From the fifth day on, the patient failed, however, and on the tenth day "physical examination demonstrated the presence of a lobar pneumonia, to which the patient succumbed" on the following day. The author concludes: "It is certain that the patient did not die in consequence of Bottini's operation as such. . . . What caused his

death was the phlebitis with probably following embolism." As he observes in another place, the pneumonia may well have been hypostatic.

Curiously enough, these two cases are the ones that figure in Dr. Meyer's statistics as "indirectly due to the operation."

Three deaths after prostatectomy, all of them probably due to pulmonary embolism, I have gathered from Dr. Keyes's case books. Two other suggestive cases have been reported by Dr. Fuller.¹²

CASES VI and VII (Fuller).—One case, "who was apparently progressing favorably, experienced a severe seizure of cerebral apoplexy on the third day. . . . The other died suddenly on the fifth day, perhaps of thrombosis."

The former case is suggestive of a cerebral embolism; the latter of a pulmonary or cardiac one. No autopsy is mentioned in either case.

CASE VIII (Keyes).—Patient sixty-three years of age. He has suffered for two years from prostatic obstruction and stone. Suprapubic prostatectomy. Mulberry calculus extracted. Pedunculated middle lobe torn off with the rongeur forceps. Little bleeding. No post-operative chill or shock. The subsequent history is tantalizing: "Death after two weeks, apparently heart failure. No trouble with the wound. Some septicæmic symptoms apparently, but the head was always flighty. Indeed, he was generally delirious at night."

This report was written in 1892. There are no other data, but it smacks of uræmia and embolus.

CASE IX (Keyes).—Patient sixty-four years of age. Urinary difficulties for eighteen months. Has lost weight rapidly of late. Urinary distance 8¾ inches. Residual urine, eight ounces. Perineal prostatectomy; bar torn away with rongeur. The patient did nicely for two weeks, but was extremely nervous. This symptom was attributed to a slight uræmia, though the urinary output was adequate in quantity. On the sixteenth day after operation the patient, who had been left by his nurse but a few minutes before, rang for assistance and was found sitting up in bed suffering intensely from dyspnoea which had come upon him suddenly. In spite of every effort at stimulation, the patient died in a few minutes. No autopsy was obtained, but the symptoms of the case were so characteristic as to leave little doubt of the true nature of his fatal attack.

CASE X (Keyes).—Patient aged sixty-five years. Nine ounces of clean residual urine. When nervous he dribbles, but he usually gets up but once at night. He elects prostatectomy rather than the slavery of the catheter. There is a distinct systolic murmur at the apex of the heart; but compensation is perfect. A trace of albumen and a few casts are found in the urine.

Suprapubic prostatectomy. Sessile median lobe torn away with rongeur forceps. Bleeding moderate. Perineal drainage. "After operation the patient was drowsy and, although he passed plenty

⁹St. Petersburg medicinische Wochenschrift, 1897, xxii, 377.

¹⁰Medical Record, 1899, lv, 39.

¹¹Ibid, 1900, lvii, 705.

¹²Medical Record, 1898, liv, 721.

of urine, he remained 'heavy' mentally, enough so to cause suspicion as to his kidneys." On the evening of the second day after operation he expressed himself more comfortable than at any time previously. At 11.30 p. m., while the nurse was feeling his pulse (which had shown no signs of weakness or irregularity) it stopped and never beat again. There was no struggle or gasping; the patient simply died by syncope. The patient's body was removed to his home, where an autopsy was performed. Vegetations were found upon the heart valves and the diagnosis of acute septic endocarditis was made. As there were no local or general evidences of infection either before or after operation, as the pulse was slow and regular up to the last moment, and as the lesion of chronic endocarditis had been suspected before operation, I am inclined to doubt the post-mortem diagnosis and to believe that death was due, either to cardiac or to pulmonary embolism; in the latter case the death by syncope without evidence of pain or asphyxia might be due to the shock of embolism upon a patient still in that condition of depressed mentality so common after operation upon the urinary organs of men who have passed the prime of life.

Such are the ten motley and meagre cases which I have been able to collect. I make no pretense that they are equally convincing; indeed, several of them are not convincing at all; but it has seemed worth while to gather together all the cases which might be attributed to embolism, if only to suggest that this accident may be much more common than the records show. In Cases VI, VIII, IX, and X no suspicion of embolism was entertained at the time of death; they were regarded as sudden death from an obscure cause, and it was not until long afterward that the records of the last three were scrutinized with regard to this point.

The ten cases may be classified as certain, probable, possible, and improbable. Cases I and III have alone been submitted to the certain test of autopsy. Cases II and IX bear *prima facie* symptomatic evidence of embolus, and may be classified as probable. Cases IV, VII, VIII, and X are possible examples of embolism, though the possibility varies widely from the distinct suggestiveness of Cases IV and VII to the doubtful character of the other two. Finally Cases V and VI may be classed as improbable, since they present clearly none of the distinctive marks of embolism.

It may also be observed that Case X may as well be an example of cardiac as of pulmonary embolism, while Case VI was assuredly not pulmonary if an embolus at all.

With such an unsatisfactory set of cases before us, why make any point at all of the danger of embolism after operation upon the prostate? Surely Cases I and II cannot justify one in considering embolism a factor in the prognosis of suprapubic cystotomy, for they bear only an infinitesimal

numerical relation to the constant succession of cystotomies which are performed with perfect safety. As well implicate exploratory laparotomy or ventrofixation on the evidence of Wyder's cases. I accept this contention and lay no stress upon the danger of embolism after simple cystotomy, whether suprapubic or perineal; though, as Welch says, pulmonary embolism is a possible complication of any surgical operation, "especially those involving the pelvic organs."¹³

But, vague as they are, the eight cases referring to operations upon the prostate have a distinct importance. Although not sufficiently numerous or definite to prove anything, they are distinctly suggestive. They suggest a possibility of contingent mortality after operations upon the prostate, which surgical cleanliness can do little to overcome. If Cases IX and X are really examples of embolism, they represent two of the three deaths which have occurred after prostatectomy in Dr. Keyes's practice since 1894. If Cases IV and V are examples of embolism, they represent 50 per cent. of the mortality after Bottini's operation at the hands of Dr. Willy Meyer.

These suggestions are perhaps exaggerated, and yet there is a bare possibility that they are accurate, and if so, they represent a mortality which may well lead any one to hesitate before attacking the prostate.

Theoretical considerations are anything but reassuring. Operations upon the prostate are undertaken at a time of life when the patient's vitality is waning and for diseases which in many cases imply the presence of infection and damaged kidneys. Infection is a negligible factor, as a rule, if adequate drainage is provided for (Bottini's operation must always remain a striking exception in this regard). The condition of the kidneys, is, however, the most important element in the prognosis. However much the surgeon may advise early operation for prostatic hypertrophy, for one reason or another it will rarely be possible to operate before retention or infection, or both, have left their mark upon these organs. A slight uræmia evidenced by drowsiness, mental hallucinations, scanty urination, hiccoughs, etc., is frequently encountered after prostatectomy or prostatotomy. These symptoms may be ephemeral or they may be grave enough to terminate in the patient's death; but, even in the milder cases, the effect of uræmia upon the patient's vitality cannot but encourage any tendency to thrombosis which may exist.

Admitting, moreover, that the pelvic veins, by their large size, their sluggish circulation, and their absence of valves, are specially liable to thrombosis, no organ has the anatomical predisposition to throm-

¹³Op. cit., p. 262.

bosis possessed by the prostate. Itself a vascular organ, it is placed at the bottom of the pelvis, surrounded and permeated by a plexus of large veins, whose circulation is so slow that they commonly contain phleboliths in later life. Any cutting, tearing, or burning of this organ must assuredly cause a certain amount of venous thrombosis with the associated inflammatory reaction, and when the sluggish state of the periprostatic circulation is considered, the wonder is, not that thrombosis should be frequent, but that it should be rare. Add the shock of operation upon the vitality of an older man, add the inevitable uræmia for the first few days after operation, and the wonder grows that embolism should not more frequently result. Perhaps it does; perhaps many cases which have been attributed to uræmia or sepsis belong here; perhaps other surgeons have overlooked the possibility of pulmonary embolism.

The surgery of the prostate is yet in its infancy. Operators have been occupied in cutting down a forbidding mortality of sepsis and uræmia, and in this struggle it has been natural to overlook the rarer causes of death. But better days approach. Already the danger of septic and inflammatory complications has been so far reduced that it only figures notably in cases where operation has been postponed until the patient was almost moribund, and we are gradually learning to estimate with greater accuracy the probable physiological capacity of the kidneys, and to strengthen them in many ways.

And now the question of embolism arises. It has been hinted at from many quarters, but its importance has not been fixed. This paper claims no priority in determining so broad a question. But it is time that we took heed of the danger which seems to threaten. If the possibility of embolism is a real element in the prognosis, the sooner it is realized the better; and if it is of no more importance after prostatectomy than after hysterectomy it should be relegated to its proper place. I simply ask the question: Is embolism frequent or is it not? Are we confronted with a danger that cannot be lessened, or will means be discovered to forestall or prevent? Is thrombosis encouraged by the rough torsion of the rongeur? Is it due to infiltration following Bottini's operation? Does it ever extend from the gland itself, or is it due to injury of the periprostatic plexus? Are phleboliths concerned in its production? Are there any signs by which it may be recognized, and means by which it may be prevented? Such are the questions which naturally present themselves. I have no answers for them.

Any suggestion that may help us to define more clearly the dangers of operations upon the prostate is surely worthy of grave consideration at the present moment. In the preceding paragraphs a few

scattered facts bearing upon a most important subject have been collected. Though they prove nothing and convince no one, I trust they may be suggestive.

HUMAN ASYMMETRY.*

By WILLIAM S. ELY, M. D.,

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Organic nature furnishes nothing that is symmetrical. No leaf has its exact duplicate, no organ has its perfect counterpart, and no individual is constructed with absolute symmetry. The foot-rule, square, and compass seem never to have been employed by the Divine Architect in the construction of the animal and vegetable kingdoms. We are so accustomed in the vegetable world to a lack of symmetry as at times to find that any suggestion of it is artificial, wanting in beauty, disappointing. This is especially true in the case of trees, and the occasional efforts of the French landscape gardeners to give symmetry to trees and shrubs only made them grotesque, and illustrated the absurdity of the undertaking. Some plants and flowers do, indeed, exhibit apparent symmetry, but on close study it is found not to be absolute. The higher animals are mainly built up of groups of organs more or less alike which combine in harmonious action and are generally supposed to have their corresponding parts symmetrical, but in many it is in appearance only, and on close study by the artist or the physician, the lack of symmetry is marked. The subject is so broad that we are compelled to limit our remarks to human asymmetry. Its facts are well known, but they have seldom been made the theme of an article for this society.

As a rule the nearest approach to individual symmetry is in infancy, but with growth and environment and study and toil, all of which operate in different degrees upon the two sides of the body, there come asymmetries which by the time that growth is completed are fixed and permanent characters of the individual. Normal asymmetries are often supplemented by those that are pathological. Both have for the physician and the surgeon great significance, at times aiding in the appreciation of disease and injuries, and their proper treatment.

Anatomically, asymmetry is apparent on slight study. The two sides of the head are seldom alike. This is the common knowledge of every hatter, and in injuries of the skull it is occasionally difficult to determine whether certain localized prominences or depressions are natural or the result of accident. The ears rarely correspond exactly in place, size, and shape. The eyes are often unsymmetrical, and the

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irides at times contrast widely. From slight convergence or divergence of the eyes to pronounced squint, from approximate emmetropia to extreme ametropia there are many shades of lack of symmetry that should not be deemed pathological. The nostrils are not equally patent, and the turbinated bones may differ. Deviations of the nasal septum are common, do not invariably obstruct respiration, and are not always pathological. When we look into the mouth, asymmetry is marked by irregularity of teeth, unless they be artificial, inequality of tonsils, dissimilarity of the right and left halves of the uvula and tongue, and other differences which the mirror of the laryngologist makes apparent. Remove the clothing from the chest and the lack of symmetry can be seen in unequal muscular fulness, fatty development, bony formation, circumferential measurement, and in tilting of the ensiform cartilage. The dressmaker is constantly obliged to pad the unsymmetrical busts of her patrons, as well as their other deforming disproportions, and she in turn, by the mandates of fashion, creates asymmetries of internal organs. In the arms asymmetry is exaggerated by right-handedness which enlarges the bones, thickens the muscles, changes the contour of the chest, and develops one upper extremity at the expense of the other. Looking from behind we find tendencies to spinal asymmetry before we reach well-defined lateral curvature, lordosis, or beginning Pott's disease. There is asymmetry of the testicles and of the veins of the scrotum—the left testicle being as a rule the larger, and venous asymmetry favoring left varicocele. With pelvic asymmetry which introduces a serious element in the progress of labor, the obstetrician is much concerned. The inequalities of the lower extremities are demonstrable by both longitudinal and circular measurements, and the feet which are never alike by nature have their asymmetries intensified by the bootmaker.

When we come to internal and concealed organs of the body our subject receives further illustration. If we admit that we have a double brain it is probable that its corresponding parts are unequally developed. Most of us have our best eye, and our best ear, and are conscious that our motor activities, and sensory impressions are a little more evolved on one side than on the other, and by many people it is admitted that when fatigued one leg leads and the other lags. Popularly the lungs are thought to be symmetrical. Anatomically we know that they are very unlike, and that the heart largely contributes to the differences which are to be noted in their size, shape, lobar divisions, weight, and location. The heart itself is a very unsymmetrical organ. The kidneys may be said to be never symmetrical. Such azygous organs as the liver, spleen, uterus, and prostate gland have some lines of symmetry which

disease often distorts. Arterial asymmetry is sometimes seen and often felt in the radials, making the pulses extremely unequal.

In disease we find that similar organs are either not both affected, or, if affected, not in the same degree. Headache and earache are often one-sided. Ear-wax may form in one or both ears. Disease of but one tonsil may be present. Neuralgia of one side of the face and sciatica of one limb are common. While the selective action of many diseases can be easily explained, there are still numerous affections in which it remains a mystery.

We are frequently confused by what may be termed the asymmetry of symptoms. Pain that is present in one condition may be absent under conditions that seem similar. In fevers and inflammations the subjective and the objective symptoms are often said to be out of proportion to what we have read, or have seen, being in this sense unsymmetrical, and introducing an element of doubt and confusion in the minds of many consultants, thus making diagnosis obscure and prognosis difficult. Much has been written under different heads upon this phase of our subject, and more remains to be learned. The two lungs are seldom equally involved in any affection. In respiration the two sides of the chest may expand unequally or one side may not expand at all. Lagging respiration is sometimes noted as the only symptom in the beginning of pneumonia and pleurisy. Arterial sclerosis advances in different degrees in corresponding vessels, and asymmetry of pulse may come from injuries to the arm, aneurysmal or other tumors of the chest cavity, emboli and autochthonous clots, or from compression of the subclavian artery (Vierordt). Asymmetrical movements of the eyes and of the pupils in disease may be of serious import and multiply diagnostic doubts. It is not yet determined to what extent, in comparing the two sides of the chest, slight relative differences obtained by inspection, palpation, measurement, auscultation, and percussion may be considered within the range of normal asymmetry. As no two individuals are alike, there is no exact standard of percussion note and auscultation sounds in health. Not only do healthy sounds differ in different individuals, but delicate shades of differences, due to relative asymmetries, exist in health in the same individual. The subjective element in the physician introduces another condition of variation, and the time must come when some more exact method of eliciting percussion sounds than that now practised will be adopted.

Symptom asymmetry marks neurological conditions. As we do not know the nature of nervous force, we have to study its effects, which in disease of the nervous system are frequently emphasized by characteristic asymmetry. Slight atrophy or hypertrophy, impaired motion or sensation, absent, less-

ened, or exaggerated reflexes become of great import in certain cases. There are paralyses of parts of the face and eyes and cheeks and tongue and lips which are so slight as to escape the untrained eye. There are degrees of ataxia, areas of altered sensibility and limitations of movement which the patient may not note, and the general practitioner may fail to discover, but by the accomplished neurologist they are coordinated to make a diagnosis of a definite and localized nervous lesion.

Much of the work of the orthopædic surgeon is in correcting deformities of early life and in the majority of his cases the first symptoms were the slight pains or asymmetries of movements too often overlooked by the general practitioner, and not infrequently escaping the close observation of the interested mother, or caretaker. It becomes us, therefore, in treating every child, to have it stripped on the initial visit, in order that we may study it, to detect any asymmetry of surface or of muscular power and nervous action. Very soon it will be discreditable not to detect early some of those conditions which reach the orthopædic surgeon only when asymmetry is marked by a twisted spine, or a shortened and atrophied member, or hip disease advanced to a well-nigh hopeless stage.

Through disregard of the laws of inheritance many of our patients are the products of unsymmetrical ancestry, inheriting unsymmetrical brains, disproportionate nervous systems, and are weighted for life with various asymmetries of which science can better take account than correct. The emotional, the hysterical, the eccentric individual is decidedly unsymmetrical in his development, and much so-called genius suggests asymmetry. All those complex emotions which represent unbalanced action are just as much evidences of nervous asymmetry as are the gross appearances presented by atrophied or hypertrophied muscles indicative of muscular asymmetry, and the time will come when better than now, we can demonstrate the asymmetry of brain cells.

Numerous occupations have deforming tendencies. In early school life pupils are subjected to influences that favor asymmetrical development. The stoop of age is often prematurely acquired, and there are tasks which bend the body forward and ankylose the spine. The chronic weary and the heavy laden are always deformed. Some of our recreations have a similar effect. A prominent English writer deprecates tennis for English girls and speaks of it as "that nasty game which is making our English girls lop-sided, destroying their symmetry of form." This objection does not apply to many exercises. Horse-back riding in a manly way, skating, rowing, walking, running cannot be said to favor one side of the body at the expense of the other side.

The questions which our subject suggests are more easily asked than answered. The profession is not in accord in distinguishing between normal and abnormal asymmetry. It is not yet agreed how far the right half of the brain should be educated. There are physicians in this room who could not distinguish with the left index finger between the cervix uteri and fæces in the rectum. In using the microscope there are others who would fail to identify a renal tube cast with the left eye, and some of us could not sign our names with our left hand, or count the pulse with our left fingers, or open an abscess properly if our right hand were disabled.

Is such asymmetry of training to be commended? Is left-handed aptness obtained at the loss of right-handed deftness? As man was not originally right-handed, should we be indifferent to the functional development of parts of the right brain now inactive?

Many phases of asymmetry tend to pathological results, and we should strenuously oppose those habits of dress, study, and work that are compressing, contracting, confining, and disease-producing.

An inference from the foregoing is that the general practitioner must be symmetrically educated and trained in order to be able to recognize asymmetrical conditions with pathological tendencies. To decide when the services of the specialist—the man who is supposed to know everything of something—are required, the family physician must know something of everything. There is therefore no danger that the time will ever come when the calling of the general practitioner will be less dignified or important than at present.

AN EPIDEMIC OF TYPHOID FEVER IN THE BACKWOODS OF MAINE.*

By E. F. BRUSH, M. D.,

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Up the St. John's River, in the State of Maine, there is in the midst of the wilderness a clearing with homes for six families. These people are isolated; the only way to the outer world are by canoe on the river. Out of their clearings no road leads, and the nearest highway and post-office is thirty miles down the river. The principal occupation is farming. This settlement is practically in the lumbering region, so good prices are obtained for all products needed in logging camps. The St. John's River is 500 miles long and is navigable for 160 miles. The settlement is about 300 miles from the mouth of the river. I give these data, that it may be understood that the St. John's is a considerable river where it flows by this small hamlet.

In a canoe, with an Indian guide, I ascended the

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river in October, 1897. After paddling about forty miles from Connors, which is the nearest railroad station, I found the river making quite a sharp bend, and at the outer point of this elbow, on a slight promontory to the right, was situated the first house in the settlement. It is a substantial frame and log structure, surrounded by a few farm buildings. Above it, about 100 feet or so, a fair-sized brook empties into the river St. John's. In this house dwelt Ralph Willetts, his wife, and seven children. A quarter of a mile above this Willetts homestead, and on the left, there was a small frame house built on the right river bank. This had been occupied by a man named Jackson, his wife, and one boy. Nearly opposite, but a little farther up on the right-hand side of the river, there was a vacant house. Proceeding a mile farther up the river, we reached the principal place in the settlement, quite a large frame house with extensive outbuildings. Here, the original settler, Louis Castonie, a hunter and trapper, built his home over fifty years ago, and lived there until a few years past, when he was drowned. The place was occupied during my visit by his widow and her son, with one housemaid and two farm laborers. The widow Castonie was really the queen of the settlement, all the other settlers being related to her by blood or marriage. Up the river, about half a mile farther on the same side, a fair-sized story-and-a-half, well-built house sheltered the widow St. John and her two sons, one of whom had a wife and baby, and there was also a hired man on this farm. Directly opposite, on the left-hand side of the river, the river here being a quarter of a mile wide, on a steep hillside, was a small log cabin containing two rooms with a low attic. In this shanty lived Eli Castonie, his wife, and eight children; beyond this was a wilderness with only two log cabins within the next forty miles. At this point, forty miles above Castonia, the river widens and is dotted with islands, and here three families live in a settlement called "Seven Islands." There are no dwellings beyond Seven Islands to the head-waters of the river.

Ralph Willetts, a fairly well-to-do man, works in the camps and on the river during the winter and spring, and attends to his farm during the summer. He has lived in this house by the river for over forty years. In the fall of '96 his family was composed of himself, wife, and seven children, three boys and four girls. On October 15, 1896, one of his boys, thirteen years old, sickened; according to the father's statement, he "had headache, pain in the stomach, loose bowels; after one week he took to bed and remained there for eighteen days; during this time he had no regular sleep, was delirious, and picked at the bed clothes; his mouth dry and dark colored; he began to improve after this eighteen

days' confinement to bed; he had frequent nose-bleeding during convalescence, and was well in about four weeks." November 5th a girl, aged fourteen years, sickened with the same symptoms as the boy, except that there was no nosebleed; she was sick about four weeks. November 14th, Mrs. Willetts, aged forty-five years, sickened; she recovered in about four weeks. December 18th, Mr. Willetts and two boys, eight and ten years old, sickened; Mr. Willetts and the eight-year-old boy were sick for six weeks, and the ten-year-old boy recovered in four weeks. January 20, 1897, a girl, eleven years old, was attacked and died after eleven days' illness. After she had been sick for six days she lost the power of speech and suffered great pain in the lower part of her abdomen. "She died from exhaustion caused by the pain," her father said. April 1st, a girl, four years old, had a slight attack; she was in bed three weeks. A boy, two years old, escaped.

Here was a family of nine persons; eight of them were sick, and some one was ill in this house from October 15, 1896, to January 31, 1897, continuously. Then, after two months without sickness, another member of the family was taken ill, but the youngest, a two-year-old boy, escaped. There was no other inhabitant of the Castonia community sick during these four months and a half. With one exception, no one in the vicinity visited the Willetts during this time, because they were all afraid of the fever. Only one of these eight patients was seen by a physician. When Mrs. Willetts sickened, her husband went to St. Francis in a canoe and brought up a doctor. Mr. Willetts told me that the doctor was unable to say what the disease was; he left a bottle of medicine, charged \$25, and was taken home. I made diligent inquiries for the source of contagion in the initial case in this family, and found that, in the preceding spring, some time in May, 1896, there had been a large crew of men driving logs down the river. Out of this crew, nine became sick *after* they had passed the Willetts house. The sick men were conveyed to Little Black, the first settlement below Castonia; five of them died. None of these men visited the Willetts house on their journey down the river. There had been some sickness in a logging camp 60 or 70 miles above the Castonia settlement during the winter of 1895-'96. Some of the sick men had been sent home by teams on the ice. No one had died in the camp, and no one at Castonia could tell me what had become of those who were taken home during the winter. The sickness in the camp was called "the fever," and it was variously accounted for by the camp crew, some saying that it was due to the drinking-water, which was taken from a swamp near the camp; others laid the cause to bad pork; and again others to some whiskey that had been taken into camp from Seven

Islands. This whiskey was conveyed in an old keg that had been out in the fields all summer, and it was thought by them that snakes and lizards and other such things had left the keg poisonous, so we can only surmise that the first case in the Willetts family came from some flotsam that the boy may have got from the St. John's River when bathing.

At the Willettses' house there is no privy; in fact, there is not one in the settlement. The water used in the Willettses' house is taken from the brook that empties into the river about one hundred feet from the house. It is carried to the house in pails. In the kitchen there is a barrel which is kept full of water and used for all domestic purposes. This barrel is filled every morning and is never cleaned. A long-handled dipper hangs above it; every one drinks with this dipper and throws back into the barrel whatever water is left after thirst is quenched. All the sick and well got their drink from this barrel. All the slops are thrown out of the kitchen door; the calls of nature are attended to around the corner, behind the buildings or anywhere that is convenient at the time; but there was no possible way that the surface washings from around this house could get into the water at the place where the Willettses get their supply to fill the kitchen barrel, or anywhere else into the brook. All the surface drainage from around the house washes into the main river a considerable distance below the mouth of the brook, and the Willettses never get water from the river, because the brook is handier and the water better. There is no probable way that the brook could be contaminated, because it flows through an untrodden wilderness, so faecal contamination here seemed to be impossible, except by soiled hands or flies.

In January, when the Willetts girl died, Mrs. Jackson, who lived in the next house across the river, went to the Willettses' to help the dead child's mother. Mrs. Jackson stayed at the Willettses' only a few days, and went home; she sickened in February, 1897, about four weeks after she had visited the Willetts. I could not get the exact date, as the Jacksons had moved away from the settlement after their recovery; but about one month later I got this information from Eli Castonie, that is, in March. Mr. Jackson and their only child, a ten-year-old boy, were both attacked at the same time. As Mrs. Jackson had not entirely recovered when her husband and son sickened, the three were sick together, and Eli Castonie came down the river to help the Jacksons. These people had a kitchen barrel the same as the Willettses, only their barrel was filled from the river St. John's. The same conditions as to slops, etc., existed at this house, except that it was possible for surface washings from around this building to get into the river at the point where they

got their water, but the river here was deep and swift-flowing. Eli Castonie stayed at the Jackson house a few days only. He went home and was taken sick with "the fever" on April 12th; was sick about seven weeks. Then, two months later, June 14th, one of his girls, two years old, sickened; June 18th, a girl of sixteen was attacked; July 21st, a girl of six sickened; August 10th, Mrs. Castonie, who was nursing a six-months-old baby, was taken severely ill and was sick seven weeks. On August 27th, a boy of ten took the malady; September 17th, a girl of nineteen was taken ill; September 20th, another girl, aged eight, had a severe attack, and on October 10th, the baby, who was nursing when her mother sickened in August and had to be weaned in consequence, was taken sick. This last member of the family had been sick fourteen days when I visited them, on October 24, 1897. From a careful examination, I was sure this child was suffering with typhoid fever. When the father was taken sick in April, a married daughter who lived down the river at St. Francis, came up to see her father and help to take care of him. She stayed until about the 1st of May, when she went home. She did not take the fever. Eli Castonie is the least thrifty member of the Castonia settlement. His occupation is hunting and trapping. His log habitation is a shanty of two small rooms. It is situated on the bank of the river about 300 feet back and 50 or 60 feet elevated above the St. John's. The end of the cabin is toward the river, and it fronts on a deep gulch which takes all the surface drainage from around the shanty, and the woods and lands above and beyond for a considerable distance. During wet times the bottom of this gully is the bed of a good-sized stream, but in dry times it is only marshy on its lower level. In this depression, about 100 feet back from the river and about 3 or 4 feet above the river level in dry times, water for the Eli Castonie house is taken from a bottomless pork barrel that has been sunk in the soft swamp in the middle of the bed of the gully. During the very driest times this barrel is always about half full, and no washings from around the Castonie house can possibly pass this barrel without going through it, as the only stream that flows past in dry times goes out through the bung-hole in the middle of the barrel. When I saw this "spring," it was about half full of clear, nice-looking water, and this water had been used for all domestic purposes by the family since about the beginning of May. They did not have a kitchen barrel. The water was used from the pail in which it was carried to the house. This "spring" is not available when the river is high, because the water from the river backs up and fills the lower level of the gully, thus submerging the barrel, and the other conditions of the high water make it more

convenient for the Castonies to get their water from the river above the outlet of the gully. None of the family sickened until about four weeks after they commenced using the water from the spring. The married daughter, who did not get the fever, went away before the family commenced using the water from this barrel spring, and the baby, who was the last to get the disease, did not get water until after her mother sickened and she was weaned. In consequence, from April to October all the washings from around the dwelling had gone down into the gully and so into the spring. Nine people had been sick, all slops and discharges had been thrown out of the front door, and so there must have been considerable faecal contamination. When I visited this family, they were still using water from the barrel in the gully, and every one of them had a diarrhoea, with abdominal pains and straw-colored faecal discharges. This ceased in a few days after they stopped using the spring water, during my visit.

This epidemic began with a boy thirteen years old. He had never been away from home; there was only one probable place whence he could have got the typhoid contagion—the river—and still his folks did not use river water, while all the other people in the settlement did. It is almost certain that typhoid fever had existed in the logging camps, on the banks of the river 60 or 70 miles above the boy's home, and the same disease had passed the house six months preceding the boy's illness. In the settlement where the sick men died in May, '96, there were no new cases of typhoid fever up to October, '97, thirteen months later, nor were there any cases anywhere else along the river. After the boy's illness, it was very easy to follow this water-borne contagion. Every one who drank from the Willettses' kitchen barrel after the boy was sick, except possibly a two-year-old child, had typhoid fever; this child was not tall enough to help himself from the barrel; he got milk and weak tea at meal times, and the father told me that he thought the baby did not drink any water during the fever time, which was the winter months; and the three who drank from the barrel in the Jacksons' kitchen after Mrs. Jackson went home, and took the same means of contaminating it that the Willetts boy did, were taken with the same disease; and all who drank water from the Castonies' "barrel spring" had the fever.

Now, the points of interest in these cases are: First, the contagion of typhoid fever was conveyed in the Willettses' house by water without faecal pollution, unless we consider the possibility of above mentioned, and flies. Second, there was no difference in the intensity of the contagion between the positively faecal-contaminated and the mouth-contaminated water. Third, the continued use of the faecal-contaminated water produced the same yel-

low-colored diarrhoea that characterizes typhoid fever, after the fever had subsided, and the mouth-contaminated water had not this effect. Fourth, the remarkable number of recoveries under such unfavorable environment—with none of the patients was any particular attention given to diet; there were neither baths nor medicine; and the Castonie sick had only the roughest kind of food, namely, flour, pork, and beans. Fifth, the indefiniteness of the period of incubation; all those who were affected first were attacked not earlier than about four weeks after exposure, and still some persons continued to use either the mouth- or faecal-polluted water for from two to six months before they sickened. Sixth, the limitation of the disease in these nineteen cases, uncomplicated by any kind of treatment; the disease lasted from three to seven weeks; the average, taking all the cases together, was four weeks. In the Willettses' house, where the food was fair and plentiful, the continued use of the polluted water did not continue the intestinal irritation, the recoveries were complete; but in the Castonie home, where the food was coarse and meagre, a diarrhoeal condition was continued for months, and there were marked emaciation, anæmia, and languor in those who had recovered from the fever, and one child in this family had œdema of the lower extremities.

The last patient in this history, an infant six months old, did not apparently get the disease from his fever-stricken mother, who nursed him until "the fever" dried up her milk. When the mother's milk was gone, he was fed on flour gruel made with water from the typhoid faecal-polluted spring, and all his drink came from the poisoned barrel; nevertheless, it took two months to inoculate him. Season, apparently, had no influence on the prevalence of the disease. It commenced with one case in October, '96; then two cases in November, '96; three cases in December, '96; one case in January, '97; one case in February, '97; two cases in March, '97; two cases in April, '97; two cases in June, '97; two cases in July, '97; two cases in August, '97; two cases in September, '97, and one case in October, '97; thus, the epidemic extended over one entire year and was very evenly distributed.

Two families out of the five in the Castonia settlement escaped "the fever"; namely, that of the widow Castonie, composed of five members, and the widow St. John's household, six people. All the water used by these two families was taken from the St. John's River; neither of these families had a privy; all the other conditions regarding the calls of nature and the disposal of slops were the same as those observed in the three homes where "the fever" was rife, but no member of either of these two families during the entire year had drunk any water from the Willettses' or the Jacksons' kitchen barrels.

or the Eli Castonie "spring." "The fever" was not confined to one side of the river; the Willettses lived on the right-hand side going up and the Jacksons and Eli Castonie lived on the left. The two families who escaped, lived on the same side of the river as the family where the fever started.

AN UNUSUAL COMPLICATION OF INGUINAL HERNIA.*

By A. C. SMITH, M. D.,

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The case here reported is presented on account of a very unusual and peculiar condition met with in an operation for the radical cure of inguinal hernia.

The patient was a native of France, aged forty-one years, a seaman on a small sailing vessel. He had a very large inguinal hernia on the left side, which descended into the scrotum and was hard to reduce, in spite of the fact that there was no strangulation. The history given was that the hernia had first appeared twenty-one years before, when the patient was twenty years of age. He wore a truss for about five years, after which he was not troubled with the hernia descending until a few weeks before he applied for admittance to the hospital.

The operation for radical cure was done according to the Bassini method. The sac was not very adherent and was easily separated from the cord. After it was separated, however, a large amount of tissue of the nature of thickened fascia remained about the cord, and the tissues of the scrotum were thickened and elongated, suggesting that there had been a previous hernial sac, extending into the scrotum, which had become obliterated. The contents of the sac consisted of omentum, non-adherent, which was resected. After the stump of the omentum was returned into the abdominal cavity I found in the large opening of the neck of the sac what appeared to be a coil of adherent intestine. It proved to be a part of the colon, and the peritonæum of the sac passed everywhere smoothly and evenly on to and over the surface of the gut. There was nothing about it of the nature of peritoneal adhesions. The same close union of the gut with the peritonæum existed as far as I could feel in the abdominal cavity, and it became evident that the condition dealt with was not an adhesion of intestine, but the true attachment of a portion of the colon, which had been dragged slightly outside the ordinary boundaries of the abdominal cavity by the downward and forward traction of a hernial sac, or rather of a second hernial sac after the first had become obliterated; that is to say, the foundation on which the bowel rested had slid downward, forward, and inward, with the peritonæum. The first part of the sigmoid colon, according to the description in Gray,

passes downward, inward, and somewhat forward, and approaches the anterior abdominal wall. This portion of the colon, which often has no mesentery, is not described by all anatomists as properly a part of the sigmoid flexure.

To close the hernial sac, the peritonæum of the neck was trimmed down over quite a large opening and sewn together as in an ordinary laparotomy wound. Once I trimmed too close to the bowel, and a spurting vessel revealed a branch of the mesenteric artery. Some pouching of the peritonæum was left, and the internal oblique and transversalis muscles were pulled down over this and sewn as strongly as possible to Poupart's ligament. Observation of the case terminated fifty-seven days after the operation, and the result was then excellent and the abdominal wall was flat and strong.

Issues and Events of the Day.

THE PATRICK CASE AND ITS LESSON.

By KENNETH W. MILLICAN, B.A. CANTAB., M.R.C.S.,
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Perhaps nothing can more clearly demonstrate than did the Patrick case the absolute necessity for some other method of dealing with medical evidence in criminal trials than the one usually employed, viz., that of calling individual "experts" on either side to testify as to their opinions on the points at issue before a jury of laymen. In scientific exposition, two points are to be aimed at: 1. Perfect accuracy of expression without possible ambiguity. 2. Intelligibility.

Now, in nothing more than in medicine is it impossible to attain both these ends simultaneously, save by a strict adherence to purely technical language, the signification of which is unambiguously determinate to every trained scientific auditor. The medical witness has, therefore, in addressing himself to a lay jury, constantly to choose between the risk of sacrificing accuracy and the certainty of sacrificing intelligibility in order best to convey to the lay mind that impression which he wishes to convey. He obviously must not sacrifice intelligibility altogether; he is therefore driven to dispense with accuracy of expression, and, more frequently than not, in so doing, his statement becomes ambiguous, and, besides being possibly misleading, leaves a loophole for clever counsel (not guided, as the medical witness is supposed to be, by a simple desire for scientific truth, but rather by the avowed purpose of upsetting the witness's testimony so far as it tells against his client) to make him seemingly contradict himself. It is all very well to say that the witness has the right to explain; there is much that he *cannot* explain with absolute precision, and without leaving room for his statements to be misapprehended or perverted, save by using the precise determinate language of science, which is not understandable by those untrained in all the requisite collateral knowledge.

Let us briefly review the medical evidence in this

*Read before the Medical Society of the County of Richmond, N. Y.

case, and see how far it sustains the position taken. With all the complications of motive, opportunity, the plots and counterplots that have been alleged on either side, we, as medical witnesses, have nothing whatever to do.

On September 23, 1900, about 8 p. m., a physician was summoned to a patient whom he had been attending for several months and found him dead in his bed. The patient had been under his care from April 10, 1900 (3313),¹ a weak old man, eighty-six years of age, with weak and slow action of the heart; his pulse was only 54; he had dropsy of the lower extremities from his knees down; partial deafness (3314). On September 8th he was worried over the Galveston flood and later over the burning of his oil mills (3317). On September 21st, his respiration was oppressed and shorter than usual, or at least was oppressed and so much so that about every minute he would have to take a deep, full inspiration to supply the deficiency; the physician found nothing the matter with the lungs and considered the cause of his condition mental (3318).

The pulse was 60, very weak; lower limbs still dropsical (3318). He had eaten nine bananas, partly cooked, partly raw, on September 15th or 16th, and next day had had indigestion and diarrhoea (2219). On the 22d, the physician told deceased's valet that deceased was under severe mental strain, but he believed he would recover, but "if the worst should happen not to be surprised" (3323). He called about 11 a. m. on the 23d, found the patient feeling very well, and with no pain, his pulse and temperature about the same, but he did not like his breathing—his breathing showed that something was worrying him greatly. He did not examine the lungs that day, but had done so on the 21st (3323). The patient had respirations 23 (3358), not a difficulty of breathing, but a need to breathe in about every minute to supply the deficiency of air (3324).

On being summoned at 8 p. m. on September 23d, the physician examined the body carefully and found that deceased had apparently been dead about half an hour. In his examination of the deceased, he felt his pulse, put his hand over his heart, examined his eyes; his fingers; had his own face within five or six inches of deceased's face (3326). Half an hour later, he examined him again, alone and in a similar way. Pupils normal, body still warm, features calm and placid, nothing to indicate any violent struggles (3327). The physician had had a large experience with chloroform during the civil war and would be able to detect the odor of it, he thought, four or five hours after administration (3329). He did not detect the odor of chloroform (3329). At 11 a. m. on the 23d, the day of death, he had not noticed that deceased had any congestion or oedema of the lungs or difficulty of breathing, but about every minute he would draw a deep, full inspiration (3369). He had no watery or bloodstained expectoration (3371); he had some cyanosis (3371); he had no bubbling râles, the respiratory murmur was normal (3373).

The doctor gave a certificate to the effect that death was due to old age and weak heart, with indigestion followed by collateral diarrhoea and worry as immediate cause (3331).

Arrangements were made by the defendant, acting as the person in charge, to have the body cremated, but finding it could not be done at once, the body was embalmed. In the meantime, certain circumstances that seemed to the police authorities suspicious arose, and an inquest was held, an autopsy being made by the coroner's physician in the presence of another coroner's physician. The following is the official account of the autopsy findings:

An autopsy performed on the body of William M. Rice at morgue on the 25th day of September, 1900, at 3 o'clock p. m., about forty-three hours after death, by E. J. Donlin, M. D., coroner's physician, revealed: Inspection—Body emaciated; rigor mortis slight; small abrasion of back just to right of lumbar vertebra; sutured wound at upper third

of right arm (inside) p. m.; sutured wound of abdomen about 2½ inches to left of umbilicus, p. m. Abdomen contained about a quart of embalming fluid. Left lung congested and oedematous. Right lung same, and a small area of consolidated lung tissue, about size of 25-cent piece, in lower lobe. Heart: Pulmonary and aortic orifices slightly contracted. Liver firm, otherwise normal. Kidneys firm, capsules not adherent, surfaces granular. Markings fairly distinct and a number of small cysts. Pelvis of right kidney dilated. Brain oedematous and pale. Bladder contained about five ounces of urine. Stomach empty. Colon slightly congested and contained a pale, pasty and lumpy faeces. Small intestines contained a small quantity of bile-stained fluid.

No fresh death certificate was issued, but the body was disposed of on the original physician's certificate of death. The brain, heart, liver, spleen, kidneys, pancreas, stomach, and intestines were taken for examination; the lungs were returned to the body and sewn up in it (3504).

Subsequently, a series of confessions, contradictory to each other, was made by the valet of the deceased, with none of which, as medical witnesses, have we anything to do, save with the last. This last confession was substantially as follows:

Somewhere about 7.30 p. m., on September 23, 1900, the witness folded a towel round his hand into the form of a cone, placed a piece of sponge in the small end, poured about two ounces of chloroform onto the sponge, and put the cone over the deceased's face as he lay on his bed, presumably asleep, and ran out of the room, leaving the cone unsupported on his face. In half an hour he returned, found the cone just as he had left it and the deceased dead. He opened the windows, put the room in order, removed the towel and sponge into another room, put them in a range where there was no fire, touched a match to them, and "they burned as though oil or something was put on them, burned very quickly." He then summoned the defendant and the deceased's doctor, who arrived soon after 8 o'clock.

Upon this testimony the defendant was indicted for murder, on the ground that he had procured the killing of the deceased by the administration of chloroform through the instrumentality of the valet.

Brushing aside all legal sophistries, therefore, it was for the State to prove:

1. That the deceased did not die a natural death but was killed.
2. That he was killed by chloroform administered as described.

Now, as the only available actual testimony to those facts was that of a confessed accomplice—and a discredited one at that, in virtue of his previous contradictory "confessions"—it was only legally admissible as evidence when sufficiently corroborated. Such corroboration might be:

1. By witnesses to the act.
2. By medical evidence that death had been caused by chloroform,
3. Coupled with collateral circumstantial proof on such matters as motive, intent, opportunity, fixing the guilt on the accused.

Now, there were no witnesses to the act.

In point of logical order, therefore, it was for the State to show by medical evidence, in the first place, that the deceased either (a) actually died from chloroform; or (b) could not have died a natural death, but could have been killed by chloroform administered as alleged.

It was for the defense, on the other hand, to rebut this testimony by showing either (a) that the deceased could not have died from chloroform; or (b)

¹The figures in parenthesis refer to the pages of the court stenographer's official report of the testimony in the case of *The People of the State of New York v. Albert T. Patrick*.

that even if it was possible that he might have died from chloroform, it was also possible that he might have died a natural death.

These propositions must be proved on the strength of medical evidence alone, in the absence of direct *admissible* testimony as to the acts alleged to have caused death, and independently of any outside considerations tending to render the guilt of the defendant probable or improbable.

When the State had proved, and not before, either of its alternative propositions, it would have been competent to fix the guilt on the defendant by proving motive, intent, opportunity, etc.

The medical testimony in this case, therefore, was the all-important base upon which the whole structure of the charge rested. Let us proceed to consider this in detail:

In support of the contention of the prosecution, it was asserted by one of the two physicians present at the autopsy that:

He found "the brain normal, the heart normal (716), save only for some possible slight contraction of the aortic and pulmonary orifices, so slight that he could not be sure about it (714), the kidneys normal, the liver normal, the intestines normal, subject only to certain modifications induced by the presence of embalming fluid (716). The presence of embalming fluid prevented any statement as to the character and condition of the blood in the heart (778), but he saw blood in all four cavities (779); there were also some small clots, but whether *ante mortem* or *post mortem* he could not say, on account of the embalming fluid (779), but the blood that he observed was not coagulated (780).

In the witness's opinion the cause of death was in the lungs (717), which opinion was based upon the fact that he saw them the seat of an "intense congestion of the lungs, right and left, a congestion which was coextensive with the lungs themselves" (717). There was also hypostatic congestion (717). He drew the conclusion that nothing else but the inhalation of a gaseous irritant could have brought about such a congestion, active in character and coextensive with both lungs (722). The witness emphasized the fact that the congestion was an *active* congestion (802), not a passive congestion due either to an obstruction *a fronte* or to a deficient *vis a tergo*. The witness also found a patch of "consolidation" as large as the distal joint of his thumb (732) in one lung, which elsewhere (807) he calls "lobular pneumonia." This patch of consolidation he considered "perfectly negligible from the standpoint of the causation of death" (732), but "consistent with the congestion produced by the inhalation of a gas (732). The production of such a consolidation was sometimes a vital process and sometimes not (765), and the patch could have been formed within twenty minutes before death (732). He also found "œdema in both lungs" (760).

He testified that chloroform vapor was such a gaseous irritant as might have produced the active coextensive congestion of the lungs before described (719-720); it was classifiable with muriatic acid, ether, ammonia, house gas, as an irritant (730). The evidences of its irritant effect would not remain in the face or the eye, unless of very great intensity (752), but they would remain in the lungs, "because the blood vessel in the lung into which the blood is driven or induced by the presence of chloroform has not any elastic fibres; while the blood vessels of the face have elastic fibres (753).

In explanation of this alleged irritant action of chloroform as a mode of producing death, the witness said:

"I give chloroform to a patient, and that chloroform may kill simply as an irritant. It may kill as chloroform. If it kills as an irritant when it is sent into the lungs in large quantities, without any admixture of atmospheric air, the lungs are so blocked up, and the air cannot get through and the patient dies of chloroform, but does not die of the chloroform as chloroform, but dies of the chloroform as an irritant, bringing about congestion of the lungs. Whilst, on the other hand, I give chloroform sufficiently

diluted as not to excite any undue inflammation of the lung, simply such an inflammation as is purely a negligible quantity, then the chloroform gets in its work as chloroform and the person will die" (786). And again: "The chloroform would have its mechanical action as an irritant, that is, an action which is not specific to the chloroform, but which goes through almost every other form of irritant gas, ammonia, for instance, or ether, the fumes of osmic acid—on the other hand, we have the specific action of the chloroform, its action as chloroform and not as an irritant; its action as an anæsthetic and its action as a hypnotic. Now, if I give chloroform without proper dilution, if I give the full fumes of chloroform undiluted and crowd that in upon the lung, I will get death purely from the mechanical congestion of the lung, and the rest of the body may be absolutely unaffected by the chloroform; if, on the other hand, I give the chloroform thoroughly diluted, I may reduce the amount of irritation in the lung, I could not get rid altogether of the irritating effect of the chloroform, however I dilute it" (828).

As to the post-mortem evidences of death by chloroform poisoning, the witness referred (733) to a series of experiments he had made on animals in relation to the effect of irritant gases on the lungs, and said:

"In all my acquaintance with chloroform, the standing factor is the congestion of the lung coextensive with the lung itself; the brain may or may not be congested; the spleen may or may not be congested; the liver and the kidneys; but the lungs invariably congested, and that with a congestion coextensive with the lungs themselves" (830).

In reference to the suggestion of counsel for the defense that the condition of the kidneys as described in the autopsy indicated chronic nephritis, which chronic nephritis might be a factor in causing death by congestion and œdema, of the lungs, the witness denied that the condition of the kidneys found was a pathological condition, and in explanation said:

That he had testified before Justice Jerome that he had found chronic nephritis (767) or inflammation of the kidneys (770), but that "there were two kinds of nephritis, a pathological nephritis which was a diseased condition, and a physiological nephritis, which was not" (767), and that the "inflammation of the kidney which is a physiological process would not affect the heart," but "an inflammation of the kidney which is a pathological process might affect the heart" (768).

The first witness's testimony was corroborated by the physician who performed the autopsy.

He confirmed the autopsy report, with the addition, as regards the kidneys, that the crypts were thinner than usual (1320). The organs outside of the lungs "were in a normal state, excepting slight changes that were not of any account at all" (1321). The congestion of the lungs was a "slight congestion" (1331), but it extended "all over both lungs" (1321), and might have been caused by "the inflammation [inhalation?] of any irritating vapor or gas" (1321). He knew of nothing else that would cause such an irritation coextensive with the lungs themselves (1322). The vapor of chloroform was an irritant gas (1322). The congestion and œdema of the lungs were the only things that he recognized in the body of the man as causing death, for there was no evidence of disease whatever outside of the lungs (1345). The congestion of the lungs produced by Bright's disease would not be coextensive (1349).

An ex-professor of pathology and present official consulting pathologist and university professor corroborated the two preceding witnesses to the effect that:

He knew of "no disease of the human body which will produce congestion of the lungs which is coextensive with the lungs themselves" (1393). "A man could not die from

disease where there was nothing but congestion, a physical disease; it would have to be inflammation and certain marked structural changes" (1394). A spot of consolidation, the size of your thumb or of a 25-cent piece, would not be sufficient cause of death (1395). He had examined sections from the kidneys and the heart; he did not see the brain (1395); the kidneys "were normal as to size; normal as to color, and there were slight changes in the kidneys; some new tissue formation, which are [*sic*] always seen in advanced life, and which have no pathological significance whatsoever; they are physiological processes, part and parcel of old age" (1396). He could express no opinion of the kidneys from microscopical examination because of the embalming fluid in the body (1397). "The liver was normal as to size, and normal as to appearance, and was perfectly normal" (1397). The heart was a "perfectly normal heart" (1396), but as regarded its microscopical condition, he had examined the muscles of the heart under the microscope, and he found it so changed by the formaldehyde that he could not express any opinion (1397). As regarded the effect on the lungs of the embalming fluid, injected through the brachial artery, "it could never reach the lungs" (1398).

According to this witness' experiments on animals if chloroformed with practically no air and all chloroform, the congestion was very intense; if the amount was varied from complete, pure chloroform, or almost pure, then the congestion varied. In a number of experiments congestion was found in all (1401). The witness questioned the accuracy of the autopsy record by stating of the kidneys that "you could not get a granular surface without an adherent capsule (1405, 1408), and that he found the capsules adherent in a few places in deceased's kidneys (1409). The cysts on the surface of the kidney mean nothing" (1405); "a granular surface of a kidney is a normal condition in a person eighty years old" (1405). The witness could tell the difference between a pathological inflammation and a physiological inflammation from the granular formation on the kidney, because [in the latter?] "this granular formation is on the surface of the kidney, and does not extend down into the kidney, to any extent" (1407). "Every granular kidney has disease of the heart to go with it; that condition of new growth in the kidney tightens up the blood vessels in the kidney and the heart has to increase in size to pump the blood through the kidney; when it is a part and parcel of advancing life, when it is physiological inflammation, the heart does not show these structural changes, and I should base my opinion more upon the appearance of the heart than I should on this one factor in the kidney" (1407). The witness noticed that the aortic orifice was slightly narrower, but considered that it was entirely within normal limits and had nothing to do with the pathological condition (1411).

"Active congestion all over the lungs shows that the cause must have come from the air passages" (1421); "and the only cause that could come down the air passages, that would set up this active congestion that I know of is some gas or some other form of vapor, that is, irritant enough to spread it all over the lung" (1421). Finally, chloroform was such an irritant vapor.

We can now gather a fairly clear idea of the contention of the medical witnesses for the prosecution. It resolves itself into the following propositions:

A post-mortem examination on the body of a man eighty-six years of age, who has been ailing and under medical care for some months, which discloses all the organs normal, with the exception of slight contraction of the aortic and pulmonary orifices, the surfaces of the kidney granular, the crypts thinner than usual, the capsule non-adherent (adherent in a few places?), some small cysts in the kidney, and the pelvis of the right kidney dilated; but the lungs coextensively congested with an active congestion, and œdematous, and a patch of consolidation the size of a quarter-dollar at the right base, gives no indication of any disease as a possible cause of death. An active congestion of both lungs, co-extensive with the lungs themselves, which are œdematous, cannot be caused by any known disease.

Such a condition could only be caused by the inhalation of a gaseous irritant.

Chloroform vapor is such a gaseous irritant if administered in a sufficiently condensed form.

The saturating with about two ounces of chloroform of a sponge inserted in a cone made by a folded towel, placing it on the face of a sleeping person, and leaving it there without holding it in position, would constitute such an administration in a sufficiently condensed form.

Such death would be due to the mechanical or irritant action of the chloroform, causing a complete blocking of the pulmonary circulation through excessive determination of blood without corresponding efflux thereof.

Against these propositions of the medical witnesses for the prosecution, it was contended by seven medical witnesses, for the defense, that:

An active congestion of the lungs, coextensive with the lungs themselves, which were œdematous, could occur suddenly as a result of disease, and might prove rapidly fatal.

Such a condition would not necessarily be accompanied by any special morbid signs clearly recognizable seven hours before death by a competent physician, and it might leave no further indications of its origin at the autopsy.

It would be likely to be contributed to by an anæmic condition, old age, an enfeebled heart action, and kidneys with surfaces granular, capsules non-adherent (or, as stated by one witness, adherent in a few places) crypts thinner than usual, several small cysts, and the pelvis of the right kidney dilated. It would also be likely to be contributed to by a patch of "consolidation" the size of a quarter of a dollar at the base of one lung.

The inhalation of an irritant gas is not the only cause which could determine an active coextensive congestion of the lungs. Moreover, chloroform vapor is not an irritant to the deeper respiratory passages to any appreciable extent in any degree in which it would be possible for it to penetrate into the lungs by any ordinary process of respiration.

The placing of a cone, saturated with two ounces of chloroform, on the face of a sleeping man and leaving it there would not constitute an administration of chloroform in a sufficiently condensed form, for the reason that the very first application of it in the manner described would inevitably result in glottic spasm, cough, and movement sufficient to displace the cone, before any appreciable amount of the vapor could reach the lungs.

Several theories as to the mode of causation of death by chloroform have hitherto been promulgated and more or less widely accepted, *e. g.*, paralysis of the heart muscle, of the respiratory centre, of the vasomotor centre, shock, etc.; but the theory of death by the mechanical or irritant effect of chloroform vapor on the pulmonary surfaces, as distinguished from its specific or toxic effects above referred to, is not one of them, but is an *absolutely novel theory*.

Finally, "the recognition of chloroform as the probable cause of any given death cannot be based upon the post-mortem appearances; indeed, the latter are of no value in deciding such a question."³

³Wood, *Therapeutics: Its Principles and Practice*, 1900, p. 103.

The foregoing being the respective theses of the prosecution and the defense, it is clear that on both sides they are largely in their very nature theoretical, and whether true or untrue, do not prove or disprove themselves on mere assertion or denial, however eminent the witnesses; and since, from their nature, they cannot be submitted to the only scientific method of proof, viz., direct experiment under conditions so absolutely parallel as to positively preclude fallacy, the judgment between them must necessarily be of the nature of a conclusion drawn as the result of weighing arguments advanced *pro et contra*.

Now, such an argument would clearly have to presuppose in those to whose judgment it was submitted a sound acquaintance with all the principles of physiology, pathology, morbid anatomy, clinical medicine, etc., which would be tacitly assumed at every step of the argument on both sides. Failing that, it would be necessary to stop every few minutes in the argument, to demonstrate some intermediate proved proposition upon which the argument depended. This, in turn, would call for digression into other intermediate proved propositions necessary to demonstrate the truth of the first intermediate proposition, and so on, almost indefinitely, back to first principles. Fancy starting out to demonstrate, say, the forty-seventh proposition of the first book of Euclid, to one who was ignorant of all the preceding forty-six, and even of the definitions, axioms, and postulates! Yet that would be exactly parallel to trying to argue the foregoing propositions *pro et con* as to the cause of death, before a jury of laymen; while the whole matter being theoretical and inferential, can only be treated by way of argument, if the object is honestly to arrive at a sound conclusion.

To illustrate the need of argument in this connection: Outside of a bare assertion, practically no facts or arguments were adduced by the medical witnesses for the prosecution to substantiate their statements. For instance, no attempt was made to show that it was the common knowledge and belief of the medical profession at large, that an active coextensive congestion of the lungs arising from disease was a recognized possibility. On the contrary, many causes have been named by various "authorities." Anders,⁴ for instance, says that active hyperæmia of the lungs may arise as a distinct primary affection, and

* * * may be engendered as an independent affection by the inhalation of hot air, highly irritative substances, as well as by violent physical exercise, the ingestion of large amounts of alcohol, and strong mental emotion.

S. C. Chew⁵ mentions as causes of active hyperæmia of the lungs

* * * the sudden recession of the blood from the surface and perhaps from other internal organs, such as may take place under the influence of cold. Violent exercise, rapid walking uphill, or even mental excitement, may in some impressible subjects suffice to produce it.

Osler⁶ says:

The occurrence of a rapidly fatal congestion of the lungs following extreme heat or cold, or sometimes violent exertion, is recognized by some authors. Renforth, the oars-

man, is said to have died from this cause during the race at Halifax.

Sajous,⁷ an excellent compendium of prevailing medical opinion, cites as possible causes of active hyperæmia of the lungs, violent emotions or fright, exposure to sudden damp or cold, drinking ice water, renal disease, etc., and says that both lungs are usually involved, and that it may occur as a primary disorder, especially in persons in whom the kidneys are diseased.

Now it is surely reasonable to argue that any of the foregoing causes that act by forcing a determination of the blood to the lungs, would tend, since they operate from outside the lungs, to congest them uniformly all over, or to use the catchy phrase that has now become current, "coextensively"; indeed, it may fairly be urged that they would be more likely to effect a uniform congestion of the lungs throughout than would the inhalation of an irritant vapor, since the latter would occasion spasm of the bronchioles, so that the deeper recesses of the lungs one would expect to find less congested than the portions nearer the entry.

Again, not a single case out of all the recorded autopsies in death from chloroform was adduced by the medical witnesses for the prosecution in which active coextensive congestion of the lungs with œdema was a post-mortem finding. On the other hand, an examination of the reports of over 300 autopsies, taken as they came, shows only three cases in which *active* congestion was present at all, and in those cases there were indications of preexisting pulmonary trouble, and in no case was the congestion apparently "coextensive." This is a fact which, under the rules of evidence, was excluded from the testimony in this case. Of course, the proving of a universal negative proposition is a logical impossibility; but a mass of negative evidence is better than no evidence at all, and must be accorded due weight until it is offset by positive proof to the contrary.

As to experiments on animals: In the first place, they have their place in an argument, but they cannot be accepted as absolute evidence unless it be shown that conditions were exactly similar. Besides, the experiments referred to by the first witness (733) were performed after the event, not under judicial conditions, and are entirely at variance in their results with recorded previous experiments, *e. g.*, those of Lallemand and others, cited by Sansom,⁸ as showing that

* * * the lungs, when the autopsy was made shortly after death, were found to be of a rose color, presenting no sign of congestion.

And he adds:

Death is not due to any special congestion, the appearances of engorgement being due to the gravitation of the blood.

Moreover, in the experiments on animals by the second Hyderabad Commission,⁹ out of forty-two experiments, the lungs were normal in all but one, and there was no congestion. In the one case (No. 205) the lungs were engorged, but it was with "dark venous blood," and "the post-mortem appearances indicate death from asphyxia pure and simple."

⁴Anders, *Practice of Medicine*, 5th Ed., 1901, p. 504.

⁵Chew, *Pepper's System of Medicine*, 1885, Vol. iii, p. 259.

⁶Osler, *Practice of Medicine*, 1901, p. 635.

⁷Sajous, *Cyclopædia of Practical Medicine*, Vol. v, 1900, p. 1.

⁸Sansom, *Chloroform*, Philadelphia, 1866, p. 147.

⁹*Lancet*, January 18, 1890, pp. 149-150.

The animal was a savage one and struggled violently.

If the possibility of an active coextensive congestion from causes other than the inhalation of an irritant vapor were established before competent medical referees, the congestion would then become merely an additional factor to œdema in the cause of death. Strümpell¹⁰ says that in very rare cases

* * * an apparently primary acute pulmonary œdema with a speedily fatal termination develops in men who were before that perfectly healthy, and the necropsy gives no further indications of its origin.

The cases, cited by one of the medical witnesses for the defense,¹¹ also become pertinent so far as showing that "rapidly" may mean two or three hours; as also are those of "Acute Suffocative Pulmonary Œdema," which form the basis of a clinical lecture by Professor Lindsay Steven, of Glasgow,¹² and of Mr. Lissaman,¹³ in the latter of which, the inhalation of chloroform proved such a sovereign remedy, that Mr. Lissaman instructed the patient's husband in its use. Many other cases, also, are on record, notably one by Dr. Abbot,¹⁴ in which he was summoned suddenly at 10 p. m. to "see a woman in an alarming condition," and saw her within fifteen minutes.

Her complaint at the moment, however, was, not of dyspnoea, but of a general feeling of indescribable distress, most aggravated at the epigastrium. An occasional cough produced a rattling in the throat, but there was very little expectoration.

The patient had been suddenly taken ill at night, had walked through the snow to her sister's, where Dr. Abbot was summoned to see her, a distance of about half a mile, and did not complain of dyspnoea on climbing the hill. She reached her sister's room about 9 p. m., only an hour and a quarter before she died in the doctor's presence in the act of raising a glass of stimulant to her lips. Death was instantaneous, respiration and circulation failing together. At the autopsy, sixty-two hours after death, both lungs were found congested and of a deep red color throughout. [Obviously "active coextensive congestion."] There were no tubercles, and apparently no other findings to account for death.

The other propositions might be fairly argued before a competent board in like manner. Against the assertion that chloroform is an irritant vapor to the extent of being capable of creating the condition alleged, may be set the statements of Hale White,¹⁵ that, apart from its local action on the skin and alimentary canal and on the cardiac muscle, "chloroform acts entirely on the central nervous system"; of Ringer,¹⁶ that "it is unlikely to influence appreciably the mucous membrane of the bronchial tubes, the quantity separated being very small"; of Lauder Brunton,¹⁷ that "you are not likely to get either profuse salivation, tending to choke the patient, or profuse discharge from the bronchi, leading to bronchitis afterward"; and of one of the medical witnesses for the prosecution¹⁸ who was called in rebuttal,

that "the irritation produced in the air passages by its inhalation is very slight"; and, again, that "the advantages of chloroform are its more agreeable odor and the fact that it does not irritate the air passages."

In opposition to this, on the other side, it might be argued that these refer to the ordinary administration of chloroform, but that in the case under consideration it was alleged that the chloroform had been turned on "full force," so to speak. But we have the testimony, in addition to any individual experience we may have, of nearly all authorities that "coughing, holding the breath, struggling, nearly always arise from too strong a vapor being presented to the patient."¹⁹ To this may be added the statement of Lauder Brunton¹⁹ that "It would thus appear that there is very little danger in giving chloroform in a concentrated form at first, or in giving it in a very dilute form; but if you give it very dilute to begin with, and then cram it on at intervals, you may get very serious results."

Indirect arguments might be advanced from the employment of chloroform vapor as a soothing application to painful ulcers, photophobic eyes, etc.,²⁰ from its being the preferred anæsthetic in patients with pulmonary disease,²¹ and frequently administered directly into the mouth or nose, or even through a tracheotomy tube into the trachea, under which conditions Professor McWilliam²² found the influence of the anæsthetic to be remarkably similar to that when administered with a face piece, in his experiments on animals.

Finally, in such an argument, the report of Crouch and Corner²³ to the Society of Anæsthetists might be cited, wherein they recorded 3,000 consecutive anæsthesias, the object being to determine whether it was true that ether at times set up lung trouble, and, if so, how it compared with chloroform. Counting only cases in which pulmonary symptoms appeared within twenty-four hours of administration, they found such symptoms after 10 cases out of 2,400 ether, and no cases out of 600 chloroform, administrations, notwithstanding that many of the latter being face cases, chloroform was administered directly into the mouth with a tube.

It would take too long, and neither is it necessary, to consider, in like manner, the other propositions, especially that concerning the likelihood of a cone so strongly charged with chloroform, and with practically no air, failing to set up such spasmodic action as to displace it, unless it were held in place.

It seems to me, however, that enough has been said to show how entirely the final conclusion must be a matter of inference from argument. And while the considerations herein presented

¹⁰Strümpell, *Text-book of Medicine*, 2d Amer. Ed., p. 183.

¹¹Leif, *American Journal of the Medical Sciences*, Vol. LXXXIX, 1888, p. 70-94.

¹²Steven, *Lancet*, January 11, 1902, p. 73.

¹³Lissaman, *Lancet*, February 8, 1902, p. 306.

¹⁴*Boston Medical and Surgical Journal*, Vol. LXXIV, 1866, p. 421.

¹⁵Hale White, *Materna Medica Pharmacy Pharmacology and Therapeutics*, 1901, p. 204.

¹⁶Ringer, *Handbook of Therapeutics*, 1897, p. 367.

¹⁷Brunton, *Lectures on the Action of Medicines*, 1897, p. 209.

¹⁸Hare, *Text-book of Practical Therapeutics*, 1898, pp. 143 and

¹⁹Budley Buxton, *Anæsthetics*, 1900, p. 183. Brunton, *Lectures on the Action of Medicines*, 1897, p. 210.

²⁰Ringer, *Therapeutics*, 1897, p. 365; Brunton, *Pharmacology*, etc., 1885, p. 680.

²¹The first case in which it was employed in inhalation is related by Professor Ives, of New Haven, under date of January 2, 1832. The case was one of pulmonic disease, attended with general debility and difficult respiration, and was effectually relieved. (*Silliman's Journal*, Vol. xxi, 1, January, 1832, p. 406; cited in *United States Dispensatory*, 18th Ed., Philadelphia, 1899, p. 381.)

²²McWilliam, Report to the Scientific Grants Committee of the British Medical Association, *British Medical Journal*, 1890, III, pp. 831-890.

²³*Lancet*, January 11, 1902, p. 93.

may seem to be in such terms as to be comprehensible to any average layman, it must be remembered that, when presented in argument, they would call forth statements and counter statements which would inevitably wander into more abstruse fields, and would demand a proper medical training to appraise at their exact value. When doctors disagree, the layman is apt either to discredit them all alike; to be swayed by the manner and bearing of certain ones, and award to statements plausibly presented a respect of which they are not deserving; or to attach undue importance to the *ipse dixit* of others, simply because they happen to be men holding eminent positions, or because they have attained a notoriety in the public eye.

It would seem, therefore, that it is urgent time for the profession to consider if some means of avoiding this conspicuous conflict of diametrically opposed professional opinion upon subjects of the first importance cannot be devised. Not only that, but the state of things which, while it permits the rules of evidence to be relaxed in civil cases by consent of parties or order of the court, strictly forbids such relaxation in criminal cases, is undoubtedly inimical to the interests of truth in matters of medical evidence, and fosters this conflict by so limiting the testimony, that it becomes possible for experts honestly to maintain diametrically opposite opinions on matters which, to the lay mind at least, can really admit of no such divergence.

On the other hand, that the strict adherence to rules of evidence, in all ordinary matters in criminal procedure, is based on the experience that that plan, even though it occasionally creates a hardship, best protects the interests and rights of the parties in the majority of cases, seems tolerably certain. Its relaxation, therefore, in court, can hardly be advocated; but if, in all criminal trials at any rate, the medical points, when involving the very essence of the issue, could be argued out by the medical witnesses before an impartial board of properly qualified medical men, the rules of evidence being relaxed so that the argument should become academic in character, and the decision of that board could be presented to the jury as a ruling, parallel to that of a judge on a point of law, not only would much unseemliness be avoided, but the interests of truth and strict justice would be greatly advanced.

Such a board could be appointed by the presiding judge in each case, just as at present a judge who has occasion to doubt the sanity of a prisoner appoints a committee *de lunatico inquirendo* whose findings are reported to him, and upon whose findings he makes his final judgment. All "expert" medical evidence should be placed before the medical commission. But the report of the findings of this commission alone would be placed before the jury, and these findings should be couched in such simple and unequivocal terms as to permit a layman to act intelligently upon them. The establishment of such a commission is but one step further in a line which has already been indicated by the appointment of juries *de lunatico inquirendo*. Any effort to establish a permanent board would probably meet with

marked opposition on political grounds, but there seems to be no adequate reason why criminal judges could not be empowered to appoint commissions as indicated above to receive medical or in fact any other expert testimony.

That some reform is needed, several recent cases, including the one herein reviewed, clearly indicate. I am far from suggesting any obliquity, either mental or moral, in the medical witnesses either for the prosecution or the defense in any of the cases. But, take for instance the novel theory of sudden death by the mechanical effects of the irritant vapor of chloroform causing active coextensive congestion, without leaving behind any one of the group of pathological signs which, little characteristic though they are, are present ordinarily in most cases of chloroform poisoning—not one in all nor all in one, but at any rate one or two "to represent the family"—at first blush, this theory seems plausible and even fascinating. As a possible hypothesis for future chloroform commissions to inquire into, it may have claim to consideration; but to assume it as the sole basis upon which to establish a charge that, if proved, condemns a human being to death, seems to be the most vicious kind of argument in a circle; for, whatever may be thought individually of the alleged plots and counterplots, of the motives and opportunities for murder, until it is placed beyond all reasonable doubt that death could not have been due to natural causes, and could only have been caused as alleged, these external considerations can have no shadow of weight whatever.

Therapeutical Notes.

Incipient Tuberculosis in Drinkers.—Lancereaux (*Journal de médecine interne*, March 15th) prescribes the following powders:

R	Phosphate of lime.	150 grains;
	Powdered nux vomica.	15 "
	Powdered opium.	3 "

M. Divide into twenty powders. One may be taken twice or three times daily.

Oleic Acid in the Treatment of Gall-stones.—Olive oil has been long recommended in large doses for the treatment of gall-stones, and Blum and Cipriani have also recommended sodium oleate for the purpose, but an objection to both the oil and the soap made from it lies in the disagreeable taste and the large quantities used; neither is very cheerfully taken by the patient. Artaulet de Vet has recently recommended the substitution of oleic acid for olive oil. Through the administration of the oil the paroxysms of pain are rapidly quieted. The oleic acid can also be given as a preventive, obviating the reformation of stones. During the attacks themselves, ordinary sedatives can be used, 1 gramme (15 grains) of oleic acid in a gelatin capsule being given night and morning. As a preventive, from half a gramme to a gramme of oleic acid in a capsule should be given every morning before breakfast for ten days consecutively. If the period for the return of the attacks can be calculated upon, the remedy should be given for fifteen days prior to the date when the attack is expected.

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PRELIMINARY EDUCATIONAL REQUIREMENTS.

While it is probably only a question of time when the leading medical colleges throughout the United States will make the possession of the degree of bachelor of arts a prerequisite for entrance upon the graded course leading to the degree of doctor of medicine, that time is yet far in the future for many of the medical schools, even of the better class. The university schools will naturally be first to take this step, following the lead of Harvard University and Johns Hopkins. That all of the colleges realize the necessity for a good preliminary education as a foundation for professional training becomes apparent upon a comparison of their present requirements with those exacted, say, five years ago, for the entrance into the leading medical colleges. Almost without exception, the entrance requirements have been rendered more exacting, and at the beginning of each scholastic year we find one or more of the medical colleges raising the standard of entrance requirements.

An editorial article has recently appeared in the *Columbia Literary Monthly*, the leading undergraduate publication of Columbia University, proposing that the possession of the degree of B. A. be made a prerequisite for admission to the school of medicine. Unfortunately, the editor has seen fit to characterize the greater part of medical students at the College of Physicians and Surgeons as being uncouth and uncultured, and has based his plea for the B. A. requirement largely upon this assumed fact. Dr. James W. MacLane, the dean of the medical school, has characterized this statement as being unjust to the students in that department, who are, he says,

a fine body of men. The young editor of the *Literary Monthly* has probably fallen into the error, pardonable in a very young man, of judging by external appearances only. It is possible that, judged from a sartorial standpoint, the students in the medical school will not compare favorably with those in the literary school, and it is even probable that the medical students are not so well informed in the technicalities of golf and foot-ball as their literary fellows are, but in those elements which go to making up earnest, intelligent, and successful pupils we feel confident that the medical students stand higher as a whole than those in the purely literary departments do.

The possession of any specified degree, or even an examination, is at best but a poor makeshift for determining whether or not the applicant is fitted to take up the study of medicine. It is rather certain mental characteristics than mere routine educational training which fit one for such study. The best that can be done with any kind of preliminary requirements is to ascertain whether these characteristics are present or not. But their possession cannot be determined definitely until after the student has taken up the study, and many men who have failed in life through unadvisedly taking up the study of medicine might have been saved this failure had there been a system of mid-term examinations, upon the results of which the student would be either commended in his efforts, corrected in his errors, or possibly candidly warned that he was not fitted for the study of medicine and could not hope to make a success in that profession. Few young men are really competent to judge of their own capacities, and a warning of this kind would frequently be of inestimable advantage to the individual student and at the same time confer a benefit upon medicine by keeping out of the ranks of the medical profession persons not fitted by Nature for the pursuit of this calling.

THE DEFECTS OF TRIALS TURNING ON MEDICAL TESTIMONY.

In this issue of the *Journal*, in the department of Issues and Events of the Day, Dr. Millican makes a notable exposition of the grounds on which many members of the medical profession

rest their conviction that the present system of employing contending medical "expert" witnesses in criminal trials is a serious defect in our jurisprudence, and he advocates a remedy which has before been urged, that, namely, of a judicial medical commission to sift the alleged facts in a given case and to report its conclusions. Some such plan as this has, if we are not much mistaken, been found satisfactory in Continental practice, but English-speaking jurists and legislators have not heretofore seemed to take to it. Perhaps this is due to a feeling that in a trial both the prosecution and the defense are alike entitled to profit to the utmost by medical as well as by legal skill and learning; but if both sides are allowed to appear before the commission, as is proposed by Dr. Millican, this objection falls.

In criminal trials that are likely to turn largely if not entirely upon points of medical knowledge or opinion, the difference between knowledge and opinion is not, we believe, so sharply brought out as it ought to be for the enlightenment of the jury, and the failure to make it clearly apparent rests, we are inclined to say, with the lawyers. The hypothetical question, moreover, seems much too freely allowed. It is almost invariably susceptible of more or less difference of interpretation, quite consistently with honesty of purpose in both the examiner and the witness, and it often must convey to the jury the false impression that the question embodies conditions either already proved or readily susceptible of proof by testimony. As to these matters, no doubt the bench might often interpose to prevent misrepresentation. It seems urgently needed that some way should be devised of reducing if not wholly doing away with the mystification of juries that is hardly avoidable under our present methods in so far as medical testimony is concerned.

THE SMOKE NUISANCE.

Among the few features on which New York can plume itself, conspicuous is the clearness of its atmosphere, its virtual freedom from the griminess of many other large towns. Of ordinary street dust, floating ashes, and a number of other products of the defective handling of waste material we have our full share, but, thanks to the watchfulness of our board of health, we have for

many years now been almost absolutely free from the carbonaceous pall with which many cities have to contend. An atmosphere laden with soot is not merely an obstacle to the preservation of the cleanliness of one's linen; it is really detrimental to the public health, both directly and indirectly—directly by reason of the floating particles of carbon being taken into the respiratory tract, indirectly by the demoralizing effect on citizens of the ever-present smudge, whereby they become indifferent to the presence of various other sorts of atmospheric impurities. Of what use is it, they naturally ask themselves, to try to rid ourselves of ordinary dust, no matter how germ-laden it may be, so long as we cannot escape the black belchings of innumerable chimneys?

It seems undeniable that the smoke nuisance has within recent years been growing constantly more and more decided in a number of formerly beautiful American cities, and nothing seems to be done to check its increase. Yet surely the same measures that keep it down in New York would also prove sufficient to abolish it in other municipalities, and these measures are not unreasonable to insist upon. The trouble seems to be that citizens do not realize the detriment that falls upon a city, prosperous though it may be, by reason of the injurious influence of sooty air upon the health of the inhabitants and by its repelling effect upon visitors who, but for its presence, would perhaps bring new industries and fresh capital to the place. There are smoke-consuming devices that are effective without being too taxing to manufacturers, and their use ought to be insisted upon in every city. We regard the promulgation and enforcement of ordinances to bring about their invariable use in establishments consuming soft coal as among the most important functions of boards of health, and we believe that a little reflection will result in a practically general agreement in this view.

"LATENT VACCINIA."

Vaccinia somewhat delayed—that is to say, delayed for a few days—is not very uncommon, but in the *Lancet* for March 8th Dr. J. W. Washbourn, physician to Guy's Hospital and to the London Fever Hospital, etc., subjects one's

credulity to rather a severe test when he relates the history of a case in which vaccinia is intimated to have remained latent for two years. The story is that a girl baby, two years and a half old, came under the care of Mr. Percy Rose with the history that she had been ailing for three days. The tonsils were red and swollen, the submaxillary (lymphatic?) glands of one side were enlarged, there was some stomatitis, and the temperature was 102° F. Mr. Rose was informed that the child had been vaccinated in four places two years before, but that only one of the insertions had taken, and that very slightly. On the second day of his attendance he was told that "marks" were coming out over the old vaccination sites. On the third day there was exudation on one of the tonsils, with a scarlatiniform eruption over the chest and the back, and he made a diagnosis of scarlet fever, in which he was fortified by the fact that a younger child in the family had hyperæmia of the throat, vomiting, and a scarlatiniform eruption.

On inquiry of the mother at that time, the following history of the "vaccination spots" was elicited: On January 31st, the day on which the elder child had first been taken sick, a "dry sore" was observed on the left arm, at the site (which of the four sites?) of the original vaccination; "the mother was quite sure that no marks were previously visible." On February 2d three fresh "red places" with a scab over them were observed. "On the 5th Mr. Rose found that there were four spots on the left arm at the usual site of vaccination; they were all of about the same size as a vaccination lesion, and each of them was surrounded by a small red areola with a thin dry scab in the centre. The appearance was exactly that of mild vaccination at about the seventh day."

Without stopping to inquire what a "mild vaccination" may be, we will quote the following statements of Dr. Washbourn's: "I saw the patient on February 7th with Mr. Rose, and confirmed his observations. The mother was quite certain that the spots were at the site of the old vaccination, and she was sure that the child had not been recently vaccinated and that nothing had occurred before January 31st. On examining the child, there was very slight impetigo of

the scalp, and the skin was clear elsewhere. The appearance of the marks on the arm and their arrangement were quite unlike anything in the way of secondary infection from impetigo. There was no doubt that the child was suffering from scarlet fever, and the only explanation that we could give was that the vaccination had remained latent during two years and had started afresh with the onset of scarlet fever." We must say that Dr. Washbourn's suggestion seems to us to rest upon a very shallow foundation, and we are much inclined to add that defective observation has been impressed into the bolstering up of a theory wholly at variance with all previously known facts.

EMERGENCY WORK OF PRIVATE HOSPITALS.

An interesting phase of hospital work is brought forward in the last annual report of the board of managers of the J. Hood Wright Memorial Hospital, which has just been made public. It seems in the first place that eighty cents for surgical patients and sixty cents for medical patients, the per diem allowance made by the city to private hospitals for the care of the indigent, is less than half the cost of caring for the patient in this hospital, which is \$1.75 a day for each patient, exclusive of the services of surgeons and physicians, which are given gratuitously. While this is somewhat of a hardship, there is a reasonable explanation for the attitude of the city authorities, who base their estimates, not upon the rate of expenditure of the private hospitals, but upon the average cost to the city of the same service when rendered in its own hospitals. Leaving aside this feature of the report, there is another complaint lodged against the city authorities, of the justice of which there can be no doubt. Each of the private hospitals which maintains an ambulance service acts as an emergency hospital. When an ambulance call is answered, the patient is brought directly to the hospital to which the ambulance happens to be attached, and is cared for for a day or night, and if the hospital happens to be full already, is transferred to a public hospital. The public authorities receive the patient, but do not recognize the claim of the private hospital for services already rendered, although the responsibility of the city, as pointed out in the report, really arises with the emergency. This responsibility should undoubtedly be recognized and private hospitals be treated liberally in the matter of this emergency service. The cost of answering an ambulance call, and caring for the

patient where the patient proves to be indigent, should not fall wholly upon the private institution. This service is of the most valuable character on account of the wide dispersion of the private hospitals and their availability for emergency work, which cannot be performed satisfactorily save through their cooperation. So long as public funds are to be used in payment for services rendered to indigent patients by private institutions, payment should certainly be made for the emergency service rather than for the continuous.

THE OKLAHOMA MEDICAL NEWS-JOURNAL.

This is the new name of the *Oklahoma Medical Journal* consolidated with the *Oklahoma Medical News*, and Dr. E. O. Barker, who, with two other physicians of Guthrie, started the *Journal* nine years ago and has been its sole editor for the last eight years, retires from his editorial labors. We can say that his work has been very creditable, but we can readily understand that the requirements of an increasing practice will no longer allow him to give to the publication the amount of care necessary to maintain its success. It has not seemed to us that Oklahoma, with all its bustling activity, really needed two medical journals, and we think it a matter for congratulation that the *Journal* and the *News* have been consolidated. The editor of the new journal, for which we wish all possible success, is Dr. J. R. Phelan, who was before the editor of the *News*. Of course it is with regret that Dr. Barker retires, but he promises his enthusiastic support to the new journal, and he may count on appreciative recognition of his past editorial work.

CHOLERA IN MANILA.

Information has been received to the effect that the cholera has made its appearance in Manila, a fact which naturally causes considerable uneasiness among those concerned in the welfare of the Philippines. If indeed the cholera does gain a foothold in Manila, there is every probability of its causing a large mortality, for, on account of the manner in which the buildings of the city are constructed and of the large numbers of ignorant people crowded together in the insanitary poor quarter of the city, it will be quite difficult to enforce proper sanitary precautions. On the other hand, the authority possessed by the sanitary officials should enable them to resort to measures which, however desirable, would not be available in the United States, and should give them a decided advantage in treating the situation. It is

scarcely to be hoped that the sanitary authorities of Manila can make so unique and enviable a record there as has been made by the medical officers of the United States in Havana, who have practically freed that city from yellow fever entirely.

News Items.

Society Meetings for the Coming Week.

MONDAY, April 7th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association (annual); Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society (annual).

TUESDAY, April 8th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, April 9th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, April 10th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 11th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, April 12th.—Obstetrical Society of Boston (private).

Issues of January 4th Wanted.—Our supply of the issue of January 4th has been completely exhausted, and any of our readers who may have a spare copy would oblige us by mailing it to the publishers.

The Death of Dr. Johnston.—The faculty of the Columbian University Medical School and the medical board of the University Hospital, at a special meeting held on March 22d, adopted resolutions of respect to the memory of Professor William W. Johnston, who had been professor of the theory and practice of medicine from 1871 up to the time of his death, which was recorded in our last issue. In accordance with the resolutions the medical school was closed for one week and the faculty and students attended the funeral ceremonies in a body.

Osteopaths Defeated in the Virginia Legislature.—A bill providing for the creation of a separate board for the examination and licensing of persons desiring to practise osteopathy in the State of Virginia has been killed in the committee of the State Senate on general laws.

Dr. J. Alison Scott has been elected professor of clinical medicine and therapeutics in the Philadelphia Polyclinic and College for Graduates in Medicine, to succeed Dr. S. Solis-Cohen, who resigned about a month ago.

Fifteen Thousand Dollars for the Study of Cancer.—The annual supply bill as enacted by the Legislature of the State of New York appropriates \$15,000 to prosecute the study of the best methods for the treatment of cancer. The investigation is to be carried on at the Gratwick Laboratory, at Buffalo.

The Queens-Nassau Medical Society met at Long Island City on March 25th. Dr. Walter B. Chase, of Brooklyn, read a paper on Fibroid Tumors of the Uterus, and Dr. John M. Barry, of Long Island City, presented a paper embracing some random notes on obstetrics. Dr. McFarland, Dr. Burnett, Dr. Trask, Dr. Bumstead, Dr. Hinckson, and Dr. Strong participated in the discussion of the papers.

Dr. Thomas Dunn English, author of the popular ballad, "Ben Bolt," and of several successful plays, died at his home, in Newark, N. J., on April 1st, at the age of eighty-three. He was born in Philadelphia, graduated from the medical school of the University of Pennsylvania, but took up the study of law and was admitted to the Bar in Philadelphia in 1842. He was a member of the New Jersey Legislature for two years and also served in Congress for one term. He was popular as a political speaker. He continued to practise medicine, despite his other engagements, for many years.

The Gregory Testimonial Banquet.—Arrangements are completed for the Gregory testimonial banquet, which is to be held in St. Louis on April 17th, and which promises to be a most successful affair. Among others, the following will respond to toasts: Dr. DeForest Willard, Philadelphia; Dr. Walter Wyman, surgeon-general of the United States Marine-Hospital Service; Dr. N. B. Carson, president of the St. Louis Medical Society; Dr. J. D. Griffith, president of the Missouri State Medical Society; Chancellor Chaplin; Dr. W. G. Moore, and Dr. C. H. Hughes. Dr. A. M. Dockery, governor of Missouri, will preside and will respond to the sentiment of the "State of Missouri." Dr. F. J. Lutz will act as toastmaster.

A Memorial Window to Dr. Alex. J. C. Skene has been placed in the new St. Paul's Protestant Episcopal Church, Flatbush. The window is directly over the altar and occupies a space 14 by 19 feet. The subject is "The Great Physician." The background pictures the plains of Jericho in the Valley of the Jordan. The central figure represents

the Christ, around whom are gathered the maimed, the halt, and afflicted, standing in expectant attitude, awaiting His words. Beneath is the sentence, "Come unto Me all ye that labor and are heavy laden and I will give you rest." In a separate panel is this inscription: "To the Glory of God and in Loving Memory of Alex. J. C. Skene, M. D., LL. D."

City Hospitals are Fire-traps.—The chief of the fire department of this city, after making a careful inspection of Bellevue and the Harlem hospitals, states it as his opinion that the occurrence of a fire in Bellevue Hospital would almost surely be accompanied by a frightful loss of life, and that the Harlem Hospital is but little better off. It is stated that Dr. John W. Brannan, chairman of the board of trustees of Bellevue and the allied hospitals supports the chief of the fire department in his views, and it is hoped that something will be done to improve the situation. Several successive commissioners having supervision of Bellevue Hospital have recommended the erection of entirely new buildings, but so far no action has been taken, each succeeding city administration fighting shy of the expense involved.

Academy of Medicine.—The Section in Pædiatrics will meet on Thursday evening, April 10th, at 8.15. Dr. Louis Fischer will present specimens of sarcoma involving the lung and Dr. B. Van D. Hedges will exhibit a vaccination packet. The following papers will also be presented: The Progressive Principle of Infant Feeding, by Dr. Henry L. Coit, and The Feeding of Children during the Second Year, by Dr. Thomas S. Southworth. The Section in Otology will meet on the same evening (Thursday), the paper of the evening being by Dr. George L. Richards, of Fall River, Mass., on Chronic Suppurative Otitis Media—When should Radical Surgery be Employed in its Treatment, and of What should this Consist? Dr. John Guttman will present a case of horny degeneration of the lobule of the auricle, and Dr. Thomas J. Harris will present a case of thrombosis of the lateral sinus and will also report a case of pachymeningitis.

The Army Medical School.—The exercises at the close of the session of 1901-'02 were held in the hall of the National Museum, at Washington, D. C., on Friday, April 4th, at 3 o'clock. After remarks by the president of the school, the surgeon-general delivered an address, and the Secretary of War presented their diplomas to the graduates. The exercises concluded with an address to the graduating class by the lieutenant-general of the army. Following is a list of the graduates, each of whom is a first lieutenant and assistant surgeon: Dr. Jerome S. Chaffee, Dr. Charles C. Geer, Dr. Ernest L. Ruffner, Dr. Conrad E. Koerper, Dr. Robert U. Patterson, Dr. Roderic P. O'Connor, Dr. George P. Heard, Dr. Roger Brooke, Jr., Dr. Arthur M. Line, Dr. Verge E. Sweazey, Dr. Matthew A. De Laney, Dr. Paul S. Halloran, Dr. Kent Nelson, Dr. Robert Smart, Dr. Lloyd Le R. Krebs, Dr. William P. Woodall, Dr. Charles A. Ragan, Dr. William R. Eastman, Dr. George William Jean, Dr. James F. Hall, Dr. Raymond F. Metcalfe, Dr. Perry Lee Boyer, Dr. James M. Phalen.

A Light Institute in Vienna.—A subscription is being raised in Vienna for the establishment of a light institute there for the treatment of lupus, similar to Finsen's Institute at Copenhagen. It is estimated that the establishment will cost 300,000 crowns. The list has been headed with a subscription from the Emperor Francis Joseph of 10,000 crowns.

Post-graduate Courses at Baltimore.—The College of Physicians and Surgeons of Baltimore has established a series of post-graduate courses, beginning April 28th and closing June 9th. The courses are designed for practitioners of medicine who desire to spend a short time in advanced clinical and laboratory study. The students will have the choice of either a clinical or laboratory course, as may preferred.

An Antivivisection Bill in the Massachusetts Legislature.—At the hearing, on March 21st, before the committee on probate and chancery of the Massachusetts Legislature on a bill prohibiting vivisection, Dr. George B. Shattuck, Dr. Samuel D. Abbott, of the State Board of Health; Dr. H. C. Ernest, and Professor Porter, assistant professor of physiology at Harvard, all spoke in remonstrance to the bill. A further hearing was set for April 3d.

An X-ray Hospital for Chicago.—The first meeting of the faculty of the Chicago College of X-ray and Electro-therapeutics was held on March 24th, and it was decided to erect a hospital devoted especially to the work in which the college is interested. The members of the faculty of the college are: Dr. Byron Robinson, Dr. W. K. Harrison, Dr. E. M. Reading, Dr. William E. Holland, Dr. John C. Delprat, Dr. George F. Hawley, Dr. L. D. Rogers, Dr. H. P. Fitzpatrick, Dr. R. L. Snow, Dr. George McFatrigh, Dr. Arthur H. Reading, Dr. J. L. Hammond, Dr. Rufus Bartlett, Dr. Hugo Wightman, Dr. Lyman M. Ellis, Dr. F. F. Brown, and Dr. Frederick A. Leusman.

Cuspidors for Railway Cars.—The Board of Health of the State of Pennsylvania has adopted resolutions requiring cuspidors in the trains of the Pennsylvania Railroad and Philadelphia & Reading Railway, and is attempting to secure legislation inflicting a penalty for infringement of the rule. The tentative provisions of the resolution require a cuspidor for each seat in the smokers' cars and one at either end of the day coaches. In addition rigid sanitary precautions will be required in the thorough cleansing and disinfection of the receptacles at the end of each run. In the communication to the railroad companies the board cites the fact that the latest statistics of the United States Government show that three fourths of all the men use tobacco, 80 per cent. expectorate, and 12,000,000 smoke. The railroad authorities look upon the requirements outlined as entailing a hardship upon the roads and propose that the Pennsylvania Legislature, instead of requiring the installation of cuspidors, should follow the example set by the State of New York and make expectoration in cars or on stations a misdemeanor, punishable with fine or imprisonment.

The Association of American Physicians will hold its seventeenth annual meeting at Willard's Hotel, Washington, on April 29th and 30th and May 1st, under the presidency of Dr. James C. Wilson, of Philadelphia. The preliminary programme contains a list of some thirty-three papers by the following authors: Dr. S. Solis-Cohen, of Philadelphia; Dr. James B. Herrick, of Chicago; Dr. R. H. Fitz, of Boston; Dr. Morton Prince, of Boston; Dr. Arthur R. Edwards, of Chicago; Dr. M. Howard Fussell, of Philadelphia; Dr. Richard C. Cabot, of Boston; Dr. Beverley Robinson, of New York; Dr. Alfred Stengel, of Philadelphia; Dr. W. B. Stanton, of Philadelphia; Dr. M. J. Lewis and Dr. F. A. Packard, of Philadelphia; Dr. Charles G. Stockton, of Buffalo; Dr. Frank Billings, of Chicago; Dr. Norman Bridge, of Los Angeles; Dr. Henry Jackson, of Boston; Dr. Alfred Stengel with Dr. D. L. Edsall, of Philadelphia; Dr. Frederick C. Shattuck, of Boston; Dr. W. S. Thayer, of Baltimore; Dr. William Osler, of Baltimore; Dr. D. D. Stewart, of Philadelphia; Dr. George Dock, of Ann Arbor; Dr. Eldred Scott Warthin, of Ann Arbor; Dr. Charles S. Bond, of Richmond, Ind.; Dr. C. A. Herter, of New York; Dr. I. N. Daniorth, of Chicago; Dr. Victor C. Vaughan, of Ann Arbor; Dr. F. E. Novy, of Ann Arbor; Dr. Frank Billings and Dr. Joseph L. Miller, of Chicago; Dr. James Tyson with Dr. Alfred C. Crofton, of Philadelphia; Dr. Simon Flexner, of Philadelphia; Dr. B. Meade Bolton with Dr. Carl Fisch, of St. Louis; Dr. B. K. Rachford with Dr. W. H. Crane, of Cincinnati.

The Pathological Exhibit at the American Medical Association Meeting.—The committee on pathological exhibits for the American Medical Association desires to secure materials for the coming session at Saratoga, June 10th to 13th inclusive. This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul respectively, where valuable exhibits were collected from all parts of the country. The materials included not only pathological specimens, but the allied fields, bacteriology, hæmatology, physiology, and biology were well represented. It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges. This exhibit has already become a permanent feature of the annual sessions of the American Medical Association, and the committee is desirous of securing its list of exhibits as early as possible, and to this end asks those having desirable materials to communicate with any member of the committee. To contribute to the value of the work, it is suggested that, as far as possible, each contributor select materials illustrative of one classification and by such specialization enhance the usefulness of the display. Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee, and due credit will be given in the published reports. Further details may be obtained from any of the following members of the committee: Dr. F. M. Jeffries, 214 East Thirty-fourth Street, New York; Dr. W. A. Evans, 103 State Street, suite 1403, Chicago, Ill.; or Dr. Roger G. Perkins, Western Reserve Medical School, Cleveland, Ohio.

The Legal Status of Osteopathy in the Several States.—A Summary of State Medical Laws, prepared for the Board of Health of the State of Illinois, is now in press, and through the courtesy of the secretary of the board, Dr. J. A. Egan, we are enabled to present the following data, taken from advance proofs:

Osteopathy is legalized and its practice is regulated by legislative enactments in the following States: California, Connecticut, Indiana, Iowa, Kansas, Michigan, Missouri, Montana, Nebraska, North Dakota, Ohio, South Dakota, Tennessee, Vermont, and Wisconsin. In Massachusetts and Texas osteopaths are exempted from the provisions of the medical law of the State. Under the provisions of the medical law of Illinois, enacted in 1899, the State Board of Health is empowered to examine and license persons who desire to practise any certain "system or science of treating human ailments, who do not use medicines internally or externally and who do not practise operative surgery," the said examination to "be of a character sufficiently strict to test their qualification as practitioners." Any person is eligible to this examination, which embraces the following subjects, in each of which ten questions are asked: Anatomy, chemistry, histology and pathology, hygiene, physiology, and symptomatology. An applicant receiving an average rating of 75 per cent. in this examination is issued a certificate by the State Board of Health. All persons thus licensed are prohibited by the statutes of Illinois from calling or advertising themselves as physicians or doctors.

In addition to the States mentioned, the practice of osteopathy is seemingly permitted in the following, although technically prohibited by law: Alabama, Arizona, Arkansas, Colorado, Delaware, District of Columbia, Florida, Georgia, Idaho, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Virginia, Washington, West Virginia, and Wyoming. The laws of Maine and New Hampshire permit the practice of magnetic healing, mind cure, massage, Christian science, or other methods of treatment in which no drugs are used. Prosecutions have been attempted in Arkansas, Georgia, Kentucky, Louisiana, Minnesota, Mississippi, New Mexico, Pennsylvania, Utah, and possibly others, with varying results. In but one instance in these States has the higher court rendered a decision on the practise of osteopathy namely, in Kentucky. Says the court in this case (*Nelson v. State Board of Health*, 57 S. W. R., 501): "Appellant is in no proper sense a physician or surgeon. He does not practise medicine. He is rather on the plane of a trained nurse. If by kneading and manipulating the body he can give relief from suffering, we see no reason why he should not be paid for his labor, as other laborers. Services in kneading and manipulating the body are no more the practice of medicine than services in bathing a patient to allay his fever or the inflammation of a wound. Appellant may not prescribe or administer medicine or perform surgery, but so long as he confines himself to osteopathy, kneading and manipulating the body without the use of medicine or surgi-

cal appliances, he violates no law, and appellee (the State Board of Health) should not molest him."

Court decisions favorable to the contention that the practice similar to that of osteopaths is *not* the practice of medicine as defined by the statutes, have been rendered in the following States: Kentucky (*Nelson v. State Board of Health*, supra), New York (*Smith v. Lane*, 24 Hun., 632), Ohio (*State v. Liffering*, 55 N. W. R., 168), and Rhode Island (*State v. Myloid*, 40 A. R., 753). Since the filing of the opinion in the case of *State v. Liffering*, the Legislature of the State of Ohio has legalized the practice in the State.

Contrary decisions have been rendered by the supreme courts of Nebraska (*State v. Buswell*, 58 N. W. R. 758, and *Little v. State*, 84 N. W. R. 248), but Senate Bill 102, approved 12.33 a. m., April 1, 1901, decrees that "the system, method, or science of treating disease of the human body, commonly known as osteopathy, is hereby declared not to be the practice of medicine, surgery, or obstetrics within the meaning of Sections seventeen (17) and eighteen (18), Article one (1) of Chapter fifty-five (55), Compiled Statutes of Nebraska, 1899, and entitled 'Medicine,'"—and of Illinois (*People v. Gordon*, Dock, 2095, Ag. 62, opinion filed February 21, 1902). The Supreme Judicial Court of Massachusetts in March, 1835 (*Hewitt v. Charier*, 16 Pick 353) held that a person who practised bonesetting and reducing sprains, swellings and contractions of the sinews, by *friction* and *fomentation*, but no other branch of the healing art, practised surgery within the meaning of the statutes.

The State Board of Health of Illinois has long held that persons who held themselves out as competent to treat disease and practised what is known as "osteopathy" and "magnetic healing" were practising medicine as defined by the statutes. Many suits have been instituted by the board against persons who were deemed violators of the law. In the majority of instances, the judgment of the lower courts was in favor of the defendants. This was notably so in the case of the so-called "magnetic healers" who, it is alleged, used both mental and physical agencies in their treatment. The higher courts, however, with one exception, have sustained the ruling of the board, and the question has been finally settled by the Supreme Court of Illinois in a clear and concise statement of the law governing the case, in which it is held that "services in kneading and manipulating the body" (see *Nelson v. State*) are "more the practice of medicine than services in bathing a patient to allay his fever or the inflammation of a wound." The court (*People v. Gordon*, Dock 2095, Ag. 62, February 21, 1902) says: "Merely giving massage treatment or bathing a patient is very different from advertising one's business or calling to be that of a doctor or physician, and as such administering osteopathic treatment. The one properly falls within the profession of a trained nurse, while the other does not." In this case the judgment of the Appellate Court, in the case of the *People v. Gordon*, 96 Ill. App., 456, was reversed.

The judgment of the higher courts referred to will be found in the following: *Eastman v. People*, 71 Ill. App., 236; *W. D. Jones v. People*, 84 Ill. App., 453; *People v. B. E. Jones*, 92 Ill. App., 447; and *People v. Gordon*, 96 Ill. App., 456.

The Berlin Medical Society has elected Professor von Leuthold, Professor Kussmaul, and Professor von Recklinghausen honorary members of the society.

The Pirogoff Congress of Russian Physicians, which met in Moscow on January 16th, was the most successful of these congresses yet held, there being some two thousand participants. These congresses are held once every two or three years under the auspices of the Association of Russian Physicians in memory of Dr. Pirogoff. They are general in character, embracing five groups, in each of which there are subdivisions of sections. The groups have to do with biology, pathology, clinical medicine and therapeutics, and public medicine and hygiene.

Foreign University Notes.—Dr. Th. Escherich, professor of pædiatrics at Graz, has been selected to succeed Dr. von Widoerhofer, who has recently retired from this chair at Vienna.—Professor Beckmann, of Leipsic, has been called to the recently established chair of pharmaceutical chemistry at Berlin.—Baron von Krafft-Ebing recently celebrated the thirtieth anniversary of his professorship at Vienna, on which occasion he was decorated with the cross of the Commander of the Order of Franz Joseph.—Professor von Vintschau, of Vienna, has been decorated with the cross of Knight of the Order of Leopold.—It is reported that Professor Emil von Behring proposes to turn over to the Prussian government the Nobel prize of 168,000 marks, to insure the continuation of the work of the Institute for Experimental Therapeutics, founded by him at Marburg. Some years ago Professor von Behring presented to the institute the half of the French prize of 25,000 francs awarded him for his services in the development of serum-therapy.

Foreign Obituary Notes.—From our foreign exchanges we learn of the death of the following members of the profession: Dr. Bouqué, professor of surgery at Geneva.—Privy Councillor Johann Lasareweitsch, professor emeritus of obstetrics and gynæcology in the Charkow University, St. Petersburg, Russia, at the age of seventy-three.—Dr. Julius Wolff, professor of surgery and director of the Polyclinic for Orthopædic Surgery at Berlin, at the age of sixty-six years.—Surgeon-General Sir Guyer Hunter, K. C. M. G., LL. D., F. R. C. P., consulting physician Charing Cross Hospital, London, at the age of seventy-three. Dr. Hunter served through the Indian Mutiny, and later acted as principal of the Grant Medical College, Bombay. He served the English government on a special mission to Egypt during the cholera epidemic, in 1883. He was a member of Parliament for seven years, and at the time of his death was vice-president and registrar of the Sanitary Institute.—Mr. Patrick T. Manson, son of Dr. Patrick Manson, whose work on mosquitoes and their relation to malaria has made his name well known, died recently on Christmas Island, whither he had gone to conduct a scientific investigation into the causation and treatment of beri-beri, on behalf of the London School of Tropical Medicine.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 29, 1902:

DISEASES.	Week end'g Mar. 22		Weekend'g Mar. 29	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	21	6	18	9
Scarlet fever.....	351	33	328	22
Cerebro-spinal meningitis.....	0	4	0	6
Measles.....	814	25	689	30
Diphtheria and croup.....	350	39	339	46
Small-pox.....	66	13	69	4
Tuberculosis.....	265	170	295	166

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers for the United States Marine-Hospital Service for the Seven Days ending March 27, 1902:

- ADAMS, F. B., Acting Assistant Surgeon. Granted leave of absence for twenty days from April 1st.
- CARRINGTON, P. M., Surgeon. To proceed to Fort Bayard, East Las Vegas and Santa Fe, New Mexico, for special temporary duty.
- GEDDINGS, H. D., Passed Assistant Surgeon. To proceed to Baltimore for special temporary duty.
- GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for seven days from March 18th, under paragraph 181 of the Regulations.
- KINSELL, B., Acting Assistant Surgeon. Granted leave of absence for ten days from February 10th.
- RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for three days from March 27th.
- TOWNSEND, F., Acting Assistant Surgeon. Granted leave of absence for one month from March 15th.
- WETMORE, W. O., Acting Assistant Surgeon. The leave of absence for fourteen days granted Acting Assistant Surgeon WETMORE is revoked.
- WHITE, J. H., Surgeon. To proceed to Baltimore for special temporary duty March 21st.

Board Convened.

Board convened to meet at the Bureau March 24th, for the physical examination of candidates for admission to the engineer corps, R. C. S. Detail for the Board: Passed Assistant Surgeon H. D. GEDDINGS, chairman; Assistant Surgeon B. S. WARREN, recorder.

Appointment.

W. E. RICE, of Maine, appointed acting assistant surgeon for duty at Bath, Maine, March 21st.

Army Intelligence.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending March 29, 1902:

- CARTER, EDWARD C., Major and Surgeon. The leave of absence granted him is extended one month.
- CLOUD, MARSHALL M., First Lieutenant and Assistant Surgeon, having been found incapacitated for active service on account of disability incident thereto, is retired March 25th.
- COLE, R. KING, Contract Surgeon, will report on board the transport *Meade* for temporary duty therewith during the voyage to the Philippine Islands.

JONES, JOHN F., Contract Surgeon. The leave of absence granted him is extended twenty-three days.

KIMBALL, JAMES P., Colonel and Assistant Surgeon General, is directed to report in person to Major-General JOHN R. BROOKE, president of the army retiring board at Governor's Island, New York City, for examination by the board.

RAFTER, JOHN A., Contract Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

SHAFFER, JOSEPH J., Contract Surgeon, is assigned to duty as transport surgeon of the transport *Meade*, to relieve EDWARD T. GIBSON, Contract Surgeon, who will report at the Department of California headquarters for further orders.

STEWART, WILLIAM J., Captain and Assistant Surgeon, will proceed to Fort Slocum, N. Y., and report for temporary duty pending the departure of recruits or troops which he may be destined to accompany to San Francisco.

THOMPSON, LOUIS A., Contract Surgeon. The extension of the leave of absence granted him is further extended two months on account of sickness.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending March 29, 1902.

DU BOSE, Surgeon. Ordered to report on the *Wisconsin* to the commander-in-chief of the Pacific Station as fleet surgeon.

Births, Marriages, and Deaths.

Born.

CURRY.—In Fort Bayard, New Mexico, on Saturday, March 22d, to Dr. J. J. Curry, U. S. A., and Mrs. Curry, a daughter.

Married.

CLARK—GODDARD.—In Brooklyn, on Monday, March 31st, Dr. William R. P. Clark and Miss Edith Langdon Goddard. March 26th, Dr. O. M. Gilbert and Miss Agnes Kirkbride. March 26th, Dr. O. M. Gilbert and Miss Agnes Kirkbride.

JORDAN—BROWN.—In Kansas City, Mo., on Thursday, March 27th, Dr. Benton H. Jordan and Miss Rose M. Brown.

MOORE—WATSON.—In Washington, on Wednesday, April 2d, Dr. Dixon E. Moore, of Columbus, Ohio, and Miss Maria Margaret Watson.

REDDISH—MELUS.—In Springfield, Ohio, on Thursday, March 27th, Dr. John Reddish and Mrs. Ella M. Melus.

TREYER—CUNEO.—In San Francisco, on Sunday, March 23d, Dr. Edmond Treyer and Miss Evelyn Cuneo.

VOORHEES—BROWN.—In New York City, on Wednesday, April 2d, Dr. James Ditmars Voorhees and Miss Mabel Brown.

Died.

BABCOCK.—In Hammondsport, N. Y., on Tuesday, April 1st, Dr. Moses T. Babcock, in the seventy-seventh year of his age.

BERRY.—In Columbia City, Ind., on Friday, March 28th, Dr. Charles H. Berry.

CARLISLE.—In Mt. Gilead, Ohio, on Friday, March 21st, Dr. Paul P. Carlisle, of Cleveland.

ENGLISH.—In Newark, N. J., on Tuesday, April 1st, Dr. Thomas Dunn English, in his eighty-third year.

HUGER.—In Baltimore, Md., on Saturday, March 29th, Dr. William E. Huger, Jr.

O'FARRELL.—In Philadelphia, on Thursday, March 27th, Dr. Gerald O'Farrell.

ROFFEE.—In Rochester, N. Y., on Thursday, March 27th, Dr. Edson M. Roffee, in the sixty-fourth year of his age.

SARGENT.—In Philadelphia, on Saturday, March 29th, Dr. Orin S. Sargent.

TAYLOR.—In St. Louis, Mo., on Wednesday, March 26th, Dr. Rodney C. Taylor, in the thirty-sixth year of his age.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending March 29, 1902:

Smallpox—United States.			
California....	Los Angeles....	Mar. 8-15....	6 cases.
"	Sacramento....	Mar. 8-15....	1 case.
"	San Francisco....	Mar. 8-15....	18 cases.
Colorado....	Denver....	Mar. 8-15....	8 cases.
Illinois....	Belleville....	Mar. 15-22....	2 cases.
"	Joliet....	Mar. 1-15....	8 cases.
Indiana....	Evansville....	Mar. 15-22....	5 cases.
"	Indianapolis....	Mar. 15-22....	14 cases.
Iowa....	Clinton....	Mar. 15-22....	1 case.
Kansas....	Wichita....	Mar. 15-22....	5 cases.
Kentucky....	Covington....	Mar. 16-23....	8 cases.
Maine....	Portland....	Mar. 15-22....	4 cases.
Massachusetts....	Boston....	Mar. 15-22....	19 cases.
"	Cambridge....	Mar. 15-22....	3 cases.
"	Fitchburg....	Mar. 15-22....	3 cases.
"	Lawrence....	Mar. 15-22....	4 cases.
"	Malden....	Mar. 15-22....	2 cases.
"	Somerville....	Mar. 15-22....	2 cases.
Michigan....	Detroit....	Mar. 15-22....	13 cases.
"	Grand Rapids....	Mar. 8-22....	4 cases.
"	Lansing....	Mar. 15-22....	19 cases.
Nebraska....	Omaha....	Mar. 15-22....	29 cases.
New Jersey....	Elizabeth....	Dec. 28-Feb. 15	12 cases.
"	"	Mar. 8-15....	1 case.
"	Hudson Co....	Mar. 9-16....	48 cases.
"	Jersey City....	Mar. 9-23....	78 cases.
"	Newark....	Mar. 15-22....	25 cases.
New York....	Binghamton....	Mar. 15-22....	1 case.
"	New York....	Mar. 15-22....	66 cases.
"	Yonkers....	Mar. 14-21....	2 cases.
Ohio....	Cincinnati....	Mar. 14-21....	25 cases.
Pennsylvania....	Allegheny City....	Mar. 15-22....	1 case.
"	Philadelphia....	Mar. 15-22....	35 cases.
"	Pittsburgh....	Mar. 15-22....	4 cases.
Rhode Island....	Providence....	Mar. 15-22....	5 cases.
South Carolina....	Greenville....	Mar. 8-15....	7 cases.
South Dakota....	Sioux Falls....	Mar. 15-22....	4 cases.
Tennessee....	Memphis....	Mar. 15-22....	13 cases.
Washington....	Tacoma....	Mar. 8-15....	10 cases.
West Virginia....	Wheeling....	Mar. 15-22....	2 cases.
Wisconsin....	Greenbay....	Mar. 15-22....	23 cases.
"	Milwaukee....	Mar. 15-22....	3 cases.

Smallpox—Foreign.

Belgium....	Antwerp....	Mar. 1-8....	18 cases.	3 deaths.
Canada....	Halifax....	Mar. 15-22....	9 cases.	
"	Hamilton....	Mar. 15-22....	1 case.	
"	Quebec....	Mar. 15-22....	22 cases.	
"	Winnipeg....	Mar. 1-15....	9 cases.	
China....	Hongkong....	Feb. 1-8....	1 case.	
Colombia....	Cartagena....	Mar. 3-9....		1 death.
"	Panama....	Mar. 10-18....	50 cases.	
France....	Paris....	Mar. 1-8....		3 deaths.
Great Britain....	Leeds....	Mar. 8-15....	2 cases.	
"	London....	Mar. 1-8....	555 cases.	80 deaths.
"	North Shields....	Feb. 22-Mar. 8....	16 cases.	2 deaths.
"	Swansea....	Feb. 22-Mar. 1....	1 case.	
"	Tottenham....	Feb. 22-Mar. 1....	1 case.	
"	West Ham....	Feb. 22-Mar. 1....	7 cases.	
Scotland....	Dundee....	Mar. 1-8....	1 case.	
"	Glasgow....	Mar. 7-14....	95 cases.	2 deaths.
"	Leith....	Mar. 8....	1 case.	
India....	Bombay....	Feb. 18-25....		8 deaths.
"	Calcutta....	Feb. 15-22....		8 deaths.
"	Karachi....	Feb. 2-9....	2 cases.	3 deaths.
"	"	Feb. 16-23....	12 cases.	2 deaths.
"	Madras....	Feb. 8-14....		5 deaths.
Italy....	Naples....	Feb. 22-Mar. 1....	9 cases.	1 death.
"	Palermo....	Feb. 22-Mar. 7....	27 cases.	5 deaths.
"	Rome....	Jan. 18-25....		1 death.
Russia....	Odessa....	Mar. 1-8....	2 cases.	1 death.
"	St. Petersburg....	Feb. 22-Mar. 1....	11 cases.	8 deaths.
"	Warsaw....	Feb. 15-22....		2 deaths.
Spain....	Barcelona....	Mar. 8-15....		5 deaths.
Straits Settlements....	Singapore....	Jan. 18-25....		2 deaths.
Uruguay....	Montevideo....	Feb. 26-Feb. 8....	152 cases.	14 deaths.

Smallpox—Insular.

Porto Rico....	San Juan....	Feb. 22-Mar. 1....	14 cases.
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Yellow Fever.

Mexico....	Vera Cruz....	Mar. 8-15....	4 cases.	2 deaths.
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Cholera—Insular.

Philippines....	Manila....	Mar. 24....	18 cases.
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Cholera—Foreign.

China....	Canton....	Mar. 17....		2 deaths.
"	Patshan....	Mar. 19....		Raging.
India....	Bombay....	Feb. 18-25....		5 deaths.
"	Calcutta....	Feb. 15-22....		84 deaths.
"	Madras....	Feb. 8-14....		10 deaths.
Straits Settlements....	Singapore....	Jan. 18-25....		21 deaths.

Plague.

Australia....	New Castle....	Mar. 21....		Present.
India....	Bombay....	Feb. 18-25....		701 deaths.
"	Calcutta....	Feb. 15-22....		176 deaths.
"	Karachi....	Feb. 2-9....	53 cases.	45 deaths.
"	"	Feb. 16-23....	52 cases.	48 deaths.

Pith of Current Literature.

*Journal of the American Medical Association,
March 29, 1902.*

The Use of the Gall-bladder to Restore a Pro-lapsed Liver. By Dr. A. F. Jonas.—In conclusion, the author asserts that: (1) The cause of hepatoptosis consists in a modification of one or more of its normal supports, or in an increase in the size and weight of the liver; (2) it is impossible for the liver to descend without producing a descent of the hollow abdominal viscera; (3) the utilization of the gall-bladder as a suspensory ligament, to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seems practical.

End-to-end Approximation of the Broad Ligaments and other Points of Technique in Abdominal Hystero-myomectomy. By Dr. E. C. Dudley.—The author asserts that the broad ligaments, when approximated by this method, take the place, in an anatomical sense, of the excised uterus and form a pouch posteriorly that corresponds to the cul-de-sac of Douglas, and anteriorly a depression that answers for the uterovesical pouch. They also prevent that descent which so commonly results from hysterectomies as ordinarily performed. The broad ligaments, thus brought together, are interposed between the bladder and rectum and thus prevent the intimate union of these two viscera—a union that would leave a very thin wall between them through which infection might pass from one to the other. The operation, apparently, is more quickly and easily performed by the author's method than by that of side-to-side union of the ligaments.

Anæmias Secondary to Gastro-intestinal Disease, with Report of Two Cases. By Dr. G. W. McCaskey.

The Anatomic Factor in the Production of Baldness. By Dr. George Elliott.—The author attributes a great deal of baldness to the fact that the skin of the scalp has no underlying layer of muscle to exercise it, and he accounts for the infrequency of baldness in women by the massage which their scalps undergo in the daily haircombs, women taking much more time for that operation than men. Therefore, according to the author, prevention by massage exercise is nine points in the law of treatment.

Ocular Lesions Associated with Constitutional Diathesis. By Dr. R. Isaac Jones.—The author advises in all ocular troubles to remove the cause, whether it is syphilis, rheumatism, or other debilitating and lowering dyscrasia. The general condition of the patient should always be studied.

The Prostate. By Dr. John B. Murphy (*concluded*).—In extreme cases, prostatotomy is the operation of election. The practice of to-day, however, should be timely practice; continued use of the catheter is a menace to life, and prostatectomy gives the best permanent result. Suprapubic prostatectomy should be limited to exceptional cases of enormous intravesical enlargements of the prostate. The perineal is the most direct and least bloody route, admitting of a very large opening and permit-

ting the prostate to be drawn quite into the open before it is attacked. The operation should always be an intracapsular enucleation *en masse*, allowing the anterior isthmus to remain. A semi-sitting posture should be maintained for seventy-two hours after the operation.

Case of Typhoid Fever Complicated by a Thrombophlebitis of the Long Saphenous Vein. A Severe Hæmorrhage from the Bowel, Infection of the Clot, with Recovery. By Dr. George C. Armstrong.

Medical Record, March 29, 1902.

The Relation of Surgery to Obstetrics. By Dr. Edwin B. Cragin.—The author defends the proposition that the relation between surgery and obstetrics is now, and in the future is likely to be, so intimate, that the best preparation for obstetrical work of the highest type is through surgical training. In the near future the skilled obstetrician will not be thought to have finished his work until the parturient canal of his patient is restored to as good a condition as that which existed prior to the onset of labor. This implies, not only the immediate repair of lacerations when indicated, but also the secondary operation, if for any reason the primary was not performed, or was not successful. The difference in the two operations is chiefly one of denudation. The author refers to a displacement of the uterus beginning in or recurring during the puerperium, as being a condition fully within the sphere of the skilled obstetrician.

The Study of Quarantine in the Light of Modern Progress. By Dr. Arthur H. Glennan.

A Fatal Case of Gangrenous Appendicitis without One Cardinal Symptom in the Course of the Disease. By Dr. Samuel M. Evans.—In view of his experience in this case, the author wonders if, in the presence of constitutional symptoms of toxæmia, the source of which cannot be found, there exists the merest suspicion of abdominal involvement, it is not justifiable to make an exploratory incision for the purpose of diagnosis, and of further intervention if necessary.

Cosmetic Considerations not the only Ones in Cases of Strabismus; the Importance and the Possibility of Securing Binocular Vision. By Dr. Richard H. Derby.

The Treatment of Internal Hæmorrhoids. By Dr. W. Duff Bullard.—The injection and Whitehead methods should be abandoned. The only value the injection method possesses is its applicability in the case of dangerously ill patients, to whom an anæsthetic cannot be administered. The Whitehead method has no advantages. The ligature and the clamp-and-cautery operations are the proper procedures to employ, the latter possessing the advantage of a more speedy and painless cure, and less liability to complications.

Is the Mind an Entity? By Dr. H. H. Stoner.

Medical News, March 29, 1902.

The Present Status of Serumtherapy in Typhoid Fever. By Dr. James Ewing.—The author mentions the researches of Wassermann and

Deutsch as representing the acme of progress in the investigation of immunity in typhoid fever, culminating, as do many previous studies, in strong indications that immunizing bodies are the product chiefly of the colorless blood and lymph cells. Daubler found, however, that during the process of immunization against typhoid infection, the leucocytes and purulent exudates did not increase in bactericidal properties, but remained the same throughout. It remains for the future to decide if success can be secured in the treatment of typhoid fever by injection of serum and visceral extracts from animals which have been treated with a view to producing polyvalent immunizing bodies. It would appear that the outlook in this field is fairly indicative of success, if not in the preparation of a curative serum for typhoid fever, at least in essential progress in the knowledge of artificial immunization, both in this disease and in other infections which have heretofore baffled all attempts at serumtherapy.

Surgical Complications of Typhoid Fever. By Dr. Robert Abbe.—The author notes the frequent call for consultation to distinguish between appendicular inflammation in its milder forms and the early pain in the appendicular region in typhoid. While the two closely resemble each other, a waiting policy clears all doubt away, and as the dictum of a few years ago that "the time to operate for appendicular inflammation is when you recognize it," has passed, the mild symptoms do not call up profound anxiety as of old. Peritoneal inflammation due to perforation sometimes occurs as the result of a slight leakage, in which case it is conceivable that a speedy exudate would be thrown out about the spot and the abscess walled in, thus accounting for those cases which have made a spontaneous recovery. If it were possible to recognize such a slow beginning, Ochsner's "ice, morphine, and starvation" would be indicated. Operations for perforation should be delayed until shock has passed, say within twelve or eighteen hours. Finney suggests that at the earliest suspicion, a competent surgeon should be requested to make a small exploratory opening of the abdomen under cocaine anæsthesia.

The Detection of Typhoid Bacilli in the Fæces as a Diagnostic Test of Typhoid Fever, and a Comparison of this Test with the Widal Reaction. By Dr. Henry A. Higley.—During the second week of typhoid fever, isolation of typhoid bacilli from the fæces gives slightly better results than does the Widal test. The two methods combined, aid materially in diagnosis previously to the appearance of distinctive clinical symptoms. By the use of the Hiss isolation method, especially with the substitution of the new plating medium, the detection and isolation of typhoid bacilli are, to one familiar with bacteriological methods, simple, reliable, and practical.

Remarks upon some Experiences with the Widal Reaction. By Dr. E. Libman.—A positive Widal reaction, according to the author's experience, always means that typhoid fever is or has been present. Partial reactions are absolutely to be ignored. A negative reaction does not exclude the existence of typhoid fever.

Some Observations in Typhoid Fever. By Dr. Frank Sherman Meara.

Adrenal Substance in the Intestinal Hæmorrhage of Typhoid Fever. By Dr. Warren Coleman.

Pathology of Typhoid Fever. By Dr. R. Alexander Bate.

Boston Medical and Surgical Journal, March 29, 1902.

The Suture of Arteries. By Dr. J. C. Hubbard.—The author recapitulates the work done in this line thus far. The field for the suture of arteries, however, is necessarily small. It is suitable only when the vessel walls are healthy, and would be of no use in calcified arteries or a secondary hæmorrhage where the vessel is bathed in pus. It is particularly serviceable in wounds of large arteries, such as the femoral or brachial, where a sudden tying of the vessel might possibly cause gangrene. The most favorable cases are those where the wound is made at the time of an operation. Suturing of arteries is also adaptable to the treatment of traumatic and dissecting aneurysms. The Murphy button principle is applied by means of magnesium cylinders, which are absorbed in a short time.

A Contribution to the Study of Catgut as a Suture and Ligature Material. By Dr. Hugh Cabot.—The author makes the points that: (1) In order to get the best results from catgut, care must be taken to select the size and preparation best suited for each occasion; (2) the use of too large sizes is one cause of unsatisfactory results; (3) care in tying and cutting catgut ligatures is essential to safety.

Neglected Methods for the Sterilization of "Gum-elastic" Catheters. By Dr. F. J. Cotton.—As a result of experimentation the author asserts that all the gum-elastic catheters, bougies, and filiform bougies, ordinarily sold may be boiled repeatedly and for long periods in saturated solutions of ammonium sulphate or sodium chloride without essential damage. Such a procedure is well fitted to remove the reproach of gum-elastic instruments—that they "are not sterile."

Two New Methods of Operating for Retrodisplacement of the Uterus. By Dr. Frederic Coggeshall.

The Influence of School Life over Health. By Dr. Frank W. Wright.

American Medicine, March 29, 1902.

Sand Filtration in Relation to Disease. By Dr. James M. Anders.—The author emphasizes the potency of impure water, especially when bacterially contaminated, in causing certain diseases, and points out the efficiency of sand filtration as a practical means of minimizing the prevalence of diseases produced by polluted drinking water. He shows that, while the primary cost of slow sand filtration is greater, and while it requires more space, it has undoubted superiority over mechanical filtration. Besides which, mechanical filtration is much more expensive to operate and demands the utmost care in the artificial chemical processes which constitute the system. Moreover, sand filtration is a natural process.

Observations on *Bacillus Coli Communis* from Certain Species of Domesticated Animals. By Dr. Veranus A. Moore and Floyd R. Wright, A. B.—The variations in the pathogenesis of the cultures from the different species of animals was very marked. Guinea-pigs inoculated in the abdominal cavity with half a cubic centimetre of a fresh bouillon culture, died in from twenty-four to thirty-six hours when inoculated with the cultures from dogs, but, with very few exceptions, they did not die after inoculation with cultures from other animals. The further fact was observed that when guinea-pigs were inoculated with cultures of one, two, three, four, and five days' growth respectively, those inoculated with the four- and five-day cultures remained well while the others died.

The Treatment of Suppuration in the Uterine Appendages. By Dr. Charles P. Noble.—The methods of dealing with this condition have been greatly improved by: (1) Abandoning abdominal section in the treatment of pyosalpinx and abscess of the ovary, when complicated by intraperitoneal abscess, and by substituting direct incision and drainage in this group of cases, and also for recent cases of pelvic suppuration of puerperal origin; (2) substituting hysterectomy for oophorosalingectomy for the removal of bilateral suppuration in the uterine appendages. Free incision and drainage in cases of suppuration of the uterine appendages complicated by intraperitoneal abscess has proved to be a most valuable life-saving measure, yielding a mortality of less than two per cent. as contrasted with twenty-seven per cent. from abdominal section. Direct incision and drainage finds its best indication in: (1) Puerperal phlegmon; (2) puerperal ovarian abscess, intraperitoneal abscess, and pyosalpinx; (3) in complicated cases of pelvic suppuration of whatever origin, in which the pus is not contained within the ovary and tube.

Report on a Parasitic Disease in Horses, Mules, and Caribao in the Philippine Islands. By Dr. J. J. Curry.

Movable Kidney, with Possible Explanation of Failure in some Cases to Relieve Symptoms by Nephrorrhaphy. By Dr. George H. Mallett.—The author points out that when performing nephrorrhaphy great care should be exercised that the circulation of the ureter and vessels is not interfered with, the possibilities of these occurrences not being so remote as is generally supposed.

A Criticism upon a Recent Discussion of Certain Cases of Blood Examination. By Dr. Robert N. Willson.

Philadelphia Medical Journal, March 29, 1902.

Paresis. A Clinical Study of One Hundred and Forty-nine Cases Occurring at the Philadelphia Hospital. By Dr. William Pickett.—The author suggests that immunity from paresis rests, not on freedom from the great infection alone, but, as the older writers believed, on abstinence from all excesses. Diagnosis depends so much upon a practical acquaintance with the "paretic manner," that no amount of fine training in the best schools can take its place. The author urges the importance of *teaching in the asylums*. An hour in the wards is of more value than many lectures.

Somnolence Caused by an Ear Lesion. By Dr. W. G. B. Harland, with Remarks by Dr. Charles H. Burnett.—Dr. Harland reports the case of a boy, thirteen years of age, who would go to sleep, without feeling tired or out of sorts, at any time when his attention was not aroused by action. He would fall asleep in a store even while his order was being filled. The condition did not simulate petit mal. There were no vertigo, tinnitus, nausea, or headache. There was a small plug of cerumen in the left ear. Upon syringing the ear, the wax came out readily and a few drops of foetid pus were found behind it. The drum was macerated and had a large perforation in the lower posterior quadrant. Within a day, without other treatment, the unnatural sleepiness disappeared. A return of impacted cerumen was accompanied by some return of the sleepiness, according to the mother, though this was denied by the patient. The symptom disappeared after cleaning out the ear. The author ascribes the symptom to either meningeal irritation from the absorption of pus or to pressure on the labyrinthine fluid.

A Second Contribution to the Study of Anæsthesia by Nitrous Oxide Gas and Ether. By Dr. Prescott Le Breton.

The Supraorbital Reflex; an Explanatory Note. By Dr. D. J. McCarthy.

Arteriosclerosis and the Nervous System. By Dr. Charles Lewis Allen.

A Case of Herpes Zoster Ophthalmicus. By Dr. W. S. Durand.

Lancet, March 22, 1902.

The Ætiology of Typhoid Fever and Its Prevention. By Dr. W. H. Corfield.—In the first of the Milroy lectures upon this subject, the author goes very thoroughly into the history of our knowledge of the ætiology of typhoid fever, beginning with the treatise by Mayr, published in 1806 and reviewing the literature down to 1874, when the author published a paper opposing the view that the poison of enteric fever was spontaneously produced.

The Pulmonary Circulation, more Particularly in Relationship to Variations in Cardiac Activity. By Dr. T. G. Brodie.

The Education of Epileptics. By Dr. W. Alexander.

A Short Contribution to the Study of General Infection Produced by the *Staphylococcus Aureus* and by the *Streptococcus*. By Dr. G. Bellei.—The author reports two cases of general infection with the *staphylococcus aureus*, and two with the *streptococcus*. One of the *staphylococcus* cases was of great interest. The patient, a medical man, who had just opened an abscess in the arm of a female patient, infected himself in scratching a patch of eczema behind the left ear. A red swelling developed, which was incised, but very little pus came out. His general condition became much worse, his temperature ranging between 102° and 104° F. Cultures from the blood revealed the presence of the *staphylococcus aureus* in pure culture. Later, he developed abscesses, and finally a serous pleurisy,

in which was found, not the staphylococcus aureus, but the staphylococcus albus. The patient's temperature remained high, and he died in two months with symptoms of cardiac paralysis. The woman from whom he was infected had many abscesses in different parts of her body, but never had a symptom of general systemic infection. Cultures from the abscesses showed the staphylococcus aureus.

Now, considering that the staphylococcus aureus produced in the woman only abscesses, while in the man it produced a general infection ending in death, it appears evident that this result was not due to the inherent and necessary virulence of the micro-organism, but to the special conditions of the male patient, imparting to the staphylococcus a virulence which it did not possess in the case of the female patient. Laboratory investigations tend to demonstrate that the *Staphylococcus pyogenes albus* is only an attenuated form of the *Staphylococcus pyogenes aureus*. Now, the male patient was affected with a pleurisy which was serous and always remained so, and only and constantly the staphylococcus albus was found in this serous exudation. Hence when it is remembered that, in every part of the body of the patient, purulent lesions and the staphylococcus aureus were found, it is permissible to suppose that the pleura possessed the faculty of attenuating the staphylococcus aureus, which, by virtue of this attenuation, became converted into the staphylococcus albus and was no longer able to generate pus.

In both the cases of general infection with the *Streptococcus pyogenes*, there was a history of alveolar trouble. Marmorek's serum was used in both cases, but it appeared to be without influence on the course of the disease.

Electric Shocks at 500 Volts. By A. P. Trotter.—(See page 616.)

A Criticism on the Visual Test as Used in the British Army. By A. A. Bradburne, L. R. C. P.

British Medical Journal, March 22, 1902.

Fifty Years Ago: A Farewell Retrospect. By Dr. J. K. Spender.

On the Treatment of Deafness of Middle-ear Origin. By C. Watson, M. B.

Hay's Reaction for Bile Salts. By Dr. A. P. Beddard and Dr. M. S. Pembrey.—Hay's reaction for bile salts consists in the fact that when powdered sulphur is sprinkled on a fluid containing bile, it gradually sinks. It depends upon the presence of bile salts alone. The simplest method of carrying out the test is to place the urine in a test tube with a diameter of about one inch, and to throw some sublimed or finely powdered sulphur upon it. If any begins at once to fall in the urine there is at least one part of bile salts per ten thousand. If none falls at once, then, after waiting one minute, the test tube is given a very gentle shake. If sulphur now begins to fall, there is at least one part bile salts per forty thousand, and so on for further dilutions. Few precautions are necessary. The urine must be free from air bubbles, it must be clear, and, if it is necessary to clear it, this must be done by filtration and not by heat. For, all specimens of urine at the temperature of the body give the reaction at the end of

one minute, owing to the effect that heat has in lowering the surface tension of the fluid; therefore, in every case before the test is applied, the urine must be cooled to about 17° C. The reaction of the urine and its specific gravity do not in any way affect the accuracy or the delicacy of the test. The delicacy of Hay's reaction as compared with that of Pettenkofer is very great; for, apart from the fact that in applying Pettenkofer's test to urine, there are so many fallacies as to render it almost useless; one part of bile salts per one thousand gives only a doubtful reaction. Many urines in various pathological conditions have been tested, but no case giving the reaction has yet been found in which the clinical condition was not such as to make the presence of bile salts in the urine possible. Thus, it has been found that Hay's reaction has frequently been given by the urine from cases of backward pressure in cardiac and pulmonary disease, and in cases of suspected cirrhosis of the liver; even when bile pigments were shown by the iodine test to be absent. Jaundiced patients are found to differ greatly in the relative amount of bile salts and bile pigments contained in the urine.

The Isolation of the Typhoid Bacillus. By Dr. A. Moore.

A New Diagnostic Point in Typhoid Fever. By Dr. H. Gibbes.—Some years ago the author found that he could show the eruption in small-pox on a photographic plate before it was visible to the naked eye. He thinks this method will be of value in typhoid fever where the eruption can be reproduced by photography before it can either be seen or felt. The best plan is to use orthochromatic plates, and to make a number of exposures as quickly as possible; a ray filter is required with some plates, but with Cadett's "spectrum" plates this would not matter, on account of their great rapidity. The procedure is simple: Cover the head and face with a light shawl and remove the coverings from the abdominal region, moisten a small bit of printed matter and stick it on the skin to get the focus. The operation is greatly facilitated by an assistant throwing all possible light on the part with a mirror. No rule for exposure can be laid down, as the amount of available light varies in every case, but out of six exposures of varying lengths, one or two should show the rash. The greatest care is required in developing the plate. Overexposure must be avoided; slow development with a weak developer, and not carried too far, is the rule.

An Experiment with Ultra-violet Light. By Dr. D. Turner.

Two Cases of Rare Orbital Tumor. By F. T. Paul, F. R. C. S.—The author reports a case of chondroma of the orbit occurring in a woman, aged forty-five years, and another of carcinoma of the lacrymal gland in a woman aged fifty-six years. Both cases are sufficiently unusual to be worthy of placing on record. Both cases were operated upon; in the case of chondroma, with success; in that of carcinoma, the growth soon recurred.

Case of Tumor of the Pons Associated with Degeneration in the Posterior Columns of the Cord. By Dr. E. E. Laslett.

Notes on Adrenalin Chloride Solution in Ophthalmic Practice. By Dr. G. A. Ferdinands.—When instilled into the healthy eye, adrenalin chloride solution (1 in 1,000) causes first a slight smarting, and, within a few moments, a blanching of the conjunctiva, which is best marked at the caruncle. This blanching reaches its maximum within five minutes. The action very gradually passes off, and the eye resumes its usual color in about the same time or a little longer. The solution is non-irritating and does not cause any dilatation of the pupil, neither does it render the conjunctiva or cornea insensitive to any extent. The solution has also no effect on accommodation. Under its influence the eye feels slightly dry. Applied to the inflamed conjunctival sac it gives relief in a few moments, evidently by checking the congestion; indeed, in some cases, the relief is not unlike that given by a weak solution of cocaine. The hyperæmia of acute inflammation does not appear to yield as readily as chronic hyperæmia. The solution is rapidly absorbed into the anterior chamber, and its action is seen on the congested iris. This fact renders the drug particularly valuable in iritis. It relieves photophobia, and by its control over congestion assists atropine in dilating the pupil. The solution seems to hasten absorption of serous exudation, and reduces tension, especially when above normal.

Case of Total Suppression of Urine Due to the Obstruction of both Ureters by Renal Calculi. By Dr. W. M. Stevens.—The author reports the case of a man, aged fifty-eight years, in which there was sudden complete suppression of urine, the patient dying at the end of seven days. At the autopsy it was found that both ureters were blocked at their entrances by stones. The onset of the suppression was quite sudden and without warning, showing that sudden obstruction of a ureter may occur without any symptoms of renal colic. No urine was found in the bladder, either during life or after death. There was not a single symptom pointing to uræmia, although no urea was excreted for seven days. Previous to the attack, sugar had been present in the urine. In such cases the one indication is to operate at once and remove the obstruction.

Gazzetta degli Ospedali e delle Cliniche, January 19, 1902.

On the Value of Piorkowski's Method in the Bacteriological Diagnosis of Typhoid Fever. By Dr. Ferdinando Strada and Dr. Agostino Pasini.—Piorkowski's method is as follows: Normal human urine, of a specific gravity of 1020 is allowed to become alkaline spontaneously for from twenty-four to forty-eight hours; is peptonized with $\frac{1}{2}$ -per-cent. peptone; is treated with 33-per-cent. gelatin, by boiling over a water-bath for an hour; is filtered without the addition of heat, and is poured out into test tubes. It is then sterilized at 100° C. for fifteen minutes and on the next day a second time for ten minutes. According to Piorkowski, in this medium colonies of typhoid bacilli may be differentiated in twenty hours from those of the *Bacillus coli* by the presence of long processes in the periphery of the colonies, prolongations which may reach double the diameter of the colonies. In twenty out of twenty-

two cases he obtained a positive result with Piorkowski's method; but the cultures must be maintained at a uniform temperature, 22° C., because a higher temperature causes the liquefaction of the gelatin, and a lower temperature retards the development of the germs. The urine should be taken from individuals who have been under a vegetable diet. The degree of alkalinity should not exceed a certain limit, so that the medium, after the addition of gelatin, has only a very slightly alkaline reaction. The cultures must also be fresh, inasmuch as the differential characteristics disappear from old cultures.

The Healthy Child of a Syphilitic Mother. By Dr. Giuseppe Profeta.—The author shows by citations from his own articles, published as far back as 1865, that he was the first to establish the law which is the converse of that of Colles, namely, that just as a mother who has given birth to a syphilitic child runs no risk of infection in nursing her offspring, the child born of a syphilitic mother, but not itself syphilitic, runs no risk of infection from the mother's breast.

The Results of Treatment with Trunecek's Inorganic Serum in Cases of Arteriosclerosis. By Dr. Zanoni and Dr. Lattes.—The authors report three cases of arteriosclerosis which they treated with Trunecek's serum, and conclude from their experience with this remedy that it fulfils all the claims that had been made for it by the originator. Trunecek's treatment is based upon the following considerations: Among the inorganic salts in the circulating blood, of which sodium chloride forms about 70 per cent., there is a certain amount of calcium phosphate. This salt, though insoluble in water, dissolves easily in solutions of common salt or of magnesium or sodium phosphate. The normal human serum contains very small amounts of these salts, and the solubility of calcium phosphate in the blood is attributable chiefly to sodium chloride and to the alkaline phosphates in that fluid. Sodium chloride is present in considerable quantities in the tissues, and this amount diminishes with age. Arteriosclerosis is chiefly due to the deposit of calcium phosphate in the walls of the arteries, and as the disease occurs for the most part in old persons, the conclusion is not improbable that it is due to a lack of salt in the system. Therefore, chloride of sodium and other salts that render the blood alkaline should be administered in this disease. The solution of inorganic salts should be introduced into the veins or under the skin, the latter method being preferred by Trunecek, as it allows of slower absorption.

January 26, 1902.

Chlorosis in Boys. By Professor Alfredo Monari.—Having recently observed two cases of chlorosis in boys, the author reports them, so as to bring further proof against the idea that chlorosis can only occur in girls. The first case was that of a boy, aged sixteen, who presented a well-marked chlorotic face, pulsations at the base of the neck, and a pronounced venous hum, as well as a slight soft murmur over the pulmonary area. The blood was typical of chlorosis, the hæmoglobin being 40, the red cells 3,583,000, and the white cells 6,100. Under appropriate treatment the blood was brought to its

normal condition and the other symptoms disappeared. The second patient was a boy of thirteen, who had 5,370,000 red cells, 12,400 white cells, hæmoglobin 65, and the subjective and objective signs of chlorosis. In this case the administration of iron was also followed by improvement. These cases were, according to the author, undoubtedly instances of chlorosis.

A Contribution to the Treatment of Trigeminal Neuralgia by Resection of the Cervical Sympathetic. By Dr. Guido Cavazzani.—The author quotes the cases previously reported, and relates the history of a new case of trigeminal neuralgia treated by resection of the cervical sympathetic—making eight cases on record. The patient was a woman, sixty-seven years of age, with a negative previous history, who had been suffering from neuralgia on the right side of the face for three years, and whom all attempts at treatment had failed to relieve. Resection of the cervical sympathetic was performed and the ganglion was found to be considerably enlarged and congested. The pains diminished gradually and progressively. In the cases in which he has performed sympathectomy the author has not seen any complication due to the removal of the ganglion, though he admits that the operation is a difficult one, and one involving considerable risk of wounding other structures. The operation is indicated, in his opinion, in cases of trigeminal neuralgia that resist all attempts at medical treatment.

Rivista critica di Clinica Medica, February 1 and 8, 1902.

Bechterew's Hypogastric Reflex (Van Gehuchten's Inguinal Reflex, Crocq's Inguino-abdominal Reflex). By Dr. Luigi Ferrio.—The hypogastric reflex, described in 1901 by Bechterew, and under other names, in 1900, by van Gehuchten, consists of the retraction of the suprainguinal region of the abdomen, evoked by striking the skin with the handle of a mallet. The reflex is probably due to the contraction of the lowermost fibres of the external oblique muscle of the abdomen, and the centre for this reflex must be located immediately below that of the abdominal reflex, namely, at the level of the last dorsal vertebra. If a lesion of the spinal cord is so situated as to affect this centre, the hypogastric reflex will be absent, while the abdominal reflex will be present, and *vice versa*. The author has examined 500 persons in order to find the constancy of this reflex. He finds: (1) That the existence of a hypogastric reflex, which is well distinguishable from the abdominal and the cremasteric reflexes, may be admitted. This reflex has its own paths, and its own centre situated below the centre for the abdominal reflex. (2) The diagnostic importance of this reflex is equal to that of the other. The presence of this centre indicates the integrity of that part of the spinal cord and of the first lumbar roots. (3) Its absence does not furnish positive diagnostic evidence, for it is frequently noted in healthy persons, and may be noted on one side only in the absence of any nervous lesion.

Riforma medica, January 8 and 10, 1902.

Cytoprecipitins and their Diagnostic Value. Second Communication—The Diffusion of Cyto-

precipitins. By Dr. Eugenio Centanni.—The author concludes from the consideration of the phenomena of cytoprecipitins for specific cells of certain organs or tissues, that the normal organism is endowed but rarely, and in a limited degree, with the power of precipitating with its serum the protoplasm extracted from its own tissues or from the tissues of other organisms. By injecting the cells of certain tissues into the blood, cytoprecipitins develop, which react upon the tissues used to prepare the injections. In persons affected by pathological processes the serum of the blood acquires an energetic power of precipitation, particularly upon the plasma of the diseased organs. The application of these principles in the diagnosis of disease is as yet not fully developed, but it is probable that further researches along this line will make such development possible.

January 11, 1902.

The Reaction of the Blood of Pellagra Patients on Normal Blood and on the Plasma of the Patient's Tissues. By Dr. Antonio D'Ormea.—The author found that, when brought into contact with the blood of a variety of animals, the blood of pellagra patients acted just like the blood of normal persons. In fact, its bactericidal action was stronger than that of normal blood. The serum of pellagra possesses a precipitin which is active against the plasma of the tissues of the patient himself, with a marked preference toward the tissues of the diseased organs (autocytoprecipitin). Whether this precipitin is specific for pellagra, the author has not as yet determined, but will do so in the course of subsequent experiments.

January 13, 14, and 15, 1902.

On the Passage of Pathogenic Microorganisms and their Toxines through Breaks in the Continuity of the Skin. By Dr. Cocco Dalmaso.—In this study the author considers the following questions: (1) Whether germs endowed with a certain degree of pathogenic power, or their toxines, can penetrate into the system through lesions in the skin, and if so, how long they take to kill the animal. (2) If the animal does not die, do these germs become arrested in the nearest lymph-nodes, and, if so, are they pathogenic when found in such glands? (3) Can the germs be recovered after a certain number of days at the site of inoculation, and, if so, are they pathogenic? His conclusions are as follows: The first question is to be answered in the affirmative, for pathogenic germs penetrate into the system through skin lesions, and cause the death of the animal after a time. Thus, the *Staphylococcus pyogenes albus* kills under these conditions in from three to four days; the *Staphylococcus pyogenes aureus* in the same length of time; the *Bacillus coli* in from two to five days; the pneumococcus of Fraenkel in from two to three days; the *Bacillus pyocyaneus* in from two to four days; the *Bacillus anthracis* in from two to three days, and toxines of diphtheria in from two to four days. The author has been unable to produce general infections with the bacillus of rabbit septicæmia, with the pseudo-typhoid bacillus, and with a variety of infected materials which may have contained pathogenic organisms. No germs were found in the

glands, except in two cases in which the inoculation was made with pus endermically. In these two cases, the *Staphylococcus aureus* which was isolated from the glands, produced an infection in other rabbits.

January 16 and 17, 1902.

On Myelotoxic Serum. By Dr. Giuseppe Sulli.—The purpose of the author's experiments was to prepare a specific substance in the serum of an animal which should be selectively toxic toward the bone marrow of another species. This he attempted to do by a method which was analogous to those employed by the majority of observers who had worked with the other specific cytotoxines. He first ascertained by injecting the normal serum of a dog into rabbits (subcutaneously) that the bone-marrow in the latter animals did not suffer any degenerative changes as the result of the injection. He then removed, under all possible aseptic precautions, the marrow from the femurs of a rabbit, and introduced it into a small incision in the subcutaneous tissue of the lumbar region in a small dog. The wound was closed, and after six days the same operation was repeated on the other side in the same dog. After six days longer he took some blood serum from the carotid of this dog and injected it into rabbits. The quantity of marrow and the mode of injection (subcutaneously) were identical with the conditions in the experiments, by Metchnikoff and Nefedieff, with testicular and renal cytotoxines respectively. The injections were repeated daily for eight days, and at the end of this time the rabbits were killed. He found that the influence of the serum manifested itself in a series of changes in the marrow-elements, which showed, particularly in the structure of the erythroblasts and megakaryocytes, that the blood-forming function of the marrow had been seriously interfered with by the myelotoxine. In addition, he prepared a specific antitoxine which neutralized the effects of the myelotoxine, and found that the antitoxine prevented the occurrence of the lesions noted in the marrow after the injection of the toxine.

January 18, 1902.

On the Use of Gold-wire Sutures and on some New Instruments for the Radical Operation for Inguinal Hernia. By Dr. I. Tansini.—The author recommends gold wire in operations for inguinal hernia because this metal allows the use of a thin, yet very flexible and resistant, thread. Gold wire is just as easy to apply as silk, and it can be tied, by twisting it three times, simply with the fingers, in less time than it takes to knot a silk suture. The author has used gold thread not only for the union of the muscular structures, but even for the ligation of the neck of the hernial sac. In operating by Bassini's method he has employed for the deep sutures a gold thread somewhat stouter than for the superficial one. The sac was ligated with a stout wire, while, when it was necessary to suture it, the thin wire was used. In the case of the deep sutures the ends of the wire were bent obliquely with forceps so as to lie flat. The use of gold thread proved to be less expensive in the end than that of silver thread. He does not use catgut in ligating vessels, but simply leaves the artery-forceps on the mouth of the severed vessels, and arrests the hæmorrhage by torsion if necessary.

The author complains that, owing to their various duties, the hands of the assistants at an operation are the least aseptic, and therefore he has devised a series of retractors which obviate the necessity of contact. The value of gold thread is shown by the fact that, while formerly he had one case of wound-infection in twenty operations for hernia, and one relapse in seventy, he now has had one hundred and fifty consecutive cases of radical hernia operations in which there was not a single infected wound, not a single relapse, and in all occurred a rapid recovery in an average period of eight days.

January 25, 1902.

Further Researches on the Action of very Low Temperatures Obtained by Means of Liquid Air upon the Virulence of Pathogenic Germs. By Dr. C. M. Belli.—In a preceding article (*Riforma medica*, 1901, No. 209) the author has shown that low temperatures induced by liquid air do not attenuate the virulence of non-spore-bearing bacteria nor of the vegetative forms of the spore-bearing bacteria. Exposure to liquid air, however, impedes the powers of reproduction of pathogenic germs, so that a count of the colonies in each cubic centimetre of culture exposed to liquid air and in the same quantity of control culture, showed a marked diminution in the former. In the present series of experiments, he exposed germs to still lower temperatures by dipping a disc of filter paper impregnated with a broth culture of the germs into a vessel with liquid air. It was found that if bits of this filter paper were introduced under the skin of guinea-pigs, and other pieces of filter paper that had not been exposed to liquid air, but that had also been soaked in broth culture, were also inserted, all the animals died of anthrax, which was the germ experimented with, though the liquid air took about eight hours to evaporate. Evidently, therefore, the anthrax bacillus preserves its virulence even after having been exposed to the direct action of liquid air for a period of eight hours.

Roussky Vrach, February 16, 1902.

In Memoriam, V. A. Manasseine. By A. Lugovo.—A short biography of Professor Manasseine.

Banti's Disease. By Dr. Sergey Grouzdieff.—The author reports a case of primary chronic hypertrophy of the spleen with ascites (Banti's disease). At first, malarial cachexia was suspected in this patient, but this diagnosis was rejected upon reading the article of Professor Guido Banti (*Splenomegalia Primitiva*, *Riforma medica*, 1901, i, No. 50-53). Since then he has observed two cases of a somewhat similar character. The patient was a man, aged twenty-four years, who had complained for the past three weeks of epigastric pain, increased after eating, of loss of appetite, and diarrhoea. For a number of years he had felt discomfort and weight in the left flank after running, and for the past three weeks there had been evening chills. On examination, the abdomen was found somewhat enlarged and containing a moderate quantity of free fluid. The spleen was felt distinctly, and was found to reach the breadth of one finger and a half from the median line, and of three fingers below the umbilicus; it was smooth and normal in outline. The

blood contained 70 per cent. of hæmoglobin and about 4,000,000 red cells and 6,500 white cells; no poikilocytes, no nucleated red blood cells, no microcytes, and no pigmented bodies. About 75 per cent. of the leucocytes were large polynuclear cells, the rest were lymphocytes. The absence of plasmodia and the observation of the temperature excluded the possibility of chronic malarial disease. Banti, of Florence, in 1894, reported four cases of this kind, and since then a number of cases of the disease have been reported in Italy, and in addition one in France, and one in America.

Praktichesky Vratch, February 2, 1902.

A Case of Dermoid Tumor of the Bladder. By Dr. A. T. Bogaevesky.—Only two cases of this kind are recorded in literature. The first, by Thompson, who removed a dermoid tumor of the bladder in a woman aged thirty, through the dilated urethra. On microscopical examination the growth was found consisting of skin, fat cells, and hair follicles. The second case was reported by Paget. The patient in the present case was a woman, aged thirty-three years, who had been suffering from painful micturition for the past eight years. She had been treated without effect for cystitis. Bimanual examination showed the presence of some hard body at the base of the bladder. On dilating the urethra under chloroform, a pear-shaped pedunculated growth was felt with the finger, at the base of the bladder. The growth was covered with sparsely growing hairs, that had small stones at the end. It was removed with a wire écraseur and was found to be spherical, to weigh twelve grammes, and to be covered with wrinkled skin and hairs bearing stones at their ends. On longitudinal section it was found to contain adipose tissue, and, in the part nearest to the pedicle, there was a small piece of bone.

Vratch, February 23, 1902.

Banti's Disease. By Dr. Sergey Grousdieff (*continued*).—The author gives a summary of what is known concerning this affection, which was first described by an Italian physician, Banti, and is characterized by hyperplasia of the spleen, anæmia, cirrhosis of the liver, and ascites. The cause of the disease is entirely unknown, but it is certain that malaria, syphilis, and in general the infectious diseases do not play any part in its production. The disease begins with a slow and insidious increase in the size of the spleen, the area of dulness often reaching to the iliac crest and above to the seventh rib in the axillary line. Then follows anæmia, which gradually becomes severe, with a febrile movement, and gradual exhaustion. The number of red cells and the amount of hæmoglobin are decreased, but the number and structure of the white cells do not change. There may be poikilocytosis and microcytosis, but there are never any nucleated red cells in the blood. The *anæmic stage* lasts, generally, for several years, sometimes for ten or eleven years. Then comes the *stage of urinary changes*, accompanied by a dark-colored, scanty urine, with an excess of urates, urobilin, and traces of biliary pigments. Jaundice, dyspepsia, and sometimes diarrhoea follow. This stage lasts for several months. Then comes the stage of ascites, during which the liver decreases in size, and the abdomen becomes

slowly filled with a yellowish fluid. During this time the jaundice increases, but the fæces always remain dark-colored. The symptoms of anæmia become more marked, and the patient dies in a few months. The pathological changes found in these cases consist in atrophic cirrhosis of the liver, which, however, only comes on during the last stage; of hyperplasia of the stroma and periarteritis in the spleen. The prognosis is bad, but the removal of the spleen, and Talma's operation (omental-parietal anastomosis) are of value in its treatment. (*To be concluded.*)

The Eleventh Congress of Naturalists and Physicians and the Eighth Pirogoff Congress. A Review of their Activity. By Dr. D. N. Jbankoff.—The author shows that the coincidence of two such large medical meetings in Russia caused an interference with the results of both, and draws the conclusion (which may be heeded in other countries) that two national meetings cannot succeed as well when they coincide in time, as when they occur at different seasons.

Some Urological Observations. By Dr. M. L. Krebs.—The author reports a case of vesiculation of the bladder, and one of leucoplakia of the bladder, the latter being a disease of the vesical mucosa in which there appear desquamation in various parts of the vesical mucosa, characterized by a detachment of the epithelial cells containing the horny substance, in consequence of which the epithelial lining of the bladder becomes cloudy, and thus produce the characteristic white spots. In 1895 Dittel described a case of this kind, and in the following year Brick reported five such cases. The last named author in these cases saw a mass of horny epithelial cells devoid of nuclei. Leucoplakia of the vesical lining resembles closely leucoplakia of the tongue in syphilitics and inveterate smokers.

Miscellaneous.

Sensibility under Spinal Cocaine Anæsthesia.—Dr. Robert H. Ritchie (*Intercolonial Medical Journal of Australasia*, January 20th) reports a case of amputation through the middle of the thigh under local anæsthesia by lumbar puncture. The injection was made with thirty minims of sterilized water containing $\frac{1}{4}$ of a grain of cocaine hydrochloride. After ten minutes, the skin of the patient's foot was pinched, and he said he could feel it quite distinctly. The same procedure was repeated frequently, the skin of the foot, calf, and thigh being pinched, and each time the patient said he could feel it quite plainly, and could locate the site of the pinch. Twenty minutes after the injection it occurred to Dr. Ritchie that, though aware of the pressure of a pinch, he might not be sensible to pain, so without letting the patient see what was being done, a small incision with a scalpel was made in the left calf, right through the skin; blood came freely from the wound, but the patient did not stir, and on being asked if he felt anything, said he did not. To make sure he was quite insensitive to pain, the foment was removed from the right thigh, and the incision for cutting the anterior flap was begun, the patient asserting that he could feel no pain whatever, though he knew his leg was being touched. The operation was then proceeded with.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:]

XI.—How do you treat pneumonia in children? (Answers due not later than April 10, 1902.)

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

XIV.—How do you treat chronic ulcers of the leg? (Answers due not later than July 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. T. Haven Ross, of Cato, N. Y., whose paper appears below.

PRIZE QUESTION NO. X.

THE TREATMENT OF PUERPERAL CONVULSIONS.

By T. HAVEN ROSS, M. D.,

CATO, N. Y.

The writer's aim has been, from first to last, in a fairly extended obstetrical practice to *prevent* puerperal convulsions; therefore, as prevention is surely the *best* of all treatments, it would not be out of place to begin these few words on eclamptic therapeutics with some consideration of measures which usually insure the puerperal woman's escape from the terrors of eclampsia. The general rules hereafter mentioned as guiding the writer in obstetric practice are founded on the observation of 582 cases of labor personally conducted, to date, without loss of mother or child in any instance. The records began in 1883. Most of the cases, fortunately, came under my eye from one to nine months prior to confinement. In none of these was there any true eclampsia, and in few were there signs that it might not be far distant. In consulting practice the writer has seen and helped to treat cases of puerperal convulsions as set forth below.

General Prevention.—The most important organ to the pregnant woman, and to the nascent human

being within, is the *liver*. No matter at what period the pregnant woman comes under care, her liver should invariably be arraigned at the medical bar and, following the European legal idea, be deemed a criminal until proved innocent. Such hepatic investigation will lead, in the majority of cases, to correctional attention which will dispel and prevent the autotoxæmia which so often causes or aggravates hyperemesis; which gives rise to mental depression and that *bête noir* of primiparæ, "puerperophobia," or fear of labor; which causes headaches, generally hysterical "nerves," insomnia, etc.; and, finally, is a potent factor in the causation of puerperal convulsions. The functional errors of the stomach, liver, etc., lead often to an obstinate constipation, which in its turn increases the toxæmic condition and the danger. By regulating the liver and maintaining its tone and highest working capacity, the physician can prevent much discomfort and many ills throughout the puerperium and that worst of all complications, puerperal convulsions. Do not trust *any* liver to bear the strain of pregnancy and parturition without aid. In addition to the correct hygiene and dietetics of pregnancy, always have the patient take *daily* a dose of the liver tonic *par excellence*, to wit:

R̄	Euonymin.	} each. 1/8 of a grain;
	Calomel,	
	Powdered ipecac,	
	Alain. 1/12 " " "	
	Podophyllin. 1/20 " " "	
	M., ft. pil. No. i.	

This is the ordinary, average dose to be taken at bedtime. The amount of this combination suitable for a given case must be determined by a few nights' use. The best rule is to give just enough to cause one natural movement of the bowels daily. If one pill is too much, give a fraction; if too little, double. One will meet with cases requiring very different amounts—from one eighth to three or four.

When there is no indication of autotoxæmia, it may be given, by the above-mentioned rule, alternate fortnights for months, with benefit to both mother and child in a general way, until the lying-in period is fully accomplished; and even later will assist in involution and return to the ordinary conditions of life. The writer believes that to this "liver fad" of his he owes his patients' immunity from puerperal convulsions and many of the lesser ills afflicting the pregnant. The kidneys are also to be watched, and the careful obstetrician will analyze the urine frequently, but where this hepatic and general defense is well and thoroughly attended to, the kidneys will behave in a most seemly manner throughout the term, if they were normal at the beginning. Sometimes it is absolutely impossible to induce a woman to observe any rules of diet or

hygiene, but one can invariably persuade her to take a daily tablet to increase her "safety." How criminal it is to allow a pregnant woman, day after day, to go about with tightly constipated bowels, every day adding a load of toxic matter to the blood, which should be of the purest, to sustain her through the greatest physical and mental crisis of her life! As to diet, a word. Pork in any form, Irish potatoes, and any food tending to interfere with proper elimination should be avoided. My opinion, based on years of contact with the pregnant and the study of the histories of consultation cases, is that the great majority of the so-called reflex neuroses, etc., of pregnancy are simply the results of autotoxæmia having its starting point in functional hepatic derangement. A word to the wise, etc.

Special Prevention.—Having so far as possible instituted the general measures mentioned, what shall we do if, in spite of all this, puerperal convulsions threaten by warning signs? First, place the patient in a quiet, clean, plainly furnished room, under the care of a trustworthy person as nurse. Open the bowels thoroughly, both medicinally and mechanically; the former by Epsom salts or a full dose of calomel or calomel at frequent intervals in divided doses. The writer's preference is for calomel in tenth-of-a-grain doses every half-hour till free watery evacuation is secured. At times Epsom salt may be required to assist the mercurial. Clinically, calomel thus given seems to act as an antiseptic in the blood, with some degree of power. Mechanically, the bowels should be emptied as high as possible by flushing with warm normal salt solution, which cleanses and also acts favorably through absorption into the circulation. In a word, the calomel, causing watery evacuations, drains from the blood the offending toxins, and in a small measure acts as an antidote to them *in situ*; while the salt irrigation helps to unload the bowel, and the portion thereof absorbed helps to refill the circulatory system with *clean* fluid.

Next, in the words of that master in therapeutics, Horatio C. Wood, "*Bleed the patient into her own abdomen, with veratrum viride*;" give a reliable preparation of veratrum viride frequently in small ascending doses, until the proper dose and time are determined by carefully watching its action. If the stomach rejects it, give hypodermically a good fluid extract, with due caution and regard for aseptic technics. One one-hundredth of a grain of red iodide of mercury hourly, after the final dose of calomel, often seems to be of great value. This course applies to the average sthenic case of *threatened* nerve-force explosions. Where the woman is asthenic, with little and ~~poor~~ blood, and in a generally depressed condition, proceed as above described in regard to clearing the bowels, and then, instead

of veratrum viride, introduce into the circulation normal salt solution, if need is urgent, and rely on stimulation, general and special, with possibly a little morphine hypodermically as a sedative. The red iodide may be used as above mentioned, if desired. In the writer's experience these special measures of prevention have *never* been followed by puerperal convulsions, even in those few cases in which the general preventive procedure described above did not forestall signs of danger or approaching trouble.

Treatment of Developed Convulsions.—In consulting practice the writer has come in contact with a number of cases of developed puerperal convulsions, in which the following course was pursued, with success in most of them; that is, in those in which the patients were not profoundly toxæmic and nearly moribund before any treatment was instituted. Proceed in sthenic cases, where the face is flushed, with a rapid pulse of high tension and full, as described above under "Special prevention." Clear out the bowels, but now in urgent cases give a full dose of Epsom salt, a fluid ounce of a concentrated solution, assisted by flushing the bowels as high as possible with normal salt solution, preceded by an enema of warm water containing glycerin and Epsom salt to quickly clear the lower bowel. Then administer fluid extract of veratrum viride hypodermically to its physiological effect only. Too free use of it will cause toxic effects, such as vomiting, uncontrollable purging, collapse, and possibly violent mania. Begin, then, with from eight to ten minims subcutaneously and wait fifteen minutes; if there is no sign of lowering arterial tension and pulse rate, give five minims as before; this will lower tension and bring the pulse rate down to about 70 or 75. Watch the circulation closely, and the moment there is any increase in rate and tension give five minims more. Continue the five-minim doses at intervals determined by the pulse, which *must* be kept below 80 or, better still, between 70 and 75. So long as the pulse is kept at that point, the tension is lowered, and *no* convulsion takes place. The veratrum relaxes the whole arterial system, "*bleeding the woman into her own vessels*," and relieves the important nerve centres from excess of toxic blood without withdrawing valuable elements from the body. For the control of the actual convulsion, before the veratrum can act, chloroform is to be used, or, if preferred, morphine subcutaneously may be substituted, until the veratrum viride accomplishes its work. The chloroform is the better, however, unless contraindicated. I am considering cases in which the convulsions come on at or near term, and the uterus should be emptied as rapidly as is compatible with safety of the parts. Nature, chloroform, and veratrum viride tend to

relaxation, and in my experience special interference has rarely been needed, and never has it appeared necessary to incise the os, as has been advised and practised by some. In those cases in which the toxine has overpowered the system before any relief has been attempted, and when the woman is asthenic, with feeble circulation and a pale or cyanotic face, *veratrum viride* is to be omitted and resort had to stimulation while paying special attention to elimination. In these cases morphine, nitroglycerin, strychnine, ether, etc., have a place of usefulness.

The writer firmly believes that the above-described prophylactic routine and special preventive treatment on the appearance of premonitory symptoms will almost invariably dispense with the need for active treatment of actual puerperal convulsions.

THE IMPORTANCE OF PROMPT DELIVERY.

Dr. S. J. Essenson, of New York, writes:

As long as the pathology of eclampsia remains obscure there can be no rational curative treatment of the condition. Many subjects recover, no matter what the treatment is, many die in spite of treatment, and others do well without any treatment at all. No single treatment, therefore, can be recommended, but a combined treatment promises best for saving the lives of mother and child.

Three indications can be offered for this combined treatment as follows:

Control of Convulsions.—The four medicinal means most certain and safe are chloroform, morphine subcutaneously, *veratrum viride*, and chloral hydrate, the latter combined with sodium or potassium bromide. It is generally agreed among obstetricians that morphine is the most reliable of all, but it is also believed it prolongs the post-eclamptic stupor and may cause death during coma by interfering with the eliminative processes. When the pulse is strong and rapid, *veratrum viride* is the most certain means, second to chloroform temporarily, even permanently, to control the convulsions. It reduces the pulse rate, reduces the temperature, relaxes and relieves the rigidity of the cervical ring, and causes diuresis and diaphoresis. When the pulse is weak, I rely upon morphine hypodermically, chloroform inhalation, and chloral by the rectum, with stimulation.

Empty the Uterus, under anæsthesia, by some method that is rapid and will cause as little injury to the woman as possible. It is certain that the danger is practically over in about eighty per cent. of cases the moment the uterus is emptied, if done early in the attack. It is not meant by this that the convulsions always cease, but they become less dangerous, and there is a post-partum eclampsia in which the mortality is about seven per cent. only. But, still, authorities differ as to the extent to which local in-

terference shall be carried out, as the artificial dilatation of the cervix may cause grave convulsive attacks. In the second stage of labor, after dilatation has been secured, the immediate emptying of the uterus is indicated, on which all agree. Palliative treatment is certain loss of the child, and about one third of the mothers are lost. But with proper surgical procedures mother and child can be saved. Four procedures can be offered in the early part of labor, and during pregnancy: 1. Mechanical dilatation of the cervix and extraction of the foetus. In order to accomplish this, it takes from forty minutes to an hour and a half, and sometimes the lower segments of the uterus may be lacerated. 2. Deep incisions of the cervix. It gives us the means of emptying the uterus in from five to ten minutes, provided the supravaginal portion of the cervix has disappeared. 3. Combined mechanical dilatation and deep cervical incisions, in cases in which the supravaginal portion of the cervix is still present and the uterus must at once be emptied. 4. Cæsarean section may be employed, but it carries a very high mortality; also it may result in uterine atony and hæmorrhage, the irritation of the uterine and abdominal scars, etc., but it is left to the judgment of the skilled surgeon.

Elimination of the poison or poisons, which we think cause the convulsions. This last indication is not to be separated from the two others, but goes hand in hand with them. Use cathartics as early as possible, such as croton oil, compound jalap powder, calomel, high enemata of magnesium sulphate, and salines. In coma and post-eclamptic stupor I administer concentrated solutions of magnesium sulphate by the rectum. Dry cups over the kidneys and hot fomentations cause diuresis and are of greatest value. Nitroglycerin is a very valuable diuretic, and antieclamptic, and so also is *veratrum viride*. Diaphoresis by means of hot-air baths or hot packs is very good, but pilocarpine is dangerous on account of the œdema of the lungs and glottis it may produce. The intravenous injection of normal saline solution in case of collapse and small compressible pulse is here indicated, as in any other case of the same kind. Oxygen has been successfully administered in many cases. After the attack, when there is a threatening collapse, alcohol and strychnine can be given with advantage.

THE IMPORTANCE OF DUE ACTION OF THE KIDNEYS.

Dr. P. M. Miller, of New York, writes:

The most accepted pathology of eclampsia, as to its causes, is that convulsions occur during or after pregnancy in women, who are suffering with Bright's disease, and whose urine is loaded with large quantities of albumin, although some authorities maintain that albumin is often absent when

eclampsia occurs and that convulsions may occur with or without albuminuria.

The causes of eclampsia which we are able to study and investigate are mostly of such a character that we can classify them chiefly as the exciting. The nervous system is the master over the puerperal women of a peculiarly excitable condition that predisposes them to eclampsia during or after pregnancy. In extremely anæmic women puerperal convulsions occur on account of irritation of the vasomotor centre by the retention of excrementitious matters which ought to be removed by the kidneys.

The most necessary routine in preventing eclampsia is the occasional examination of the urine. If persistent albumin is found in the urine, a strict prophylactic treatment should be resorted to. Examine thoroughly the face, extremities, and the genitals (labia), and, on detection of any œdema and albumin in the urine, a smart diuretic should be given, large quantities of mineral waters, plenty of plain water, and milk, which should be mostly the diet. An iron tonic, especially tincture of chloride of iron, several times daily, is very beneficial. Laxatives, such as calomel or Carlsbad salt, in cases of constipation, are very useful, together with Turkish or domestic baths at a temperature of from 102° to 108° or 110° F., to help in the removal of the retained excrementitious matters by means of the skin. Avoid all unnecessary excitement.

Should convulsions threaten to appear, give an enema and a hypodermic injection of from $\frac{1}{6}$ to $\frac{1}{4}$ of a grain of morphine. After the bowels have moved, administer a large dose of chloral hydrate, with potassium bromide by the rectum and a cathartic by the mouth.

On the appearance of convulsions, administer chloroform at once, and on restoring the patient to consciousness treat her as above described. In some robust and healthy women you may first start with venesection; the quantity of blood drawn should not exceed sixteen ounces.

In case the symptoms and the convulsions disappear and the woman remains in a fair state, do not induce labor, but continue the prophylactic treatment as described unless symptoms of eclampsia should again appear; in this case, the best thing is to hasten delivery. Eclampsia after childbirth is best treated with morphine, opium, and chloral.

ACTIVE INTERVENTION, INCLUDING BLOODLETTING, OFTEN CALLED FOR.

Dr. Howard L. Lomax, of Albany, writes:

I endeavor to teach my families that the condition of pregnancy, from the earliest months to the end of the puerperium, requires watchful care, so that

on the appearance of any premonitory symptoms the proper preventive treatment may be instituted at once. To this end I seek to have them engage me early. A careful examination of the patient is then made, and any errors in diet, dress, habits, or surroundings are corrected. The patient is seen once a month and any premonitory symptoms are to be attended to at once. The urine claims special attention, and an examination is made at least once a week, care being taken to note the amount of albumin and quantity of urea excreted in twenty-four hours.

Upon the appearance of any premonitory symptoms, the patient is freed from all worry and over-exertion. She is kept on a milk diet, and assumes the knee-chest posture several times daily. Diuretics, diaphoretics, and cathartics are in order. The best diuretic is large doses of tincture of chloride of iron, and calomel ranks as the best cathartic. Proper hygiene—an abundance of fresh, pure air, frequent bathing, and the drinking of large quantities of water—is very essential. Suspected syphilis receives anti-syphilitic treatment.

Unfortunately, it is impossible to carry out these preventive measures in many cases. One convulsion generally follows another, and my experience has taught me that much valuable time is lost in resorting to medicinal agents. Cerebral vascular tension, a laboring heart, and a system charged with urea require a good bloodletting. When one convulsion follows another, it is our duty to chloroform and deliver at once. Dilate the cervix with the fingers, and apply the forceps or perform version. If this is impossible, make an artificial laceration of the cervix, as recommended by Dr. Emory Lanphear. Insert one finger by the side of the cervix, and, using this finger as a guide, cut through the cervix with the scissors up to the cervicovaginal junction and proceed in the same way on the other side, being careful not to open the peritoneal space. If the pelvic structures render delivery otherwise impossible, insist upon a Cæsarean section.

In mild cases, abstract ten or twelve ounces of blood and infuse one or two pints of normal salt solution. If this is impossible, give a hypodermic injection of morphine (half a grain) and ten grains of calomel every hour till three or four doses are taken; administer a high rectal injection of normal salt solution or give a rectal injection containing twenty or thirty grains each of bromide of potassium and chloral. Produce perspiration by applying hot bottles. A hypodermic injection of pilocarpine hydrochloride ($\frac{1}{20}$ to $\frac{1}{4}$ of a grain) hasten sweating, but it must not be used if there is a weak heart, pulmonary œdema, or congestion.

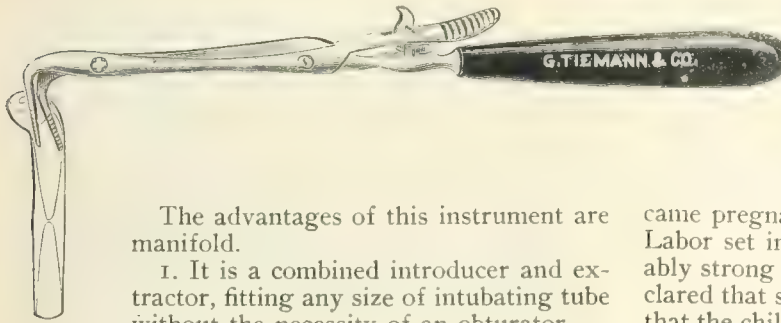
New Inventions.

A NEW INTRODUCER AND EXTRACTOR FOR O'DWYER'S INTUBATION TUBES.

By J. H. DROGE, M. D.,

— BROOKLYN.

Not knowing of a like instrument, I hereby present to the medical profession for their consideration an instrument that has been devised for the purpose of replacing the introducer and extractor which are ordinarily in use.



The advantages of this instrument are manifold.

1. It is a combined introducer and extractor, fitting any size of intubating tube without the necessity of an obturator.

2. Its simplicity.
3. Its durability.
4. No threads to wear or springs to rust.
5. Easily taken apart, cleansed, and made aseptic.

Owing to these facts I deem it worthy of attention. Thanks are due George Tiemann & Co. for aiding in perfecting this instrument.

Miscellany.

Sublata Causa, Tollitur Effectus.—The *New York Times* is responsible for the following:

At one of Dr. Weir's surgical clinics, held recently at the College of Physicians and Surgeons, a woman was presented who had a dislocation of one side of her lower jaw. The history showed that the injury had been sustained while she was engaged in strapping a very tightly packed dress-suit case. After reciting this history, Dr. Weir asked a student:

"What method of procedure would you advise to bring about a reduction of the dislocation?"

The answer came promptly: "I would advise her to unstrap the suit case, sir."

"Sterilized Vellum" to Prevent Adhesions after Laparotomy.—Dr. Charles H. Cargile (*Hot Springs Medical Journal*, February 15th) uses a "delicate vellum," prepared from sterilized animal membrane, for the purpose of covering stumps, pedicles, and denuded surfaces in the abdomen. "Being sterile, it cannot infect, and an animal substance is absorbed readily; it is so very soft and delicate, it cannot irritate mechanically. When applied to the peritonæum, a wound, or other moist surface, it quickly absorbs moisture, becomes transparent, and adapts itself so closely to the underlying surface that it is with difficulty seen." The author states that Dr. R. T. Morris, of New York, has used it successfully in two cases.

Painless Parturition in Tabes.—Mirabeau, of Munich, says the *British Medical Journal* for March 1st, citing the *Monatsschrift für Geburtshilfe und Gynäkologie* for February, recently related at a meeting of the Gynecological Society of that city a case where an afflicted woman brought forth a child in sorrow certainly, yet in neither pain nor peril. She was thirty-one years of age. When seventeen she contracted syphilis, after eighteen her health seemed good, and when twenty-two she married a man free from any morbid taint. For years the union proved sterile. When the patient reached the age of twenty-six years unmistakable signs of tabes dorsalis set in; two years later the lower extremities were completely paralyzed. The patellar reflex was absent, there was sensory disturbance in the upper extremity, and the Argyll Robertson pupil was noted. The patient could retain neither urine nor motions; she aborted when thirty, and soon afterward, while undergoing a course of inunction, became pregnant again, and carried the child to term. Labor set in spontaneously, the pains were remarkably strong and well maintained, but the patient declared that she could not feel them, nor did she know that the child was born until she heard it cry. It was a healthy, well-developed female. Mirabeau observed that this case proved the existence of motor centres in the uterus. Owing to the patient's absolute insensibility to the uterine contractions, it was impossible to ascertain how long the labor had lasted when the obstetrician first examined her.

The Virulence of Dessicated Tuberculous Sputum.—Harold Swithinbank (*Proceedings of the Royal Society*, September 27, 1901) has communicated to the Royal Society the results of a series of elaborate experiments on this subject, as follows:

"To sum up the results of the experiment, it would appear, then—

"1. That simple exposure to the temperature of liquid air has little or no effect upon the bacillus tuberculosis as far as vitality is concerned.

"2. That its virulence is to some degree modified, but not destroyed, by such exposure, even if it be continued for a lengthened period.

"3. That length of exposure is not a factor in the question.

"4. That actual immersion in liquid air has no special effect upon the organism, nor does it produce results in any way differing from simple exposure to the temperature obtained by it.

"5. That successive alternations of extreme cold and normal temperature have a decidedly destructive effect upon the vitality and virulence of the organism."

Snake Venom in Relation to Hæmolysis, Bacteriolysis, and Toxicity.—Dr. Simon Flexner and Dr. Hideyo Noguchi (*University of Pennsylvania Medical Bulletin*, February) report a series of elaborate investigations on the subject, carried on by them in the pathological laboratory of the University of Pennsylvania. The authors' conclusions are as follows:

1. All venoms, when used in suitable quantities, destroy the bactericidal properties of many normal

blood sera. 2. The manner of this destruction consists in the fixation of the serum-complements by the venoms. 3. Venoms have no action upon the intermediary bodies of serum. 4. If the venom is incapable of uniting with the serum-complement (*Necturus*), then the original bactericidal properties remain unaffected by the presence of the venom.

Effects of Antivenene on Hæmolysis and Bacteriolysis.—Through the kindness of Dr. McFarland they secured a small vial of Calmette's antivenene. This was used to test the restraining action upon venom hæmolysis and venom antibacteriolysis. The antivenene was first proved to be non-hæmolytic for rabbit's corpuscles and to improve slightly the nutritive value of fresh rabbit's serum.

Erythrolysis by cobra venom on rabbit's corpuscles is prevented if neutralization by antivenene is effected. Thus 2 milligrammes of venom plus 1 cubic centimetre of antivenene is still lytic, although action is retarded; 1.5 milligramme of venom plus 1 cubic centimetre antivenene caused slight hæmolysis after twenty-four hours, while 1 milligramme plus 1 cubic centimetre was without taction.

In the case of rattlesnake venom, 1 cubic centimetre of antivenene neutralized 3 milligrammes of the poison.

Leucolysis was affected in approximately the same degree as in the case of erythrolysis.

The effect on bacteriolysis is equally marked. When cobra or rattlesnake venom is treated with a neutralizing quantity of antivenene and fresh serum is added the resulting fluid behaves in a manner similar to that of the control mixture of normal fresh serum and antivenene.

Antivenene, therefore, neutralizes venom and removes both the hæmolytic and the antibacteriolytic actions.

Gray Hair and Emotional States.—Dr. Harry Campbell, writing to the *Lancet* for March 8th, in reference to the article on this subject in that journal for March 1st, by Dr. Robert Jones, agrees that "abnormal grayness is an infallible index of some defect in the nervous system." He says: Between the normal and the abnormal there is, of course, no sharp dividing line—the one runs imperceptibly into the other—but, speaking generally, we may say that the chief features of normal grayness are: (1) It does not come on before, say, the age of thirty-five years; (2) it is symmetrical; (3) it begins in certain regions, preferentially the temples (so named on account of this very fact), spreading thence; (4) the blanching progresses gradually; (5) the blanching on the scalp does not proceed decidedly in advance of that on the face.

We are now in a position to give the features of abnormal grayness: (1) Premature blanching of the hair is the most important sign of it, and the earlier the grayness appears the greater the abnormality—thus it is greater in one who turns gray in his twenties than in one who does not begin to go gray till in his thirties; (2) asymmetrical grayness is so well recognized to be due to defective nervous action that I need not further insist upon the fact; (3) grayness which does not begin in symmetrical foci spreading thence, but affects the whole scalp or beard equally in all its parts, is, unless it progresses slowly, generally abnormal; (4) rapid blanching is always ab-

normal; and (5), when the whole of the hair on the scalp is decidedly gray, while that on the face retains its color completely, the condition is abnormal. We may frequently observe this condition in men in their early thirties or early forties. I have never observed the exact converse of this, though it is quite common for men to grow more rapidly gray in the beard than in the scalp; this I do not regard as abnormal.

Death from Electric Shock.—The *Lancet* for March 8th refers editorially to papers by Mr. Trotter and Mr. Aspinall, recently read before the Institution of Civil Engineers. Mr. Aspinall's paper is abstracted in the *New York Medical Journal* for March 22d, page 519. Of Mr. Trotter's paper on Electric Shocks at Five Hundred Volts, the *Lancet* says that it is intended to correct the popular belief that accidental contacts with conductors at such a pressure are inevitably fatal. Mr. Trotter showed by actual experiment during the meeting that he could endure the sensations produced by a brief contact with conductors at that pressure, and a milliamperè-meter arranged in the circuit gave readings ranging up to thirty milliampères as the current which traversed his body. The sensations, he said, were rather like those produced by touching a heated iron.

It is important to distinguish between the effects of brief accidental contacts with live conductors and those which might follow if the subject were so entangled as to be unable to escape from the position of serving as a conductor for a current at that pressure. Five hundred volts is a common voltage on circuits used for electric traction. On the Central London Railway the difference of potential between the middle line and the running rails is 500 volts, and the same difference of potential is maintained between the overhead wire and the rails of an electric tramway. In either of these systems, therefore, a passenger might accidentally come into contact with conductors having a difference of pressure of 500 volts, and would receive a shock which might feel very disagreeable, but the probabilities are that he would easily be able to extricate himself from the situation without suffering any material damage. A person falling off the platform at one of the "Tube" stations, for example, is not necessarily grilled alive, even if he should come into contact with the rails. A passenger on the outside of an electric tram-car would be better advised to sit still than to jump off headlong in the event of the overhead wire breaking and falling upon the car.

Mr. Trotter's paper and demonstration also emphasized the value of ordinary dry clothing as a protection against such pressures as 500 volts. Using a model section of the tract of the Central London Railway he not only stood upon the rails, but actually sat upon them and lay down upon them in sight of the assembled audience and the galvanometer indicated only a very few milliampères. The conclusions that the *Lancet* draws from his paper are that it is a risky thing to take a deliberate hold of conductors having a potential difference of 500 volts, but that accidental contacts with them are only likely to give a nasty shock, and that ordinary users of electric railways or tram-lines are in no imminent danger of death from the electric current.

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Original Communications.

STATE CARE OF THE INSANE.

By L. J. MORTON, M. D.,

BROOKLYN.

The question is often asked, both by statesmen and humanitarians, Are we expending too much money on the care and maintenance of our insane charges in this State? The medical men who are in charge of our hospitals for the insane will all, no doubt, answer in the negative; while, on the other hand, our public officials will criticize the expenditure as far too excessive.

We must bear in mind that the insane man is the most helpless of sick men. He must receive medical treatment, be housed and fed, and the public must think for him too. According to the stage of his disease, he is helpless. He may only be suffering from a mild attack of mania or melancholia, or he may be a helpless dement and require as much care as the new-born babe.

For hundreds of years all civilized nations have looked upon it as a duty incumbent upon them to care for their helpless and insane; to protect them from abuse and imposition on the part of unscrupulous or cruel people; to provide them with food and shelter and from the inclemency of the seasons—the scorching sun of summer or the severe cold and storms of winter. As the world grew older people became more civilized and stamped the seal of civilization on the care of this class of sick and insane. In the year A. D. 750, an asylum was founded in Barcelona, Spain, as a shelter for this unfortunate class of people. Seventy years later a second institution was opened by an Arabian physician for the reception of the insane, and so on down the flight of time, different nations caring in different ways until the days of Tuke and Conly, when the insane were humanely cared for on advanced lines, as was being done at this time in the Belgian provinces, particularly in Gheel. In the latter place, the insane are quartered in the rural districts, principally with the farming class, where they perform some kind of manual labor, the government allowing a certain sum of money for their care and maintenance, believing that the cheapest, best, and most effectual way of improving the condition of their insane charges is to place them in the most healthful sur-

roundings and quiet, comfortable homes; contending, and justly so, that the more speedily they are cured, the less expensive it will be when accounts are settled. This plan is only an evolution of what has been done for this class of patients since the dawn of civilization. In primitive times the physically strong man was the ruler and leader; he had his kinsmen and followers; many ate at his table; he was known, too, for his goodness and greatness; the weak and helpless were cared for by him—he was always the welcome host and with him the mentally sick found shelter. Again, the sanctuaries that men built for themselves in which to escape the annoyances and perplexities of the busy world were always open to receive this class of patients. Men with a charitable turn of mind took it upon themselves to build homes for them and look after them, feeling it not a task, but a duty incumbent upon them, to nurse back to health this often shunned class of the great human family. In those days every house was an inn to the weary and to the wayfarer, no matter whether it were the palace of the noble or the cottage of the humble husbandman. It was this sense of justice toward the weak that gave origin to the feudal system, when the mail-clad knight was ever ready to lay down his life in the defense of those who needed the strong arm of his protection. To-day, the State hospitals and the private sanitarium are the sanctuaries, the homes, and the retreats, that have been erected for the reception of these mentally sick men. They not only seek them and remain there, but look upon them as one of the greatest blessings of modern times. For the last eighty years institutions have been established for them in this country. During the last ten years the insane, as a class, in the State of New York, have received care and treatment such as science demanded. Previously, in all the counties in this State, except three, they were confined in the county house (almshouse), where they received no medical treatment, being merely housed. These almshouses were superintended by a very ordinary layman, his qualifications being that of an astute country politician. He might be the leading merchant of the town, or of that class, the most backward and least progressive of business men, the New York State farmer. To-day, the insane of our State who require it are cared for and treated in fine State hospitals or asylums (just as good a name as hospital),

where they are kindly looked after by men who are, as a rule, well qualified to assist them back to health.

Medical Superintendents.—The medical superintendents of our State hospitals are well equipped to fill the very responsible positions that they hold, and they should be well paid and have the comforts of a good home. The superintendent need not be an autocrat or an aristocrat, yet he cannot govern unless he has full sway to rule. Like the captain of a ship or the general of an army, he must and should be the respected head whose word rules. In days gone by, able and conscientious medical superintendents in this county of Kings were badgered and wheedled by the various little parvenues of commissioners, or perhaps, by underlings in their employ.

The medical director of an asylum generally has too much to attend to for one man. To look after his house staff, his nurses, and orderlies, is quite enough. He should have time to travel and visit other institutions of the same kind, at least in his own country, and bring home and apply his experience. This authority and these privileges, with a good salary, are only just recompense for him, because, through any misunderstanding with his superiors or loss of his health, he might have to resign and would then be quite helpless to enter private practice, for he has not had the training to become a brilliant surgeon, neither has he the snap, nerve, and energy, to be a successful general practitioner. Therefore, this position is not without its disadvantages.

Housing of the Insane.—It is a truism that, under improved sanitary conditions, people in cities, towns, and villages live longer and are freer from disease than if living in unsanitary locations. For instance, in Santiago, where every year since yellow fever has become known, hundreds of the population have fallen victims to it, not a single case existed this year. We have no cholera and typhus, as in years gone by, or great epidemics of small-pox. Before the germ theory of disease was discovered, all these different epidemics were looked upon by the people as scourges or as a punishment from divine Providence.

The use of separate buildings, or what is known as the cottage system, is now recognized as the proper manner in which to house and care for the insane, and why? Because, under this system of separating the mentally sick into small families, fairly classified, you will be economizing for the taxpayers, and how? Because your public charge will make a more rapid recovery, be discharged and return to his former occupation, thereby becoming self-supporting. In Scotland, where this practice is in vogue, patients are cared for at public cost in separate buildings, and each attendant has only two

charges to look after. Although expensive, by long experience they have found it less costly, because recoveries are more rapid and permanent. And this leads to another question as to the housing of the insane, *i. e.*, Is segregation of this class conducive to good? Is it well for so many suffering from the same disease to be kept in the same building, all observing day after day the misery of their afflicted brothers? The consensus of opinion is that it is not, but that it is preferable, on the contrary, to place a few in number in separate buildings, making each home as nearly as possible like the home which he enjoyed and loved before he was compelled by disease and force of circumstances to be committed to a public institution. He should have suitable exercise and, when able, some kind of work—pleasant, agreeable, and not fatiguing or beyond his strength. A better and more intelligent class of nurses, both male and female, is to be had since they have been compelled to undergo a preparatory training. Thus the patients, educated and uneducated, will have now, and in the future, kind, humane, and thoughtful persons to care for them.

In the Long Island State Hospital, at Flatbush, the superintendent is indefatigable in his efforts, in exercising the most watchful care over the 1,192 patients in that institution. But his hospital is an ancient structure extending east and west. If it had been built extending north and south, he would have a structure built on modern lines, and some time during the twenty-four hours the sun's rays would strike each room. But this is not the case, and if the recoveries are not rapid and permanent, it is no fault of his, but is rather due to the mistakes of those who constructed it. The superintendent is a worthy successor in the long list of his predecessors, several of whom have added lustre and fame to the history of medicine in this State.

Increase and Causes of Insanity.—Is insanity on the increase, and why? is often asked. It must be said that it is, and the reasons are many. The rapidity with which we do things; stringent living; the overtaxing of the brain in the counting house; brisk business competition, and the desire to become wealthy in a short space of time.

Emigration aids greatly in increasing the number of insane, and will continue to do so while this country is the dumping ground for the ignorant, the outcast, the criminal, the degenerate, and the drunkard of Great Britain and continental Europe, who seek the large cities of the United States, living in filthy and stuffy tenements, where the population is congested, or perhaps over a rumshop or cheap hostelry, there to spend their nights, and probably their days, in drunkenness and dirt. Why should they not become mental and physical wrecks? It would be wonderful if it were otherwise. This latter class

fills your almshouses, hospitals, penitentiaries, prisons, and insane asylums, in every State in this country. And here let me digress for a moment from the trend of my remarks and say that we want no continental Sunday in this city or in this State or in this nation. Who of us would wish to see humanity so degraded, so drunken, so depraved, and debauched as we behold them in the large cities of Europe. We want no condition of affairs similar to those that exist in the large manufacturing cities of England and Scotland, where the only two institutions that do business on Sunday are churches and rum shops. If such were to be the case our chief executive would be compelled to ask his commission in lunacy to build more institutions of the same kind, and quickly too.

Private Sanitariums.—Private sanitariums within recent years have sprung up rapidly in this State and throughout the whole country, so that there is no dearth of places in which patients can be received, and the wonder is how so many of them can thrive. The reason for such a number, possibly beyond the requirements, is that many physicians who have been in other institutions, public or private, not caring to enter private practice, or perhaps not feeling competent to do so, open a retreat for patients suffering from nervous and mental diseases. They are good homes for those needing care and rest, the only objection is that they are costly and beyond the means of a majority of those who are in need and wish to be cared for in a small institution.

Commitment of the Insane.—In this State, the law for the commitment of the insane, to either a public or private hospital, is unwieldly, vague, and cumbersome, and something should be done to amend it.

In many cases I advise the friends of patients to take them to adjacent States and place them there in private sanitariums, that is, if there may be any question as to their commitment—not as to their detention; because, in no State, can a patient be confined against his will. He has a right to the possession of his body, and if he is mentally sound enough, he can demand that right, and, if on examination by the proper authorities, he is adjudged sane, he must be discharged forthwith.

The commitment of patients to either public or private hospitals behooves the exercise of care and judgment. I am never willing to advise sending patients away unless they are dangerous—suicidal, homicidal, destructive, or noisy. But should there be an hereditary strain in a family and the patient be the child of insane parents, I do not hesitate for a moment advising the sending of him away, or if he is kept at home, he should be watched very closely, no matter from what form of insanity he may be suffering. Even if the disease has skipped a gen-

eration and his parents are sound mentally, if I can obtain a history of insanity further back in his grand parents, I follow the same rule. I lay particular stress upon the commitment of this class of patients, because of having had several very unpleasant experiences where people persistently refused to allow their friends to be sent to a public hospital or sanitarium; but I consoled myself by the fact that I had advised their commitment. Where their friends persistently refused to send them to the State asylum on account of the publicity, or were not able financially to send them to a private sanitarium, I have not only admonished, but implored and abjured, these friends of the insane to be governed by my advice and to have them sent to a public institution for care and treatment.

Home Treatment.—The mild forms of nervous disorders, as a rule, can be cared for at home or in some other quiet place. Even in cases of acute mania, if the friends have accommodations at home, I give the patient a trial before sending him to a retreat. On two different occasions within the past year I have had to meet the patients and their friends, who were very loud in their denunciation of physicians who had been instrumental in sending them to a sanitarium without giving them, as they thought, a fair trial at home. One was suffering from a mild form of melancholia, and the other from a mild form of acute mania with insomnia and muscular activity, and both after a few days in their new retreat cleared up and requested their liberty. My answer to their charges was that that might occur to any physician, general practitioner or specialist, and, even though the physician did err, their intentions were good and they had the safety and welfare of their patients at heart.

Again, another objection is that after a man or woman has been discharged from an asylum and people outside discover it, he or she is shunned and finds it difficult to secure employment. This treatment of those unfortunate people is at least humiliating and quite sufficient cause to upset the mental balance again. This does not apply so much to private sanitariums or retreats as to commitment to public asylums, and therefore I would again say: Treat, if possible, either at home or in some private retreat, cases similar to those already mentioned, viz., mild melancholias, perhaps mild cases of acute mania, puerperal mania, insanity of lactation, insanity of adolescence, or mild cases of harmless dementia. Quite recently a patient whose friends I had advised that it would be better to have him sent to a public institution, as he had no means to enter some retreat, begged in his lucid moments to be saved the shame and publicity of a public commitment to a public hospital. His words were: "The press will publish it, my neighbors and business acquaintances

will know it, and I shall be ruined in my business."

In my own practice I have treated with excellent results in the homes of the patients cases of simple and agitated melancholia, also cases of alcoholic dementia with multiple neuritis. I once attended at his home in this city a wealthy man who was suffering from agitated melancholia with suicidal tendencies. His faithful wife and the members of his family, with the assistance of nurses from time to time, cared for him and exercised the most careful watchfulness. We had to lock up all means of self-destruction—poison of various kinds, ropes, razors, guns, and pistols. Six months of the year he remained in the city, the other six months of summer and autumn were spent at his country place in the mountains. From time to time I prescribed for him, never imagining that I should see him restored to his normal mental health, but, after six years of care and watchful nursing and general medical treatment only when indicated, this man made a good recovery, being again solicitous for the welfare of his wife and family, whom, on more than one occasion, in his agitated moments, he had wished he could destroy.

Another case in private practice was that of a man who was suffering from alcoholic dementia. He was helpless, did not recognize his surroundings and had to be cared for by a constant attendant. After twelve months he cleared up and returned to business, where he remained for three years and then died of pneumonia.

In St. Mary's Hospital I have treated several cases of alcoholic dementia, accompanied with multiple neuritis. One patient, who was not able to walk, recovered, and her mind cleared up after treatment for a little over twelve months, and she is still living. My next case was more protracted—that of a woman who gave a history of alcoholism. She did not recognize her surroundings, was paralyzed in both hands and feet, but made a good recovery both mentally and physically after three years' treatment in the hospital. The internes in the hospital can bear me out in these statements.

Classification.—As to the classification of the insane, it is not always practicable, and I question very much if any benefits are derived. No medical officer would think of placing patients that he thought would make a speedy recovery, where they would have for associates many demented, because, if that association were for any great length of time, it would end in unfavorable results for those suffering from acute insanity, for the constant association with demented tends to lower the mental tone, even of those who are sane, by the psychological effect of mind over mind.

Medical Treatment.—As to the medical treatment of the insane, after their admission to either public or private hospitals, it is hardly within the province

of one in practice outside to offer suggestions. The medical staff, especially the older members, have their own experience as to classification, treatment, and the use of drugs. But I would say that every asylum physician should be a capable practitioner—a man knowing his profession and having plenty of time to study it. That fifty patients would be enough for any one man to see in a day, and these fifty sick men should have the attention of the best and most skilful medical attendance that the country can produce.

I have never considered the putting to bed of agitated patients as essentially necessary, although many do. I have taken patients who were suffering from acute mania and muscular excitement and afforded them ample opportunity to work off their superfluous energy by giving them plenty of exercise, and, at night, a hot bath for half an hour, with ice to the head, followed with a drachm dose of sodium bromide, repeated in two hours, after which they have slept for three or four hours and on awakening were quiet. This treatment, repeated for two or three evenings, has proved very effectual.

I do not advocate the long-continued use of bromides, unless in epileptic insanity, as they set up gastric disorders and weaken the heart muscles. Neither do I consider it a good practice to administer large doses of bromides after long fasts, particularly the first thing in the morning or just before meal time. I have seen bromides prescribed for patients suffering from melancholia and dementia. Why try to quiet the already subdued patient? Although, in this country, we follow in the footsteps of the German physicians in the use of opium in melancholia, I have found that its use for any length of time causes the patient to become weak and more depressed, impairing digestion, drying up the glandular secretions, and causing muscular weakness and wasting. In cases of melancholia, at different times, I have used the thyroid extract, but not always with favorable results. Since following out the suggestions of Dr. Hiram Elliott on the use of thyroid extracts in the treatment of melancholia, I have had much better success, thanks to this very able clinician.

Hypnotics.—For an hypnotic, if it has to be used for any length of time, I prefer paraldehyde to the bromides, opium, morphine, or chloral. Some object to its use, owing to the fact that the patient may contract a habit, but the habit is not so bad and the physiological effects are not injurious. In drachm doses, mixed with simple elixir, it may be given early in the evening. Trional may be given in 10 or 15-grain doses, in a hot drink at bedtime. Hyoscine may be used in sthenic cases, where the patient is violent and dangerous, or where there is excessive muscular excitement, but, even then, it should be

given with great care, and by no means indiscriminately, or to weak or delicate patients. It is a dangerous drug to use in the insomnia and excitement of delirium tremens, especially if the patient has used liquor for any great length of time. Hyoscine being an alkaloid taken from an alkaloid, should only be administered by those who have had *wide experience* in its use.

303 HENRY STREET.

A CASE OF ROUND-CELLED
SARCOMA OF THE STOMACH,
WITH SECONDARY MANIFESTATIONS
IN THE
ALREADY ADENOMATOUS THYREOID.

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The case here reported, from the pathological laboratory of the Montreal General Hospital, has a double interest, in that it is representative of a disease which is comparatively rare, and that it presents an instance of new growth invading other new growth, long pre-established. The history indicates that a fetal adenoma of the thyroid gland had been in existence previously to the occurrence of the sarcoma; sarcomatous metastasis attacks the thyroid and invades the adenomatous tissue in the same way as that in which it invades the normal glandular tissue.

The literature on the condition of sarcoma of the stomach has been excellently condensed at different times by Schlessinger, Dock, and Howard, the last-named writer, by the addition of four cases, bringing the total number of reported cases to sixty-one. From the reports of these cases the following facts are perhaps the most striking:

1. Apart from procuring the neoplastic tissue, there is no way by which, during life, sarcoma can be definitely distinguished from carcinoma of the stomach.

2. The lymphosarcomata are most diffuse, the myosarcomata and fibrosarcomata the largest; the muscular layers are the commonest site.

3. The lymph glands are the commonest site of metastasis; secondary growths are less common than in carcinoma.

4. Splenic enlargement occurs in many cases, without involvement of the organ by the growth.

5. A large number of the reported cases are in patients over forty years of age.

The clinical signs are generally those of carcinoma of the stomach. Howard remarks, very truly, that the condition is really much commoner than the cases reported indicate, and that only a persistent

routine microscopical examination of all cases can give us the true figures, for, to the naked eye, the appearances of the two conditions are not strikingly dissimilar. The occurrence of enlargement of the spleen has been much commented upon, and still awaits explanation; it will be noted that in the case here reported it showed no enlargement.

CASE.—A. M., aged sixty-nine years, a widow, was admitted to Dr. F.G. Finley's wards, in the Montreal General Hospital, on October 1, 1901, complaining of an "empty feeling in the stomach" and loss of flesh during the summer. She has had for twenty years an enlarged thyroid; has been employed lately as a seamstress. Though loss of flesh has been progressive for six months, weakness was not distressing until a few days before admission; appetite fair, no vomiting; patient pale, emaciated, skin dry. The thyroid tumor extended down to the episternal notch, and laterally to the mid-clavicular line, but apparently caused no undue pressure. No other glandular enlargement was observed. On the wrinkled inelastic abdomen, a raised boss, looking like the lower border of the stomach, runs across 1 inch below the umbilicus. Between the costal margin (mammary line) and umbilicus is an indurated, firm, uneven mass of the size of a hen's egg, lying beneath the rectus muscle, and moving with inspiration. Peristalsis is seen through the abdominal wall on excitation.

Impaired resonance is found in apex of right lung down to fifth vertebra behind; inspiratory crackles are heard at level of spine of scapula. A test meal was given, but nothing could be removed, and, on account of the distress caused, it was not repeated. Temperature showed a daily variation from 97.2° to 101.6° F.; pulse 100 to 130. The condition was diagnosed as malignant disease of stomach.

During the patient's stay in the hospital there was obstinate constipation, occasional vomiting after food, and a sharp attack of diarrhoea; there was at no time pain in the abdomen. Death occurred on the eighteenth day after admission.

The autopsy was held three hours after death. There was a distinct tumor in the thyroid region, mostly on the left side; the abdomen was sunken; no tumor palpable; slight oedema of the feet and legs. Apart from the growth described below, the findings are not of interest, except that the spleen was not enlarged, but was smaller than usual, soft, and not implicated by the growth; there was dense adhesion between the liver and diaphragm of fibrous nature, neither being involved in the tumor formation.

The organs involved by the tumor were the stomach, lung, thyroid and lymphatic glands, and, judging by the degree of involvement, it seemed as if the stomach were the earliest site, the thyroid the latest. The stomach is dilated, 17 by 12 by 6 centimetres; its greater curvature and posterior wall (toward the pylorus) are the seat of a hard, firm, raised, coxcomb-like new growth, 12 centimetres long by 4 centimetres wide. The top of the ridge is 2.5 centimetres high, but it slopes away on both sides so gradually that from one half to two thirds of the whole surface of the stomach seems involved. The mucosa is continued over it and no ulceration is

apparent. The tumor on section is white, has no juice, is firm, not fibrous; the wall of the stomach, where it is not involved, seems thickened. The growth is within 1 centimetre of the pylorus, but section shows the ring quite free from growth. The pylorus is stenosed, being capable of dilatation to 1 centimetre in diameter. The duodenum is free; the jejunum, a few inches down, has on its outside wall a mass of new growth 2.5 by 1.5 centimetres in size, of which no trace is to be seen on the internal surface. The glands around the stomach region and the peribronchial glands are affected similarly, and some no longer have any lymph tissue, but represent solid blocks of sarcoma cells.

In the right lung, near its root, is found a mass, roughly 4 centimetres in diameter, of white, firm, new growth, with radiating bands stretching out into the lung tissue. Though close to the root of the lung, it does not seem to have interfered with any large bronchial or arterial branches, and it does not show anywhere upon the surface of the lung. The right side of the thyroid is practically normal in size, has a capsule 5 centimetres thick, and is not involved. The left side is a large mass, 9 by 5 by 4 centimetres, mostly new growth (resembling that in the stomach and lung), in places cartilaginous; elsewhere, the tissue is broken down, showing dark-colored blood pigment. The left lobe of the thyroid gland gives the impression of being gradually encroached upon from below, the upper part showing the original structure of the thyroid (microscopically, foetal adenoma of thyroid); next to this is an area of this tissue mottled by patches of white (new growth), and at the lower part, pure new growth. (In connection with the existence at the same time of these growths, compare Case II of Howard's series: Female, aged forty-six years; bilateral enlargement of thyroid, which at autopsy was found to be papillary adenoma; adenoma of duodenum; mixed-celled sarcoma of stomach.)

To review the whole case, it will be seen that there is a well-defined large growth, presumably primary, in the stomach; metastatic growths occur in the chain or lymph glands from the stomach to the thyroid; midway, the lung is involved, probably by the blood channels, rather than by direct continuity; and from the gradual upward march of the growth into the thyroid—which is involved at its lower, free at its upper part—the whole plan of growth seems to favor the interpretation given, viz., that the stomach growth is primary, the others secondary.

Microscopically, the growth is a homogeneous one of round cells, slightly larger than lymphocytes, mostly circular or subcircular, no blood vessels being discoverable in its structure. A reticulum between the individual cells is demonstrable by the use of special staining reagents. In the stomach, near the margin of the infiltrated area, the muscular layers are the ones involved, the fibre being in some regions replaced, elsewhere split longitudinally by masses of cells, which here and there overrun into the mucosa, which they encroach upon and finally al-

most completely replace. The pylorus itself is free; the isolated masses, representing glands, seem to consist of completely homogeneous tumor growth. The mass in the lung and the left side of the thyroid below are similarly solid sarcoma; the adrenal is free. The right side of the thyroid shows large sacs with colloid contents, as usually seen in the thyroid of a person of the age of the patient. In the left side of the thyroid all grades of involvement are seen, the adenomatous tissue being gradually encroached upon, and replaced, as are the tissues elsewhere. The muscular coats of many arteries are infiltrated by growth, but the lumina are free, save in the capillaries, where frequently sarcoma cells can be seen distinct from the endothelium, which appears unaltered.

It may be mentioned that a case, evidently one of primary sarcoma of the stomach, occurs in the autopsy reports of the Montreal General Hospital for 1899, but, in the absence of the specimen, it was not judged advisable to attempt to give it place among undoubted cases. I gladly acknowledge my indebtedness to Professor F. G. Finley for his kind permission to use the case here reported.

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REFLECTIONS ON SOME OF THE CAUSES FOR THE HIGH DEATH RATE AND HIGH VENEREAL NON-EFFICIENCY OF THE TROPICS.*

By P. R. EGAN, M. D.,

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The high death rate of Puerto Rico has been engaging the thoughts of Americans since the invasion. The late General Henry, at my request, when chief surgeon of the district of Ponce, convened a board of survey, October 12, 1898, consisting of an engineer officer, Captain Ellicot, and a medical officer, Captain Proben, U. S. V., to report upon the water supply of Ponce and its possible contamination.

The prevalence of typhoid fever in the city of Ponce and the suspicious character of its water supply came under my observation on assuming charge of the office, September 30, 1898. The board was called to see what measures, if any, could be taken for prevention and improvement.

*Read before the County Medical Society, Salt Lake City, Utah, February 24, 1902.

The members of the board deserve great credit for the interest they took in the subject and the thoroughness of their investigation in the limited time at their disposal.

The reservoir for the supply of Ponce was reported open to various sources of contamination, and the aqueduct was sagged at various points, admitting water from the outside. The unsavory condition of the river above the intake is best given in the words of the report: "All told, there are 143 huts along the stream; of these, 20 are along the branches, and 123 along the main stream. All are within 300 feet of the river; there are 40 within 50 feet; some directly within 20 feet. Where the roads cross the river, habitation is always marked, and here the greatest source of pollution occurs, especially within 3, 5, and 7 miles, above the dam. Forty-seven such huts were counted, which were situated almost directly on the stream, and these form a very prolific source of contagious elements of pollution. These small huts are entirely devoid of sanitary arrangements; they contain, on an average, four to five persons each, who dispose of their excreta directly into the river. They use the water for washing their clothes, etc., and for watering their cattle. All refuse of any character is thrown directly into the stream. We have been unable to find any water closet, except one . . . that is extremely filthy. . . . Along the watershed we have been able to count forty pigs and a number of dogs. Four or five places had pigpens directly near the river edge."

This lengthy extract will serve to show the terrible contamination to which the water supply of Ponce is exposed; yet it must be remembered that only four large towns have any attempt at a water system. The inhabitants of the other towns draw the water in gallons or barrels from the river in which hundreds of women are washing clothes, entrails of animals, etc., and which receives the excreta of hundreds, nay, thousands, of people living along its banks; for we must not forget that Puerto Rico is about the most thickly populated country in the world, and that a privy of any kind is practically unknown in the country districts.

The proceedings of the board were endorsed by me, recommending a system of sand filtration that had been considered some years previously, the only reliable means of purification. This suggestion, because of its cost, was not adopted, but since my departure from that city I have learned that a system of filtration has been built across the bed of the river. This, as was natural to suppose, was carried away by the first heavy rainfall, so that, to-day, there is no system of filtration worthy of the name in the whole island, and the water supply is drawn from rivers of which the board describes one of the purest.

Add to this that no city contains a system of sewerage, except San Juan, and that is so imperfect as to be unworthy of the name, that, in towns where any kind of privy pit exists, it is only partially partitioned off from the kitchen, or is next door to it; and that, finally, poor families in towns live nearly always in single rooms, without ventilation, and as crowded as sardines in a box. In towns as large as Cayey, many of the houses have no kind of closets, and the people have to attend to the wants of nature wherever they can.

While in Ponce I went to investigate an epidemic of small-pox in the neighboring town of Penuelas. There were thirty cases, with several deaths. Similar epidemics were prevalent all over the island. I was one of the directors of the five districts into which the island was divided for vaccination purposes. I accounted for 160,000 people in the district of Guayama, and the other directors did even better in their districts. Since then, according to returns, there have been but a few deaths from small-pox on the island.

To diminish the high death rate of that country, and of the forces therein, it is evident that the first necessity is a sand-filtered water supply; some adequate system of excreta removal, and sanitary habitations for all classes of the population.

Now, the two great causes of death in Puerto Rico are anæmia and tuberculosis, but the former is nearly twice as common as the latter. In 1900, the deaths were twice as numerous as the births, the numbers being 41,854 and 20,259, respectively. In the three years of American occupation the deaths exceeded the births by more than 50,000. The year ending June 30, 1901, had, according to an incomplete report, 11,535 deaths from anæmia alone.

Soon after the invasion of the island, an assistant surgeon belonging to the regular army found the ankylostoma in nineteen cases of severe anæmia. Thereupon, this worm was vaunted as the cause of Puerto Rican anæmia, just as Griesinger had declared, in 1854, as the result of a single autopsy, that it was the cause of Egyptian chlorosis. But it is doubtful if clinical facts warrant such deductions. The only scientific work so far done in Puerto Rico to elucidate this subject, was that of my friend, Assistant Surgeon E. F. Russell, U. S. army. He found that 54 per cent. of the perfectly healthy, and 84 per cent. of persons sick from every variety of disease, harbored this parasite, while, according to Manson, the ankylostoma is found in nearly every cadaver in Egypt, and in India it was found in over 75 per cent. of natives to whom thymol had been given. Very many of those so affected are strong and healthy, and show not the least symptoms of anæmia.

Of all the bread stuffs necessary to life, the trop-

ics produce only corn and rice. A white man cannot live for any length of time on corn and rice alone, or on bananas or palm nuts. Neither are the foods produced sufficient for the population, and so a chronic condition of famine exists in very many tropical countries. Among the inhabitants who can enjoy a generous diet, such as we use, anæmia almost never occurs, while in those suffering from chronic starvation, it is ever present. The dependence of the so-called pathological effects of the ankylostoma on lack of food or on diseased conditions, and its innocuousness when these conditions are absent, needs further elucidation. The English Tropical School has promised some observations on the life history of the ankylostoma, and these I await with great eagerness, as it is hoped they will throw light on this, to me, inexplicable relationship. The eggs of the parasite are discharged with the excreta, and easily find their way into the water which is drunk by the inhabitants, so that, in Puerto Rico, the worm can probably be found in almost every cadaver, as in Egypt. Our want of further information regarding the life history of the ankylostoma was forcibly impressed on me only yesterday by reading an extract of an article in the *British Medical Journal* of January 25, 1902.

There the larvæ figure as the cause of "ground itch," a completely new rôle to me, as I had heard of only one or two experiments in which it penetrated the skin.

Mr. C. A. Bentley, M. B., the author of the article, states: Ground itch is an affection of the skin confined entirely to the lower extremities, and probably always associated with the presence of larvæ of the *Ankylostoma duodenale* in the affected areas; endemic in Assam and the West Indies, and possibly in other parts of the tropics; characterized by its periodical epidemic appearance in the infected areas coincident with the onset of the rainy season; with typical lesions consisting in a primary erythema, followed by a vesicular eruption which frequently becomes pustular, and in severe cases may result in obstinate ulceration, or even in gangrene. All observations point to the earth as being the infecting medium, and fæcal contamination of the soil as being the most active agency in the propagation of the disease. The first symptom is an intense itching and burning at the spot where afterward the eruption appears. In the papular and early vesicular stage of the disease, the application of a strong solution of salicylic acid in collodion or in methylated spirit will cause the eruption to dry up. If, however, pus has formed, the only treatment of any service is the opening up and disinfection of the pustules with pure carbolic acid, and the after-treatment of the sore as an ordinary ulcer. The adoption of a proper conservancy system would probably entire-

ly prevent the occurrence of the disease. The wearing of shoes is known to be an almost certain preventive of the disease (*New York Medical Journal*.)

Reflecting on all these unsanitary conditions, I many and many a time concluded that, if Puerto Rico were not naturally one of the most healthy sites on the globe, all the people would long since have been dead from some epidemic or other.

Venereal diseases are a scourge in most parts of the world. Nearly thirty years ago it was estimated that there were in England two millions of diseased persons, and Mulhall, according to *American Medicine*, thinks that the number of soldiers in Europe ill from the disease averages 19 per cent. of the forces. Czerny, according to the same authority, thinks 50 per cent. of all sterility is due to this cause, and the reports of twenty-four specialists have shown that 41 per cent. of pelvic inflammation is traceable to its action. But it is only in the tropics that it seems to flourish in all its glory. While there are no statistics for the natives, yet in soldiers it has been known to reach over 20 per cent. of the total illness. In 1899, the British army in India discharged 164 men for secondary syphilis and gonorrhœa, or 2.43 per 1,000. This was only exceeded by the diseases of the circulatory system, 2.55 per 1,000, and approached by tuberculosis, 1.03 per 1,000, and diseases of special sense, 1.35 per 1,000. In various quarters it has recently been advocated to make the transmission of venereal diseases a punishable offense, and for boards of health to treat it as a contagious disease. For years I have advocated that a soldier be deprived of his pay for every day that is lost to the government through his immorality, as I believe is now the rule in the British army. It has been urged in opposition to this plan that, if he knows he is going to be deprived of his pay, he will conceal his disease and not report for treatment. This is done to a considerable extent at present, and in Europe from 25 to 50 per cent. of these cases are said to be treated by charlatans. I was delighted to find that the committee of seven of the Medical Society of the County of New York, who recently reported on this matter, state that hospital care is not needed for the large proportion of venereal cases, that most of them are ambulatory cases, and that dispensary treatment, which does not interfere with their employment and their wage-earning capacity, is best adapted to their requirements, for I had always advocated that a soldier should only be admitted to hospital, as a rule, for the following venereal conditions, *viz*: Epididymitis, suppurating bubo, ulceration of the mouth, and iritis. In this manner I believe the others would willingly come up and receive the necessary treatment without going on the sick list when they know it would not count against them, while the above-

mentioned patients would be compelled by their suffering to apply for admission to hospital. I have also expressed the opinion more than once that, admitting a soldier, as at present, for an uncomplicated urethral discharge, or for a simple syphilitic skin eruption, was nothing more or less than setting a premium on immorality.

In the Lane Lectures (*New York Medical Journal*, October 26, 1901, p. 778) Mr. Malcolm Morris says: "It cannot be too emphatically stated that a person suffering from secondary manifestations of syphilis is a danger to all around him. He is charged with a poison more baneful than that of the most venomous snakes, which is conveyed on whatever he touches with his polluted lips—from a pipe to a communion cup." I presume Mr. Morris refers to the ulcerated mouth mentioned above. I have heard of doctors who contracted non-venereal syphilis from punctures received while operating on secondary cases, others from obstetrical examinations, and I have known cases arise from ulcerated mouths; but, although a graduate of the City Hospital, New York, I have never known a non-venereal case occur in any other way. But then, as in Manila, it is sought to protect the women that give and receive these diseases by converting every military hospital into a lock hospital. Judging by the patients I have seen coming from Luzon, and from what I have known in the Antilles, the attempt is not likely to meet with much success. That class of the population seems to be thoroughly saturated and in little need of protection, while the private or clandestine women are generally a degree beyond the soldier.

But, to use Mr. Morris's story, the very name syphilis is "the de'il and a'" to the line officer who generally knows nothing about it except the name; local venereal and tertiary ulcers are all contagious syphilis to him. With the positiveness born of ignorance he declares he won't have a case in his company. The non-venereal men in the hospital he never considers; they are not his company, and in medical matters he is allowed at present altogether too much authority. So, venereal diseases have at times amounted to over 20 per cent. of the total illness of the forces in the tropics.

As hospital care is not necessary in the majority of cases, a surgeon only needs to compel their regular attendance for treatment while performing their usual duty, to reduce the non-efficiency from this cause to 1 or 2 per cent. of the total illness. Yet, you will be astonished when I tell you that the surgeon has not the power to enforce a sanitary measure of this kind. He can only recommend it to the line officer in command; the medical department having, as Dr. Reed aptly expresses it, absolutely no authority whatever. It is only justice to most

general officers to say that such a recommendation would be immediately complied with, but experience shows that a very few general, and very many field and minor officers, ignore such suggestions, even ordering men into hospital as a result of the superior knowledge which the divine right to command gives them. Yet all this they can do with impunity. As a Boston lawyer recently wrote to me, rank gives a man great power, and if he uses it arbitrarily there seems to be little relief. So, the medical officers is always at the mercy of the caprices and prejudices of the line officer, from the youngest lieutenant in charge to the general commanding.

In England they think they have just escaped from this bondage through the recently appointed advisory board. The first step in this direction has only recently been taken in this country by a bill, introduced in the House, to make line officers responsible for ignoring sanitary measures suggested to them. This should receive the support of medical societies and the medical press. These bodies won the advisory board in England, where there is much more prejudice against the "d—d doctors" than there is here.

But we must not forget that our army medical department has been losing ground for about the last ten years, and that the control of the sanitary department by the medical officer is necessary for the saving of much time and money to the government by reducing the high death and venereal non-efficiency rates.

THE MAMMARY GLANDS IN PRIMIPARÆ.*

By THERESA BANNAN, M. D.,

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The impulse of puberty with its far-reaching influence on bone and muscle, on form, on feeling, on character, on all the elements which transform the female child into the potential mother, exerts its earliest and most obvious changes upon the mammary glands. Long before the establishment of menstruation or the broadening of the pelvis, the child will complain of uneasiness or pain in the mammary region where the glands have started on their period of development. Full virginal development requires several years, during which the other changes of puberty are established. As accessory organs of generation these glands are controlled by the same influence that dominates the other organs. Well-developed mammæ indicate a well-developed uterus and healthy sexuality, while under-developed organs are generally associated with irregularities of the uterine life and form. As in development, so

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in function, are these organs associated. The blood and nerve supply are closely connected through the sympathetic nervous system. The premenstrual congestion, with its subsequent flux and the gradual subsidence of its hyperæmia, has its corresponding cycle in the mammary glands. They become heavier, warmer, more sensitive, and larger, gradually returning to the corresponding period of the mid-menstrual uterine coldness. It is at these periods that the virgin breast cannot be distinguished from the early pregnant mamma. It is at these periods too that nervous women discover tumors which disappear in a few days. The enlarged and congested glands press upon a muscle attachment or an arching rib, producing pain or an irregular contour, and the tumor is formed. The accentuation of this circulatory sympathy, however, occurs in pregnancy when the mammæ and the uterus undergo development of all their elements—muscular, glandular, and vascular. The intimate nervous relation of these organs is shown in many ways. The mammæ are eternal reminders of sex. If they were not, the corset and the décolleté gown might be part of man's wardrobe. This nervous relation is again shown in the contraction of the uterus, easily detected when the child is put to the breast a few hours after birth. The irritation of the child's mouth produces contraction of the muscular tissue of the nipple, causing its erection, and reflexly excites muscular contraction in the uterus. This action, if continued, keeps the uterus in good tone, producing quick normal involution, in contrast to the subinvolution so frequently the result when suckling does not follow parturition. Other nervous relations doubtless exist in the dim regions of female life beyond the field of research.

The mammary glands reach their highest degree of development and activity three or four days after parturition, when, as twin fountains of milk and honey, they promise sustenance to the child for from nine to eighteen months. The all importance of the establishment of lactation in primiparæ and of its normal continuance is evident. On these depend the mammary health of the mother and the proper maintenance of the present and future offspring. Any complication or disorder of comfortable lactation, any condition which makes the mother less willing to offer, or the babe less able to accept, the natural pap, militates against the health of both. The presence of such conditions has forced physicians to the limit of discovery of a substitute. Cow's milk, pasteurized, sterilized, modified, condensed; innumerable artificial foods, and even grape juice, have been offered as substitutes, "just as good as mother's milk." Literally and figuratively they are a drug on the market.

Truly the babe has fallen on evil days. A century

ago it seemed natural and right that babes should be born and nourished, but the legacy of the last decades of the nineteenth century is their destruction. To-day, those from whom babes have a right to expect to be born, enter their mutual relation calculating the number and age of those who will be allowed to be born. Then the unwelcome one is exposed to the chilly comforts of artificial feeding—the unsuitable milk, the clammy bottle and the insensate nipple. Hence the enormous infant mortality from malnutrition and its results. Physicians are too ready to accept excuses from those who do not wish to nurse their children. There are women who will not—simply will not; there are some who cannot. Their inability may be absolute, due to inactivity of the glands without apparent cause, or relative, in that the woman has not blood enough to supply the secreting glands and answer the demands of social duties. A shopping tour, a ball, a night of whist, may easily divert the not too abundant blood current to other tissues. It then becomes a choice of duties. On the other hand, an apparently frail woman may wash, iron, and cook for a large family, and nurse her youngest. These are the cases where the physician should be the teacher, the doctor, advising and instructing the unwilling mother-nurse on her duty to herself and child—regulating and prescribing the allowable duties of the willing mother. It is with the normal primiparæ and her mammary functions that this paper has to do. But, if normal, what need be said? This—that within the normal exercise of this function are many discomforts and dangers which a little care can anticipate and dispel.

In construction the mammæ may be compared to a wheel—the rim the circumference of the gland, the spokes the framework, while the space between contains the glandular substance radiating toward the hub or nipple. The milk ducts passing from the glands dilate in the areola to form reservoirs or sinuses for the milk, and open by fifteen or twenty mouths within the nipple. The nipple, which is marked by large papillæ in the true skin, by pigment corpuscles, and by non-striped muscular fibres continued from the sinuses of the milk ducts, is capable of erection when stimulated, and receives the full muscular force of the baby's mouth, the force, warmth, and moisture of which threaten the integrity of the epithelium upon whose resistance depends normal lactation. The muscular tissue of the areola being continuous with that of the nipple and sinuses, in the complete erection during suckling the areola may be lost in the nipple; hence judgment of the form, size, and power of a nipple should not be made in its relaxed condition.

With the stimulus of impregnation under which the uterus enlarges, the mammary glands begin

their preparation for the future. The earliest sign of first pregnancy is in the breast. The gland becomes *larger* and *firmer*, the nipple and areola *more* pigmented, the sebaceous glands *more* numerous—all these only in a comparative degree. The brownish areola of the brunette, the pink of a blonde, the normal difference in size and firmness, with the variability of the blood supply at different periods, must all be borne in mind in estimating the value of these signs; but the early secretion of milk is strong confirmatory evidence of pregnancy, and antedates the other signs. Later, the changes become more marked and unmistakable; the areola is greatly enlarged and deeply pigmented, with a supplementary areola, speckled or solid, of lighter color; the glandular tissue is increased peripherally and centrally, often forcing the cutis to yield, producing striæ like those upon the abdomen; the sebaceous glands are enlarged; the epithelial metabolism is increased; and the whole organ is in activity proportionate to that of the uterus. The secretion of milk can be detected early in the second month, but not until four days after parturition does the gland attain its maximum power. For two or three days the supply vastly exceeds the demand; the glands become greatly distended, the milk is expressed at the slightest touch or may be retained within the ducts, forming hard and painful nodules or "cakes." The term "milk fever" was formerly given to this period, but to-day, if a rise of temperature accompanies these phenomena, the obstetrician directs his attention to the pelvic condition. If, however, fissures or erosions occur in the epithelium, there may follow inflammation of the mamma, with its train of abscesses. The absolutely normal breast should require no puerperal care. The babe should extract all the milk secreted without pain or discomfort to the mother or undue persuasion for itself. But so rare are these cases in uninstructed primiparæ that, next to the conduct of labor itself, the mammaræ claim our attention.

Ordinarily, a woman pregnant for the first time does not engage a physician until pregnancy has advanced several months, and even then the consultation may occur without any inquiry or examination of the breasts. The young woman does not realize the importance, the physician does not think of it, and the opportunity for prophylaxis passes.

The care of the breasts has to do, first, with the form of the nipple. An imperfect or inverted nipple should be developed by drawing it out with the fingers or breast pump; the pump is less certain and less intelligent than the fingers. The irritation causes contraction of the muscular fibres, and by this exercise they are developed and stimulated as fibres elsewhere in the body are; so the channels of the milk ducts are straightened and the babe may have

a safe relation with its base of supplies. Next to form, the endurance of the nipple should be developed by training. The epithelium of the nipple is to be submitted to a warm, moist, vigorous mouth for two hours or more every day, and, if it can resist destruction for a few days, tolerance is established. As with epithelium elsewhere on the skin, health and tone are given by hygiene. The removal of the products of secretion by soap and water or alcohol as required, and the daily bath, constitute the simple hygiene of the nipples. Olive oil or bland ointments may be applied, more for the slight friction in application than for any virtue in themselves. To prevent striæ, gentle massage of the tissues over the glands may be used. Thus, general nutrition of the skin with its elastic and muscular tissue is improved, and resistance to the pressure of the enlarging glands is offered. Striæ, however, are not the rule. When these measures have been instituted during pregnancy, the nipple is prepared for its work and needs only cleanliness for the future. Bathing the nipple and the baby's mouth before and after nursing seems a natural procedure. Water alone, or with boric acid, is sufficient for this purpose, preferably alone because it is always at hand, and being simple is more likely to be used.

The proper frequency of suckling varies. Most authorities agree on every two hours as proper, although some observers lengthen the period to four hours. It is doubtful if any nursing outside of civilization is fed as often as once in two hours, while many within thrive on five meals a day. The glands respond in secretion to the demands excited by sucking the nipple, and consequently can be controlled within certain limits. Suckling should, however, be at regular hours by the clock, and the babe should have plenty of time to empty the gland. The infant should have water to drink from its earliest days. The quality of the milk, the well-being of the child, and the strength of the mother are favored by not too frequent nursing. The glands themselves by their distention are time-pieces for their duty, but they can be taught, as we teach our stomachs the dinner hour.

When a babe takes its first inspiration it has begun the battle of life. When it first takes its pap, it has begun to work for its living. It would starve to death if it depended upon its own power to reach nutriment, but when the nipple is put into its mouth it must work to get the milk. So its muscles are developed by suckling and become relatively stronger than an adult's, and ready to operate on solid food when the teeth come. This, in contrast to sucking a rubber nipple. Moreover, the food is obtained slowly from the breast and in small quantities, thus favoring digestion and assimilation, while the bottle-

fed baby gulps his easily acquired milk after the evil manner of his dyspeptic elders.

The immediate effect of nursing on the post-partum uterus is to stimulate contractions, whereby the mouths of the blood vessels are constricted and hæmorrhage is prevented, and, further, to expel clots and lochia and diminish the area of the placental surface. Beyond this, lactation inhibits the re-establishment of menstruation. This is a truly conservative measure by which the female organism is spared the double demand upon its blood supply. Allied to this is the inhibition of conception. Of course, many women, apparently in perfect health, give suck and menstruate or conceive, but they are not within the physiological boundaries. The act of suckling has not only physical benefits, but also mental and moral: The act is distinctly pleasurable; the cradling of a babe in the arms is instinctive and agreeable; the nursing mother is calm, patient, protective, benign, and happy. The influence upon her character begun in the early months of pregnancy—that atmosphere of motherhood which forever separates the fruitful from the barren—extends its power and consecration to the nursing mother.

Before the establishment of lactation the babe subsists upon the colostrum, or early secretion of the glands. This is amply sufficient for its needs, is laxative, and evidently supplied for the purpose. But the laity have opinions of their own, and will insist that the child will starve, so they proceed to the administration of sugar and water, molasses, or gruel. In emergencies, new-born babes have been rolled in a blanket and forgotten for two or three days, suffering no injury thereby, and probably much benefited by the neglect. These syrups poured down the throat, pervert the taste, give food without labor, and so interfere in no small degree with the natural course of events. Small as this child is, it has its faculties, and its rights must be respected. For instance, it will not prefer a faulty nipple to a perfect one. It generally prefers one breast to the other, in that it is more comfortable lying on its right or its left side. The breast directly over the heart is a vantage ground if it seeks warmth, the right breast if the support of the mother's right arm is more comfortable than the left. Sometimes neither breast will please, and it must be denied both until hunger makes any food sweet. The babe should not be allowed to be nursed by its sleeping mother, or to retain hold after its meal has been completed.

The fourth day after delivery brings the great flow of milk, and, for several days, measures are required for the mother's comfort and safety. The most natural measure is to allow the baby to be nursed as often as necessary to relieve the breasts. The babe's appetite and powers may be unequal to

the task, or a cracked nipple may make it impossible or dangerous. The breast pump is much prescribed by the laity, and is often used without apparent injury, but its action is too forcibly mechanical to be generally recommended. Massage and bandaging are more satisfactory. To relieve an over-distended breast by massage, the milk sinuses in the areola and nipple should first be emptied of their milk by gentle pressure with the thumb and forefinger applied successively on all sides. Then the tips of the fingers should be used in pressure toward the nipple, massaging concentrically from the areola to the periphery of the gland, counter pressure being maintained by the other hand. In this way the milk sinuses are first emptied, then the larger milk ducts, and finally the smaller ducts. Special attention should be given to the glands at their lower and outer parts, where the glandular elements are most numerous and gravity delays the venous return. The amount of milk thus expressed should vary with the condition. The relief afforded by even a small amount is marked. When the babe is not nursed because of fissure or other injury, massage of the gland should take its place and as much milk as possible be expressed. If "cakes" are present, they require special care in manipulation. It is by no means necessary completely to reduce them as partial relief with subsequent bandaging will effect this. Because the fingers can give intelligent pressure to various parts, massage becomes the most valuable supplement to the baby's mouth.

The breast binder takes its place with the abdominal binder in the puerperium. Neither is absolutely necessary, but both add to the comfort of the patient and meet some indications. The breast binder may be simply supporting, raising the lower and outer portion of the gland to a better plane. It may be used as continual massage, where the milk secretion is very abundant, by being applied firmly with the nipples left free through openings over their surface. It may be used to limit the amount of milk secreted, by diminishing the blood supply by direct pressure. In this application it may completely check the milk secretion or give temporary respite to a disabled breast. The bandage should be applied over cotton. The roller bandage is indicated when one breast only is treated. It has the advantage of allowing more pressure to be used.

When a fissure or erosion occurs on the nipple, suckling should be prohibited for several hours or days. The nipple should be carefully bathed with some mild antiseptic to the deepest part of the fissure, then dried, a healing ointment used, and the whole gland covered with cotton and a firm roller bandage applied. In the meantime, the babe is nursed on the other nipple. When, in spite of the bandage, the breast fills with milk and cakes, the

dressing should be removed, massage applied, and the process of bathing and dressing the breast repeated. This should be done as often as every four or six hours, according to the hours of feeding, as the breasts are used alternately in suckling and fill up within their period of rest. If the roller bandage cannot be applied, no nurse being present, the second dressing may be done with the breast binder. This treatment, applied early, saves many hours of suffering and promotes rapid healing. When, as is usually the case, both nipples are fissured, a compromising line of treatment must be pursued. The less-injured nipple is given palliative treatment, while the other is treated by rest and support until it is partially healed, when it may be allowed to endure somewhat in its turn. Whatever principles of surgery are thus outraged, it is better than suspending the function altogether and trusting the babe to the doubtful issue of artificial feeding.

503 WARREN STREET.

THE MANAGEMENT OF CASES OF CEPHALO-PELVIC DISPROPORTION BY THE GENERAL PRACTITIONER.*

By EDWARD A. AYERS, M. D.,

NEW YORK.

I trust I may be pardoned for changing the title of my part in the evening's discussion from that of Symphysiotomy to that of the Management of Cases of Cephalo-pelvic Disproportion by the General Practitioner. I wish to consider this subject, not from a theoretical standpoint, an attitude that has brought out an enormous amount of discussion and argument all tending to the one end, What is the choice of operation?; but from the standpoint of actual every-day practice, from a standpoint that recognizes facts, not as we might like to have them, but as they actually exist.

If we were to assume that every woman to be confined who has more or less disproportion between the foetal head and maternal pelvic diameters, promptly engaged her physician for attendance in labor in the early months of her pregnancy, and, if we further assumed that every physician so engaged, both made it a rule to make an examination of the patient, and possessed the skill to recognize the existing disproportion, we should find, in a large percentage of cases, that premature delivery would be employed in cases of multiparæ whose previous labors had tested the pelvic calibre. In others, both primiparæ and multiparæ, there would be careful preparation made at the patients' homes for either Cæsarean section or symphysiotomy, and the consultant would be notified early of labor; or the pa-

tients would be sent to a hospital, where similar preparation would be made. A number of cases would be subjected to version, which would result either in delivery by breech, or basiotripsy to the after-coming head. If the patients should be in the care of experts, they would not be subjected to any efforts at delivery with the forceps, should the pelvic measurements be markedly under normal, such as 6.5 centimetres conjugata vera, but would have Cæsarean section performed at the proper moment. Should the pelvic diameters be on the borderland between possible or impossible forceps-delivery, it would be the duty of every attending physician, no matter how expert he might be in cephalo-pelvic mensuration, to test the availability of the forceps for accomplishing successful delivery. In many such cases it will be difficult to determine that the forceps will not deliver a sound child until rather prolonged and severe trial has been made with the forceps. Should there be special reason for making the delivery of a sound living child paramount, as where a woman has lost all her previous children and is supremely anxious to save this one, the forceps will be used briefly and tentatively, if at all, the physician proceeding to perform either Cæsarean section or symphysiotomy at the elective moment.

It is at this stage and the one just mentioned, where the forceps has been well tried, that obstetrical specialists meet in argument over the respective merits of Cæsarean section and symphysiotomy. In the majority of such cases, the operator will select the one with which he is more familiar, or feels best prepared in his surroundings to perform. If the efforts made with the forceps have been made by the one to operate, and he feels satisfied that the uterine cavity is still aseptic, there will be no bar to his selection of Cæsarean section if he wishes so to operate. If the question of sepsis *in utero* is uncertain, many prominent Cæsareanists disapprove of Cæsarean section. This question is not involved in the consideration of symphysiotomy, and, so far as I know, I am in agreement with others on this point. In all cases, of course, it is to be presumed that, by whichever operation delivery is to be accomplished, a living and livable child will be brought forth.

In balancing the relative merits of these two methods of delivery, we hold that Cæsarean section is somewhat safer for the child. There is considerable difference of opinion as to the comparative maternal morbidity and mortality. My own opinion is, that symphysiotomy, done with skill and experience, has a considerably better prognosis than Cæsarean section.

But, unfortunately, the foregoing is not the line of development in the dystocia cases that present themselves to the general practitioner. Not half the cases that might be proper subjects for prepa-

*Read before the Eastern Medical Society, February 14, 1902.

ture delivery are seen by a physician in time to apply this method successfully; and, with all due respect, a very considerable percentage of those seen would not be recognized as calling for early labor. Further, it is a fact, in spite of the magnificent advance made in clinical opportunity, and its availability in obstetrics during the last few years, and in spite of the arguments for, and demonstrations of the value of, careful examination in the ante-partum period, that a large majority of cases of dystocia are first recognized only in labor. It is a further fact, that before the prognosis in such cases has been carefully studied, before it has been determined whether there are absolute indications for Cæsarean section, or whether a major operation must, in all probability, follow attempts with the forceps, it is applied first as if no further difficulties need be considered. In a number of such cases, forceps traction is persisted in until no one would be justified in undertaking either symphysiotomy or Cæsarean section; and the final act in this oft-repeated obstetrical tragedy is that parturient black mark—craniotomy. These patients are not in marble-walled hospitals, bathed in an ambient sepsis; they are in private dwellings, apartments, rooms, where they must either remain, or undergo the trials of riding, under great physical distress, in an ambulance to a hospital. Most such non-charity women will positively refuse to go to a hospital; many of those who will, are in no condition to justify such moving and delay.

It is, then, a question of availability, of theoretical selection modified by circumstance. It is my opinion, and I believe it is yours, that from 85 to 90 per cent. of such severe cases of dystocia occurring in patients employing a physician, confront such a situation as this, and that about the same percentage of these women are delivered either by version, forceps, or craniotomy, with a heavy percentage of stillbirths. As regards version, I do not think it should be undertaken, first, when the conditions are unfavorable, *i. e.*, when the waters have escaped and the tonic embrace of the foetus by the uterus renders rupture liable; and, secondly, unless the operator feels reasonably sure that he can bring the after-coming head through the pelvis. Excluding version, we are usually confronted with the alternatives of persistent forceps traction, regardless of the life of the child, symphysiotomy, or Cæsarean section. In other words, it is a question of whether we will undertake to make a completely successful case of it and perform one of the last two operations.

Which shall we undertake in a private dwelling with a private patient, Cæsarean section or symphysiotomy? This is the question which actually presents itself to the general practitioner, and is the question to which I have, perhaps tediously led up.

Both have been done under such circumstances

successfully, but which is the choice? Ordinarily there is not much time in which to prepare for such operation. We cannot send for such an equipment as we would always employ if opportunity afforded. The instruments required for either operation under consideration are few and simple, and the anatomical difficulties in operation likewise simple; but the difficulties to surmount in securing an aseptic operation are in no way comparable. In most such cases, if Cæsarean section is considered, the manipulations which have been extended to the uterine cavity would call for a complete hysterectomy under favorable surroundings; otherwise, the so-called Sanger Cæsarean section, done without removing the uterus from the abdominal cavity, would greatly lessen the difficulties.

It is not necessary, here, to mention the details of requirements for abdominal section in a private dwelling, or to prove the difficulties of securing them at short notice. They are well understood. What I do wish to discuss is the greater ease and surety of proper preparation for symphysiotomy under such surroundings.

In considering this operation, I do not refer either to the suprapubic and postpubic Italian method of operating, or to the open anterior French method, but to my subcutaneous method heretofore described. In order to secure thoroughly satisfactory conditions for operation, the following are needed: A scalpel, bistoury, steel male urethral sound, a soft-rubber retention catheter, two china wash-bowls, forceps, absorbent cotton, adhesive plaster, and clean hands of at least one individual—the operator. No needles, sutures, sterilized cloths, or dressings are required. The genital region is washed with soap and water, then with bichloride solution. The instruments are placed in a solution of either carbolic acid or lysol. The urethra is held to one side, the symphysis severed by introducing the bistoury under the clitoris upon the face of the joint, as heretofore described, while hæmorrhage is prevented by pressing a wet wad of cotton on the small opening. The child is delivered with the forceps, the after-birth removed, the catheter inserted (after bringing the pubic bones together), the wings of the pelvis are strapped with adhesive plaster, and the wound completely closed by bringing the knees together and binding them. In the after-treatment, such a sling as Dickinson's can be readily set up, if my hammock-bed is not available. The manipulations which may have preceded this operation need not affect its results, as the wound is above the vaginal orifice and away from its discharges. In one of my cases, in which infection of the genital tract followed a sloughing of the posterior vaginal wall from an old cicatrix, the joint wound healed by so-called first intention.

The greatly improved statistical results of late accomplished in Cæsarean section have been clearly shown to be due, not only to improved method, but to early performance and proper surroundings and preparation, conditions that cannot well be obtained in non-hospital cases. The mortality from general statistics is still over 25 per cent. Reynolds has shown what a great difference in mortality results between cases operated on when in favorable condition, that is, without labor effort or intra-uterine manipulation, and those taken as they have presented. The former class give a mortality of about 5 per cent., while the latter range from 25 to 30 per cent. No such mortality has followed symphysiotomy during the last ten years, nor has any similar distinction in results pertaining to this method, as between elective cases and all cases taken as found. The best results, those obtained by a few operators accustomed to the method and operating under best surroundings, have given a mortality from $2\frac{1}{2}$ to 5 per cent. The general results have been from 9 to 10 per cent. I should expect a mortality of from 5 to 8 per cent., from cases operated upon in their homes by men of experience. Let us not forget that, in all such cases, a considerable, if not major, part of deaths, are due to prolonged labor and forceps manipulation, a point to consider even if we compare these operative statistics with those of craniotomy. The members of our profession are not free from the emotional waves which we see so often carrying the people at large to political extremes. From 1885 to 1894 there was a strong advocacy of Cæsarean section and a demand for the relegation of craniotomy to history. Then there arose a sudden popularity for symphysiotomy, which lasted for half a decade, with as sudden a rush back to Cæsarean section; and all the while, with our eyes focussed on hospital work done by expert operators. Yet, the private work of the practitioners of the country has varied but little. We study the book situation on puerperal infection and congratulate the people on its comparative extinction; but, when we study the general returns of health boards, we wonder why there are still so many cases. There are probably, I cannot speak from figures, many times more craniotomies being performed to-day than either Cæsarean sections, or symphysiotomies. And why? Because there have not been proper opportunities for the general practitioner to prepare for major obstetrical work, and he has been justified in his conservation of maternal life at the expense of foetal life.

23 WEST FIFTY-THIRD STREET.

SURGICAL SHOCK FROM A CLINICAL STANDPOINT.

By EUGENE BOISE, M. D.,

GRAND RAPIDS, MICH.

It is generally conceded that the pathology of shock is not thoroughly understood; but it is also generally conceded that the predominant factor is a paresis of the circulatory system, especially of the heart and arteries. Clinical facts will not bear out this view. I believe the essential condition in shock to be a profound disturbance of the entire vasomotor and sympathetic systems, but this disturbance is in the nature of a hyperirritation rather than a paresis.

This disturbing influence may reach the vasomotor centre through various channels, as, for instance, by direct irritation of the sympathetic nerves in abdominal operations; by crushing injury to the skeletal nerves, as in railroad injuries; and through the medium of the brain, as in sudden fright. Or two or more of these factors may unite as a causative influence, as in railroad injury, where the influence of sudden and great fright is added to the crushing of the large nerve trunks.

Through whatever channel the impression on the sympathetic nerve centres may be received, the effect is the same.

The clinical aspect of mental shock differs from that of traumatic shock only in point of duration. There is the same sudden pallor and clammy perspiration, the same abolition of the pulse to a greater or less degree, the same relaxation of the sphincters and sense of absolute physical prostration. But in mental shock these conditions are somewhat evanescent because of the evanescent nature of the exciting cause.

That the pathology of mental, surgical, and traumatic shock is essentially the same has, I believe, never been questioned; and that the clinical manifestations of shock, from whatever cause, can be explained most completely by the theory of excessive irritation of the sympathetic system is, I believe, capable of satisfactory demonstration.

The principal symptoms of typical, uncomplicated shock are pallor, more or less livid in character; clammy perspiration; a small, sometimes imperceptible, but very rapid, pulse of low tension; a tendency to relaxation of the sphincters and to suppression of urine, more or less marked, and a sense of mental and physical lethargy.

The pallor of shock has been designated as "livid" in contradistinction to the waxy pallor of hæmorrhage because the arteries and arterioles alone are comparatively empty, the veins remaining filled; while in hæmorrhage both arteries and veins are empty to a greater or less extent. This explains the

bluish color of the mucous membranes and of the finger nails so often seen in profound shock.

There is a condition of arterial anæmia with venous engorgement. Now, how can this condition be satisfactorily explained on the theory of paresis of the circulatory system? In no other condition does arterial paresis result in empty arteries.

Section of the sciatic nerve, whereby the vasoconstrictor nerves of the peripheral arteries are divided, results in complete and typical vasomotor paralysis. The peripheral arteries become distended and filled with blood and the surface is flushed.

That there is a condition of general circulatory paresis involving both arteries and veins, whereby the blood supposedly collects in the large veins, is a theory not supported by the facts. The large veins of the abdomen, etc., are distended, but the peripheral veins are also filled. If it were not so, you would have the waxy pallor of hæmorrhage rather than the livid pallor of shock. Moreover, if there were general arterial paresis, the arteries would not be contracted and empty. There is, normally, a certain "tone" to the arteries, a continuous action of the constrictor nerves, whereby the blood is kept circulating. Paralysis of these constrictors, whereby this "tone" is lost, invariably results in dilatation of the arteries, which remain filled with arterial blood.

I believe it to be a physiological fact, though I have never seen a record of experiments tending to prove or disprove it, that there is a correlation in the functions of the arterial and venous vasomotor nerves, whereby the equilibrium of the circulation is maintained. That is, that stimulation of the arterial vasoconstrictors coincides with stimulation of the venous vasodilators, and *vice versa*. If this is admitted, the clinical manifestations of shock are easily explainable on the theory of excessive irritation or stimulation of the entire sympathetic system, but affecting specially the constrictor nerves of the arteries, and the vasodilator nerves of the veins.

But whether the venous vasodilators are at the same time stimulated or not, the results would be the same, owing to the greater contractile power of the arteries. This theory clearly explains the spasmodic action of the heart, the empty and contracted arteries and the venous engorgement, conditions which are made manifest by the rapid, small, almost imperceptible pulse, with the peculiar pallor. But the stumbling block to the acceptance of this theory has always been the fact that arterial tension is extremely *low* in shock, and we always expect it to be *high* when the vasoconstrictors are stimulated. This in reality should not only not be a stumbling block, but is a condition that we ought to expect, if we accept the theory that I am endeavoring to substantiate.

Without referring to any theory, it is a fact, dem-

onstrated by autopsies, that in the first stages of shock, the heart is thrown into a state of violent contraction; so violent in some cases as to be absolutely tetanic, causing death.

Agnew, in his *System of Surgery* (page 377) says: "When a fatal termination is to follow, death may be sudden, produced by heart spasm, the ventricles forcibly contracting and then ceasing to beat."

The writer in the *American Text-book of Surgery* says that in sudden deaths from shock "the heart has been found contracted and empty."

In the *Medical and Surgical Reporter* for October 12, 1895, a case is related of a woman who, upon being suddenly told of her son's death, fell to the floor and expired. Autopsy showed *rupture of the left ventricle of the heart*.

It certainly cannot be contended that death occurred in these cases from *paresis* of the heart and arteries.

In cases that do not prove immediately fatal the same condition exists, only in a less intense degree; the heart is in what I may term a tetanoid condition, contracting rapidly and forcibly, but relaxing very imperfectly. Thus, but little blood enters the left ventricle, and but little passes from the ventricle to the arteries; so that, however strongly the arteries may be contracted, the tension is necessarily low, because of scanty blood supply. This very condition of the heart and arteries which I contend exists in profound shock, has been experimentally demonstrated in the laboratory, where severe stimulation of the cervical sympathetic caused cardiac spasm and *low arterial tension*.¹

Thus, however, we may theorize about a condition of paresis of the heart and arteries in shock, the record of post-mortem examinations shows that the heart is contracted and empty, even ruptured. And laboratory experiments have repeatedly produced the same condition that we see in shock, by electrical *stimulation* of the vasomotor system.

By reason, then, of this cardiac and arterial spasm, affecting the entire arterial system, there is of necessity venous engorgement, causing the clinical manifestations of livid pallor.

This same arterial anæmia would necessarily cause the sense of mental and physical prostration that is often so pronounced in profound shock. This has also been repeatedly demonstrated by experiment, notably by Brown-Séquard, who brought about a condition of temporary paraplegia simply by causing profound arterial anæmia of the spinal cord.

The symptom of profuse and clammy perspiration can *only* be explained by the theory of hyperirritation of the sympathetic nervous system. No

¹Landois and Stirling, *Manual of Physiology* p. 106.

other theory will meet the conditions. In profound shock the skin is pale, the surface temperature is low, and yet there is profuse perspiration. This is caused by *stimulation* of those secretory branches of the sympathetic system which are distributed to the sweat glands, and can be caused in no other way.

In 1875, special secretory nerves distributed to the sweat glands, were described by Goltz. Since then various experiments have been made demonstrating their nature, and also that the secretion of perspiration is entirely independent of vascular conditions.²

Thus, stimulation of the peripheral end of a divided sciatic nerve will cause perspiration, even after the limb is amputated. Also, if, after section of the nerve, the leg is exposed to a high temperature it becomes suffused with blood, but remains dry. The secretory nerves of the sweat glands are paralyzed. But if electricity is applied to the peripheral end of the nerve, a profuse perspiration is at once induced by reason of *stimulation* of the secretory nerves.

Therefore, the profuse perspiration of profound shock is not dependent in any way on the vascular conditions, nor is it due to *paresis* of the secretory branches of the sympathetic, but it is, on the other hand, caused by severe *stimulation* of those nerves.

On the other hand, the secretion of urine depends entirely upon the condition of the circulation through the kidney, no secretory nerves for the kidney having been discovered. The quantity of urine secreted depends on the pressure and supply of blood to the kidneys. Thus *general* arterial paresis would lessen the quantity of urine secreted, because, although the arteries of the kidneys would be filled with blood, the pressure would be very low.

But more especially should we look for this condition in shock, in which the arteries are contracted, and yet the pressure is low, because the arteries are incompletely filled, owing to the tetanoid condition of the heart.

To this condition, then, is due the very scanty secretion of urine that is so characteristic of profound shock. And this condition is directly caused by excessive vasoconstrictor stimulation.

Again, the relaxation of the sphincters, which is a more or less constant condition in profound shock, and is especially noticeable in mental shock, is not dependent on circulatory conditions, but is another strong witness to the hyperirritation of the entire sympathetic system. The peristaltic movements of the rectum and intestines are entirely involuntary and under the control of the sympathetic system, while the control of the external sphincter is largely voluntary and is governed by the cerebrospinal sys-

tem. Therefore, when by reason of sudden and severe fright a condition of mental shock is induced, there is an instantaneous sense of relaxation of the anal sphincter. This is certainly induced by sudden and powerful stimulation of the sympathetic nervous system, whereby active peristalsis is provoked, and at the same time, by reason of the cerebral and spinal anæmia induced by the sudden arterial spasm, there is a more or less complete inhibition of the cerebrospinal control of the external sphincter, and involuntary defecation may occur.

Therefore, when we regard surgical shock from the standpoint of the clinician, and when we reason from physiological facts which are beyond dispute to the conditions which we see in shock, we are forced to the conclusion that the true pathology of uncomplicated shock is a hyperirritation of the entire sympathetic system. We shall be confirmed in that belief if, after careful analysis, we find that line of treatment to be most beneficial which coincides with this theory.

The remedies that hold the confidence of operators are comparatively few. They are opium, strychnine, intravenous saline infusion, and external heat; to these should be added nitrite of amyl and nitroglycerin. The effect of nitrite of amyl is so evanescent that its use is generally confined to carrying the patient through the last stages of the operation. Nowhere have I been able to discover a record of ill effects from its use under such conditions, and often have I seen a rapid, almost imperceptible pulse, restored to comparative fulness by its free administration. Its use in uncomplicated shock is never other than good. And yet it is a powerful vasodilator. It relieves arterial spasm and is in no other sense a circulatory stimulant. The action of nitroglycerin is similar. It is a remedy from which we may rightly expect much, but it must be given as strychnine is given, in doses that would ordinarily prove almost toxic.

We are not dealing with a condition of moderate arterial contraction, but we have to overcome intense spasm, and extraordinary doses will be required. Its use is not generally popular because of its well-known sedative and relaxant effect on the arteries, and this is contrary to the generally accepted theory of vasomotor paresis. By reason of this theory, strychnine is at present the most popular drug in the treatment of shock, because of its well-known action as a circulatory stimulant.

But the universal testimony is that strychnine is useless unless given in large doses, or in small doses very frequently repeated. Now let me quote from H. C. Wood:³ "It has been shown by experiments of Klapp that the primary stimulation of the vasomo-

²Howell's *Text-book of Physiology*.

³*Therapeutics; its Principles and Practice* edition of 1902, p. 435.

tor centres (by moderate doses of strychnine) is followed by fall of arterial pressure and vasomotor palsy. Also that *very large* doses produce an *immediate* depression of the vasomotor centres and fall of blood pressure."

Bartholow says: "A large toxic dose of strychnine will paralyze instead of stimulate the vasomotor centre in the medulla and thus prevent any rise of blood pressure."

Dr. Carl Heineman has found that "large doses cause diminished frequency of cardiac movements with diastolic pauses."

La Housse has shown that "large doses slow the action of the heart by a paralyzing influence on the intracardiac ganglia." Therefore, if shock consists essentially in a *paresis* of the vasomotor system, strychnine in the doses always recommended, is one of the most dangerous agents that could be used.

Now as to the use of normal saline solution. Dawbarn was, I believe, the first to use it as a remedy for surgical shock, but now, properly used, it is the remedy most universally relied on. I say, properly used, because in order to get the greatest benefit, it should be used as Dawbarn originally advised, an intravenous injection of normal salt solution heated to about 115° or 118° F.

Many have objected to the temperature advised, thinking it too high, but it must be borne in mind that the sympathetic ganglia in the walls of the heart and the arteries are in a condition of extreme irritation, and the musculature is in a state of spasm. By the time the small stream of saline solution reaches the heart, it has been diluted by the mass of blood filling the vena cava, and the temperature of the blood that flows into the heart and through the lungs, before it reaches the left ventricle and the contracted arteries, is but little above normal, just enough to exert a powerfully sedative effect on the irritated ganglia and muscles. We all know that moist heat at a moderately high temperature, applied to the surface causes a red, suffused condition of the integument by reason of paresis of the cutaneous arterioles and capillaries.

The same result follows when the moist heat is applied within the arteries.

Dawbarn erroneously attributed the beneficial effect to the stimulation of the paretic heart and arteries, but certainly the heat in the small amount of saline solution in the vena cava would be so dispersed that the effect would undoubtedly not be stimulating.

Again, the solution should be administered intravenously because thus the heat is brought more directly to the irritated ganglia, and the entire effect, mechanical and otherwise, is brought about much more certainly and rapidly. And even if there were more danger in this method than when administered

subcutaneously, still the risk should be taken because the benefit is commensurately greater.

When all that is desired is the mere mechanical effect of supplying the solution to replace blood lost by hæmorrhage, the subcutaneous method with solution at a temperature of 100° F., will suffice; but in profound shock a solution at a temperature of at least 115° F. should be infused directly into a vein.

A CASE OF SARCOMA OF THE TONSIL.

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There is, in this case at least, the element of rarity to enlist interest:

The patient, Mr. J. W. M., sought me in consultation on January 10, 1899, and gave the following history: Age, twenty-three years; married; native of this country; occupation, printer.

Family history: His father died at the age of fifty-seven years, from congestion of the liver and inflammation of the gall-bladder. His mother is living and well. Five brothers are living, one of whom has lateral curvature of the spine and some enlargement of the hip-joint. The others are comparatively healthy. There is no history of any constitutional disease in the family, except that the patient's maternal grandmother is insane.

Personal history: He has had the usual diseases of childhood, and about eight years ago had an attack of grippe, from which pneumonia developed, lasting about eight weeks, but he has had no serious illness since. The present illness, which dates from a year ago, began with an ordinary cold, but a cough persisted. Deglutition was painful, and the left tonsil became enlarged and painful and developed into an abscess, which was several times lanced. It remained permanently enlarged, however, so that solid food is now taken with difficulty. Some swelling and tenderness exist externally. He has had several small hæmorrhages from the tonsil.

Upon examining the patient's fauces, a large mass involving the whole of the left tonsil was seen. It pressed the anterior pillar forward and upward, and extended downward below the margin of the epiglottis. This mass was quite hard and showed a somewhat irregular surface, somewhat injected, but without ulceration at any point. Upon introducing my finger into the mouth the growth was found to have a large and firmly attached base, and gave to the touch that peculiar boggy feeling which, though difficult to describe, is so significant to the experienced digital eye. Internally nothing but the left tonsillar gland seemed to be involved. The pillars, the uvula (which lay over the upper margin of the growth), the right tonsil, epiglottis, and larynx, were free and unimplicated. Externally, the chain of lymphatic glands was, to some extent, in-

volved, and pressure over the region of the carotid, where the common carotid divides, produced some pain.

The patient's general condition was fairly good. He had lost some flesh, which was probably due to the fact that swallowing had been difficult, and he was very much worried over his condition. An examination of the urine showed a slight trace of albumin, but no casts. Microscopical examination of small portions of the growth removed for the pur-

The neck now being pretty thoroughly cleaned of infected glands and tissues, and the patient having been under anæsthesia for a considerable time, it was thought best to stop and rally him, with the expectation of continuing when conditions would permit. Consequently, the patient was put to bed and stimulated. The temperature in the morning before the operation was 98.6° F., pulse 92. After the operation, the pulse varied from 84 to 108, and the temperature between 98.3° and 102° F. Gauze drainage was used.

On January 23d, the second operation was performed. The original incision was opened and continued upward and backward along the anterior border of the sterno-cleido-mastoid to the mastoid process. Another incision was made across the angle of the jaws, nearly at a right angle with the first, and about three inches in length. The muscular structures were dissected from the jaw-bone and a chain-saw passed around it just anterior to the juncture of the ramus and body. The bone was divided at this point, disarticulated, and removed. The portion of the wall of the pharynx which now presented was carefully dissected out, hæmorrhage being easily controlled. The portion of the pharynx which remained was stitched together, a small opening still existing between the wound and the pharynx. The external wound was closed with a continuous suture of catgut and drained with a rub-

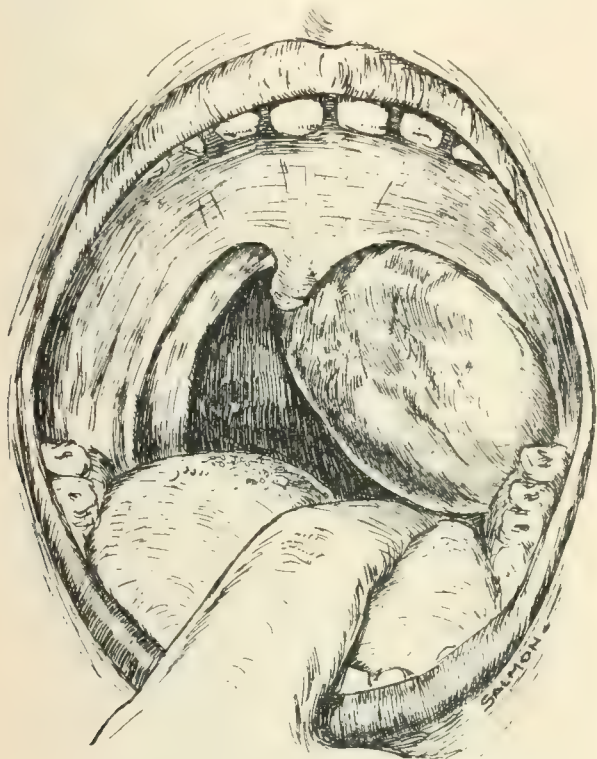


FIG. 1.—The growth when first seen, January 10, 1899.

pose revealed the fact that it was a short spindle-celled sarcoma.

When considering the treatment of such a case as this, it is difficult to think of a more perplexing and serious situation. All operative measures, internally or through the mouth, are useless, and there remains but one procedure—lateral pharyngotomy.

I associated with me in this case Dr. Albert Vander Veer, of Albany. After persuading the patient and his friends that the operation afforded the one chance for life, it was performed at the Albany Hospital on January 17th—seven days after I first saw the patient.

An incision was made in the left side of the neck, extending from a point opposite the angle of the jaw downward and forward along the anterior border of the sterno-cleido-mastoid muscle to within an inch of the clavicle. The chain of cervical lymphatics, which were considerably enlarged, ranging in size from that of a robin's egg to that of a pea, was thoroughly removed. The common carotid artery was uncovered and a ligature passed around it and the ends secured with an artery clamp, so that the vessel could be quickly tied if it became necessary. Continued dissection showed that infiltration was very extensive, and it was soon necessary to tie the ligature which had been placed around the common carotid about an inch below its bifurcation.



FIG. 2.—Short spindle-celled sarcoma.

ber tube from its most dependent part. Following this operation the pulse was 90, rather weak, rapidly rising to 108 and becoming quite weak, but the patient responded well to stimulation. He was fed on stimulating enemata of a nutrient character and milk (of each 2 ounces, whiskey 1 ounce), every four hours. Small bits of gauze saturated with ice-water were kept in his mouth to relieve thirst, and hypodermic injections of morphine were given to relieve pain. The patient was discharged from the hospital February 23, 1899.

For the subsequent history of the case I am in-

debted to the reports of Dr. William E. Swan, of Saratoga, in whose care I placed the patient, and to occasional reports from the patient himself.

March 12, 1899. Dr. Swan reported: "Remarkable progress in his case, so far as his general condition is concerned. The wound broke down for some two inches at its lower extremity, but this has filled in rapidly and is nearly closed. Patient has gained very much in color and strength. Temperature and pulse normal, and he is up and about the house a few hours daily, fully dressed. His uvula and soft palate look somewhat reddened, but no tumor or new growth seems to be visible."

March 24, 1899. The patient reported that his gain in health was steady and rapid, and the wound quite healed.

May 1, 1899. Dr. Swan reported that no recurrence of the growth could be detected anywhere and that the patient ate well and gained 47 pounds in weight in eight weeks.

June 9, 1899. Dr. Swan reports: "A continuous improvement in every way. Patient is cheerful and hopeful and attends to some light business."

June 21, 1899. I saw the patient at Saratoga and found jaw and fauces in good condition. No recurrence could be made out at this time, five months after the operation.

July 25, 1899. Dr. Swan reported that "the anticipated return of the sarcoma in the case of Mr. J. W. M. has taken place, involving the lower jaw and surrounding tissues. Some days ago I placed him under ether and cut down on the inferior maxilla and scraped out as much of the growth as possible. The wound has closed, but the growth of the neoplasm is quite rapid, and I look for the end before the lapse of many months."

October 1, 1899. Dr. Swan reported as follows: "I saw him on the street some two weeks ago. The mass on the affected side of his face and neck was the size of a large cocoanut, but he was cheerful."

The patient died a few weeks after this report.

I find on looking over the literature upon this subject that some forty-five cases have thus far been reported, but most of them in so incomplete a manner as to be valueless. It is because, in so few reports, the operative measures taken have not even been mentioned or the subsequent history given, that I have reported these details at such length. Most of the cases reported have been in males, and most have occurred at the age of forty years.

In concluding this report I wish to express to my dear friend and colleague, Dr. Albert Vander Veer, my best thanks. To his judgment, his encouragement, and his skill, I could not give too great praise.

A PHENOMENON OBSERVED ON THE TONGUE IN ACUTE MALARIAL INFECTION.

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Admitting the fact that it is extremely difficult at times, without the aid of the microscope, clearly to distinguish between acute malarial infection and septic contamination, I trust the experience of the author in this connection may prove beneficial to the practitioner at large.

From an intimate association with the malarial plasmodium, covering a period of nearly six years, during which time I have observed and attended professionally almost every form of the disease seen in the South, I believe I can present to the medical profession a symptom, or more properly a sign, seen in ninety-five per cent. of all cases of acute infection caused by the malarial organism.

A careful review of the text-books, monographs, and cursory remarks made upon the subject of malaria, shows that, in speaking of the condition of the tongue, they state "the tongue is furred, sometimes light, yellow, dark, etc."; but nothing definite is gained by such a vague description, as we often find this condition existing in other diseases, notably in typhoid fever, grippe, pneumonia, and acute and chronic stomach, liver, and intestinal disorders.

The condition of the tongue that I wish to bring out in connection with acute malarial poisoning is nearly always present, more or less, and may be said to be pathognomonic of the disease. This condition presents, upon exhibition of the tongue, one or more (generally two) dark lines running from the base of the organ to the apex, and usually separated by a clearly defined tract of clean mucous membrane about one sixteenth to one eighth of an inch wide. These lines are pyramidal in appearance, and begin among the large papillæ at the base of the tongue. They vary in width, and may be from one eighth to one quarter of an inch wide, gradually coming to a point in the middle of the tongue. In color they resemble the stain of a ten-per-cent. solution of potassium permanganate that has been exposed to air for some time. They are quite different from the discoloration seen in users of tobacco and snuff, and, when once carefully noted, are easily recognized in future. This condition will most likely be found from one day to two weeks after exposure or inoculation. It remains in some individuals longer than in others, notably in the negro. It is more beautifully defined from six to twelve hours after the initial sporulation, and remains until the system is thoroughly cinchonized. Purgation alone, so far, has failed to relieve the condition, for the gamut of drugs has been run in this connection time and

Vaccination in New York.—During the first three months of this year the Department of Health of the City of New York vaccinated considerably over 250,000 people.

again. Only one line will be found more often in the colored man than in the white.

I also wish to add that, where this peculiar condition of the tongue exists, you may rely upon eliminating the malarial poison in short order if the case is taken in hand within forty-eight hours. If procrastination is practised, as a rule a protracted illness results.

In conclusion I might state that out of several hundred of these cases as primarily seen, but few have had any rise of temperature until from twenty-four to thirty-six hours have elapsed.

This phenomenon was first observed by me in Georgia, at which time I had just begun my career, and not being as observant as I should have been, I paid no special attention to it.

Just what causes this state of affairs, I am at present unable to say. You may observe several different colors of so-called fur upon the tongue along with this condition at the same time.

Therapeutical Notes.

Quinine as a Dressing.—Dr. J. Reid (*Lancet*, February 15th) has used quinine and cod-liver oil with good results (one drachm to eight ounces in emulsion, to be shaken up before being used) in tertiary and rheumatic ulcers of the leg and for ordinary ulcers, in a case of gangrene of the skin, and after a burn, where a large surface (about a foot square) formed a slough and had to be removed as ulceration loosened the thick slough. All wounds took on a healthy and kindly action, and the pus from the sloughing derma smelled sweet and contained a limited number of cocci. The dressing has nothing to recommend it in the way of cheapness or of odor, but it has the advantage of supplying a weakened system with an oily food and a tonic drug. For intertrigo Dr. Reid has used it with good effects if not long required. For eczema it seemed to act well if stomach troubles were seen to.

Formulae for the Internal Administration of Chloroform.—The *Gazzetta degli ospedali e delle cliniche* for February 13th gives the following for use in cases where the internal administration of chloroform is indicated:

℞ Chloroform water. 150 parts;
Orange-flower water. 50 "
Distilled water. 100 "

M. A dessertspoonful every quarter of an hour.

℞ Chloroform water. 80 parts;
Peppermint water. 20 "
Syrup of opium. 50 "

M. A tablespoonful for a dose.

℞ Chloroform water, } of each. . 12½ drachms;
Distilled water, }
Cocaine hydrochloride. 1/13 of a grain.

M. A tablespoonful may be taken every two hours.

℞ Chloroform water, } of each. . 5 ounces;
Orange-flower water, }
Cocaine hydrochloride. 6 grains;
Menthol. 1½ grain.

M. A dessertspoonful every two hours.

Mercury, Oxycyanide in Gonorrhœa is recommended by Genouville (*Pharmaceutische Post*, March 16, 1902). Its action resembles that of potassium permanganate. The injections are begun with solutions in the strength of 1:5000 and gradually increased in strength to 1:1000.

The Treatment of Diarrhœa in Children from Six Weeks to Three Years Old.—Blache (*Gazette hebdomadaire de médecine et de chirurgie*, March 13, 1902) gives the following synopsis of treatment in these cases: (1) Diminution of the amount of food, stomach and colon washings repeated as often as necessary, and cataplasm on the abdomen to remain until relief is obtained. (2) Every morning, for three, four, or five days, a small teaspoonful of the following mixture should be taken:

℞ Castor oil, } of each. 10 parts;
Syrup of acacia, }
Orange-flower water. 4 "

M. Mix. Shake before using.

The dose may be regulated according to the age of the child, the average dose being a teaspoonful. It may be borne in mind that fifteen drops of castor oil is a dose for a child under six months, and from thirty to ninety drops for a child under two years.

A Powder for Suppurating Wounds.—*Arte medica* for March 16th cites the following, as ascribed to Schwarz, from the *Gazette hebdomadaire de médecine et de chirurgie*:

℞ Powdered iodoform, }
Salol, }
Bismuth subnitrate, } equal parts.
Powdered charcoal, }
Powdered cinchona, }
Powdered benzoin, }

M.

Iodine in the Treatment of Typhoid Fever.—Carrazzani and Lucchesini recommend (*Nouveaux Remèdes*, January, 1902) the use of iodine in typhoid fever. They prescribe the following solution:

℞ Iodine. 7 parts;
Potassium iodide. 70 "
Distilled water. 100 "

M. Sig.: Twenty drops of this solution in a glass-full of sweetened water or milk, to be taken during the day. In children but three or four drops of the solution are employed. In some cases subcutaneous injections of the remedy may be made and the following solution may be used:

℞ Iodine. 1 part;
Potassium iodide. 10 parts;
Guaiacol. 20 "
Glycerin. 100 "

M.

From ten to fifteen drops of this solution are injected subcutaneously at the side of the chest. Not more than two injections daily should be made, however. Thanks to the presence of guaiacol in the combination, these injections are not at all painful. The temperature is reduced, the duration of the disease diminished, and the complications prevented by this method of treatment.

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MODERN PROVISION FOR THE INSANE.

Dr. William F. Wegge, of Milwaukee, contributes some interesting reflections on this subject to the closing number of the third annual volume of the *Bulletin of Iowa State Institutions*, which is a quarterly publication dealing with the scientific and clinical work done in the hospitals for the insane and the other institutions managed by the Board of Control of State Institutions, the members of which board are its editors. We may remark incidentally that the *Bulletin* is a most creditable publication, one calculated in a high degree to enhance unity of purpose and harmony of action among the various State institutions that are under the board's management.

For the purpose of convenience, Dr. Wegge divides modern methods of caring for the insane into the congregate plan, the boarding-out, or family-care, plan, the pavilion plan, the colony plan, and the mixed plan. Under the congregate plan he includes all institutions that are arranged in a compact form or on the so-called corridor system. This, he remarks, is the oldest of all the plans that are now in vogue, and he adds that, although some of the newer institutions have been built on this plan, the tendency to do away with it is constantly growing more decided.

As to the boarding-out, or family-care, plan, while it is a feature of the provision for the insane in Scotland, is in extensive use in Belgium, Germany, and France, and has been tried to a limited extent in Massachusetts, Dr. Wegge thinks it difficult to predict what its future will be in this country, but he inclines to the view that the conditions existing here are not favorable to its development, and he believes he is safe in predicting that it will not be

extensively employed here for many years to come. It has lately been tried in Germany with a considerable degree of success as a means of preparing convalescent patients for their return to their former conditions of life.

The pavilion plan has its special advantages, but, in Dr. Wegge's opinion, it does not present the home-like appearance and the adaptability to granting the greatest degree possible of liberty that are the prominent features of the colony plan. He therefore prefers the "mixed plan," a combination of the pavilion and the colony. At a distance sufficient to separate them completely from the pavilions, and yet not far enough away to make administration difficult, he says, should be situated the cottages constituting the colony, and they should be grouped so as to be conveniently near the industrial and agricultural buildings, and so arranged as to prevent the too ready intermingling of the sexes.

The purpose of the colony, says Dr. Wegge, is to provide for the quiet chronic insane a permanent home and for convalescents a "way-station on their return home." The advantages of an institution combining the features of the pavilion and the colony plans, he thinks, are many and very evident, for in it it is possible to give special attention to the study and successful treatment of the hopeful cases and to provide proper facilities for them, the modern "hospital idea" can be fully carried out, and the plan permits of thorough classification and the extensive application of the open-door system. "The belief that insane people must be kept behind barred windows and locked doors," says Dr. Wegge, "is gradually giving way to the knowledge that a very large percentage of them can be kept under absolutely free conditions."

ARE WOMEN LOSING THE CAPABILITY OF LACTATION?

We suppose it must be admitted that for a number of decades past the proportion of women who have failed to nurse their children has been increasing. The fact, we think, has been generally recognized, and it has been commonly explained as due to the growing unwillingness of women to do their full duty to their offspring. This explanation, however, is not accepted by von Bunge, who has written a book on the subject. We have not studied the book itself, but have been very much interested in an

article called forth by it, written by Dr. A. B. Marfan and published in the January number of the *Revue mensuelle des maladies de l'enfance*. It seems that von Bunge has made a very close study of the function of lactation in many of its aspects, but we have only space to consider one of them, namely, the question of the increasing incapacity of woman for suckling, and even that only in its most salient points.

By von Bunge the decrease of satisfactory lactation is set down to increasing agalactia. It may almost be said that he assumes this to be the case, for he certainly does not prove it. He thinks that agalactia is hereditary, and in this he is probably correct, but the observation is not original with him. He thinks also that it is in great measure due to the use of alcoholic drinks. In this, too, we think he has much to support him, but we do not think that any of the supposed causes of agalactia that he adduces are sufficiently operative to justify the strict application of the rules he lays down for the government of a young man in the choice of a wife. Those rules are thus given by Marfan: A man should not marry a woman whose mother could not nurse her, a woman belonging to a tuberculous family, a woman whose family shows psychological impairment, the daughter of a drunkard, or a woman whose teeth are carious. Most of these rules, if not all of them, have some foundation in sense (which does not always conform to statistics or to laboratory revelations), but they are laid down in too arbitrary a form. For example, in the case of the injunction not to marry the daughter of a drunkard, everything depends on whether the father became a drunkard after the daughter was born or some time before that event.

It is certain that almost all women of the poorer classes are good nurses, as is shown in Madame Dluski's Paris thesis entitled *Contribution à l'étude de l'allaitement maternel*, cited by M. Marfan, who shows by his own observations in private practice that women of the wealthy class also are, as a rule, able to nurse their children, if only they will make the attempt in good faith. While von Bunge's contention would almost wholly exonerate the women of the present day from the charge of wilfully neglecting their offspring, we cannot, therefore, concur in the exoneration. It is our belief that the capacity for lactation is not in process of extinction.

AN ALLEGED PSYCHICAL EFFECT OF UTERINE ATMOC AUSIS.

We recently acquainted our readers with the features of Pincus's proposal to produce virtual sterility by steam cauterization of the endometrium as a life-prolonging expedient. It will be recalled that it was not Pincus's sole purpose to prevent pregnancy, but that in certain cases his main object would be to prevent other forms of uterine hæmorrhage than those due to the gravid condition, and in some instances to do away with normal menstruation in order to save the woman from even the moderate loss of blood incident to that function.

An objector to Pincus's operation has arisen in the person of Dr. Alfred Egon Neumann, of Berlin (*Centralblatt für Gynäkologie*, March 22d). Neumann does not object wholly to the Pincus procedure, but he contends against its employment for the purpose of abolishing menstruation in cases in which the menses are not excessive, and he brings up a psychical reason for his contention. He refers to the deep-seated belief prevalent among women that one of the most portentous symptoms that can happen to a phthisical woman is the cessation of the menses; regardless of all medical advice, he says, a consumptive woman who ceases to menstruate will resort to the most hazardous measures to bring back the flow. Why, then, he asks, bring about artificially such a dreaded occurrence as a premature menopause? Instead, he would prefer his own operation for occluding the Falloppian tubes, thus producing sterility, but allowing menstruation to go on.

Since we all take the view that amenorrhœa is not a disease, but a symptom, we cannot wonder that women so commonly regard it with profound solicitude, but we cannot accede to their notion that the induction of some sort of uterine hæmorrhage of a more or less regularly periodical character will in itself set things right as regards the general health, and we believe that in the great majority of instances a physician dealing with an intelligent woman can convince her that her idea of the situation is erroneous. Certainly we cannot admit that, when it has been explained beforehand to such a woman that to stop menstruation is the definite purpose of a given procedure, she is likely to be unfavorably affected in a psychical way by the success

of the undertaking. While we say this, it must not be inferred, however, that we are advocating the Pincus operation as preferable to Neumann's.

THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN.

The first report of this new institution, for the ten months ending September 30, 1901, has recently been issued. It is very properly insisted upon by the surgeon in chief, Dr. Newton M. Shaffer, that the institution is a hospital in the proper sense of the term, and not a mere refuge for those who are hopelessly crippled. A number of pictures contained in the report show that active and successful measures are adopted for the correction of deformities, that the patients appear happy, and that they are cared for in a building suitable for the purposes of the institution and singularly free from the forbidding appearance that too often characterizes public institutions. The situation of the hospital, in Tarrytown, is eminently attractive. A noteworthy feature of the hospital's work is the fact that the children's education is attended to as well as their physical defects. Twenty-four patients seem to have been admitted during the period covered by the report, and it is gratifying to note that all but two of them were received on the application of a parent or guardian. It seems to us that this small hospital is destined to develop into one of the most beneficent of the State's agencies for converting the disabled into efficient members of the community.

THE PHYSICAL LESIONS OF DELIRIUM TREMENS.

The bodily damage that may be wrought by delirium tremens, apart from its psychical manifestations, seems not to have met with adequate investigation. A German author, Dr. Dölken, who has recently produced a little book on the subject, has made a commendable effort to remedy this defect. According to a notice of the book by Dr. Freyhan, of Berlin, which appears in the *Centralblatt für innere Medizin* for March 29th, Dölken has found that the disease essentially affects the medulla oblongata and the sympathetic nerve. The lesions so act upon the circulatory apparatus as to cause constriction of the finest cutaneous vessels and of the visceral twigs, whereby undue work is thrown upon the left ventricle of the heart, the defective emptying of which leads to stasis in the left auricle and then in the lungs and in the right cavities of the heart.

CANCER AND MALARIA.

Inasmuch as certain well-known physicians in Germany now appear to entertain seriously the idea that the micro-organism of malaria may prove destructive of the cancer germ, it is confidently to be expected, we should say, that the theory will soon be subjected to such practical tests as will either establish it, and so bring us immensely nearer to the mastery over malignant disease than we are at present, or else summon us to give up one more promising avenue to such mastery. If the theory should prove to be well founded, it may also incidentally indicate that the cancer germ probably belongs to the animal kingdom.

THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS.

This is the rather cumbersome title of an organization which, we think, may be looked to for some very valuable work. Its objects are the following: To promote the general welfare of epileptics, to stimulate study of the causes of epilepsy and of means of curing it; to advocate the care of epileptics in institutions in which they may get a common school education, be taught some trade, and at the same time be treated for their disease to the best advantage; and to assist the various States in making proper provision for epileptics. Certainly no more beneficent objects could be laid down for itself by any organization. The association's officers are as follows: President, Dr. Frederick Peterson, of New York; vice-presidents, William Pryor Letchworth, LL. D., of Portage, N. Y., and Dr. William Osler, of Baltimore; secretary, Dr. William P. Spratling, of the Craig Colony, Sonyea, N. Y.; and treasurer, Dr. H. C. Rutter, of Gallipolis, O. The executive committee consists of Dr. William N. Bullard, of Boston, Dr. Wharton Sinkler, of Philadelphia, Dr. W. A. Polglase, of Lapeer, Mich., Dr. William F. Drewry, of Petersburg, Va., and Dr. B. M. Worsham, of Austin, Tex. The association has recently issued the first volume of its *Transactions*, on the sale of which it depends for meeting its expenses, as there are no membership fees or assessments. The volume ought to circulate widely, not only among medical men, but also among philanthropists in other walks of life and among legislators.

Addendum to Dr. McCrae's Article.—The following additional references to Dr. McCrae's article reached us too late for insertion in their proper place on page 622:

Transactions of the Pathological Society of London, Vol. lii, 1901, p. 61.

Archiv für klinische Chirurgie, Bd. liii, 1896, p. 37.

News Items.

Society Meetings for the Coming Week:

MONDAY, April 14th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynaecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, April 15th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, April 16th.—Woman's Medical Association (New York Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, April 17th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 18th.—New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynaecological Society.

Changes of Address.—Dr. Frank P. Foster, to No. 554 West One Hundred and Fourteenth Street.

Women to be Admitted to Rush Medical College.—According to the action taken recently by the trustees of the Rush Medical College, women will be admitted to the institution on an equal footing with men after July 1st next.

St. Louis Medical Society of Missouri.—At the meeting, on April 5, 1902, a paper was read on A Case of Rapidly Fatal Carcinoma of the Epipharynx, by Dr. H. W. Loeb. For the meeting on April 12th the following is the programme: Cesarean Section, report of a case, with presentation of mother and child, by Dr. C. M. Nicholson; Acute Fatty Degeneration of the Kidney and Liver after Chloroform, by Dr. A. E. Taussig.

Dr. Keen Elected an Honorary Member of the German Chirurgical Congress.—Dr. William Williams Keen, of Philadelphia, has been elected an honorary member of the Thirty-first Congress of the German Chirurgical Association. Dr. William Williams Keen is a native of Philadelphia, where he was born in 1837. Since 1889 he has been professor of surgery at Jefferson Medical College.

The American Association of Pathologists and Bacteriologists, at their recent annual meeting in Cleveland, elected the following officers: President, Dr. W. T. Howard, Western Reserve University; vice-president, Dr. Ludwig Hektoen, University of Chicago; secretary, Dr. Harold C. Ernst, Harvard University; treasurer, Dr. Eugene Hodenpyl, Columbia University.

The Louisville Medical College.—At the annual meeting of the alumni of the Louisville Medical College the Louisville Medical College Alumni Association was formed, with a view to effecting a more permanent union among the graduates of the college. Dr. F. D. McChord was chosen president; Dr. A. C. Schachnell, first vice-president; Dr. Irwin Abell, second vice-president; Dr. McCoy, of Louisiana, third vice-president; Dr. Adolph Pfingst, secretary and treasurer.

No Trouble in the Kentucky School of Medicine.—Dr. William H. Wathen, dean of the Kentucky School of Medicine, Louisville, informs us that the statement to the effect that there was trouble in the school over the delegates to the convention of volunteer missionary workers is an error, and we are pleased to publish this statement. Dr. Wathen states that there was no indignation meeting and that every member of a class of over 300 students heartily endorses the action of the faculty.

A Hospital Car.—The Plant System shops have just turned out a hospital car for the use of the system, which is one of the most completely furnished cars of its kind in this part of the country. It will form a part of every wrecking train that is sent out from Waycross. The car is divided into several compartments in which are placed an operating table, a hanging bed so adjusted that the motion of the car will not be felt by the patient, a case for instruments and medicines, several stretchers, and, in fact, every tool and appliance that can be of service in taking care of the injured.

Leprosy in the United States.—The report of the commission of medical officers of the Marine-Hospital Service, appointed to investigate the origin and prevalence of leprosy in the United States, shows 278 cases of leprosy in the following States: Alabama, 1; California, 24; Florida, 24; Georgia, 1; Illinois, 5; Iowa, 1; Louisiana, 155; Maryland, 1; Massachusetts, 2; Minnesota, 20; Mississippi, 5; Missouri, 5; Montana, 1; Nevada, 1; New York, 7; North Dakota, 16; Oregon, 1; Pennsylvania, 1; South Dakota, 1; Texas, 3; Wisconsin, 3. Of the total number, 176 are males and 102 females; 145 American born, 120 foreign born, and the remainder uncertain. It is stated that 186 of the cases were contracted in the United States.

New York State Medical Law.—The medical law of the State has been so amended that the Regents of the University of the State may, in their discretion, admit conditionally to the medical examinations in the preliminary subjects—anatomy, physiology and hygiene, and chemistry—applicants nineteen years old who meet the other requirements. Under this amendment the regents have power to grant an allowance of one of the four years of study in a medical school to graduates of college courses, registered by them as entitled to this privilege. Governor Odell has signed Assemblyman Brill's bill making uniform the public health laws relating to local boards of health; also the bill providing that medical students admitted to preliminary State medical examination must be nineteen years of age.

The Semi-centennial Celebration of the Chicago Medical Society, one of the oldest American professional organizations, was held last Wednesday evening at the Auditorium Hotel.

The Society of Medical Jurisprudence.—The 166th regular meeting will be held on Monday evening, April 14, 1902, at 8 p. m., at 17 West Forty-third Street (the Academy of Medicine). Six applications for membership will be acted upon. Charles M. Demond, Esq., of the New York Bar, will present the paper of the evening on Legal Prohibition of Unprofessional Mental Healing. A collation will be served after the meeting.

The New York Academy of Medicine.—A stated meeting will be held on Thursday evening, April 17th, at 8 o'clock. Dr. S. Dana Hubbard will present a paper on The Symptoms and Course of Small-pox; Dr. S. Pollitzer, one on the Diagnostic feature of this disease; and Dr. George H. Fox will discuss its treatment, illustrating his address with lantern slides. The discussion will be participated in by Dr. Blauvelt, Dr. Dillingham, Dr. Huddleston, and others.

Medical Association of the District of Columbia.—At the regular meeting of the Medical Association of the District of Columbia officers for the ensuing year were elected as follows: President, Dr. George N. Acker; vice-presidents, Dr. J. R. Wellington and Dr. E. L. Tompkins; secretary, Dr. M. Griffith; treasurer, Dr. Frank Leech; delegate to the American Medical Association, which meets in Saratoga in June, Dr. George M. Kober; alternate, Dr. G. Wythe Cook.

Hospitals may Close.—The hospitals at Jamaica and Flushing will have to close within a few weeks, it is feared, unless the city comes to their aid. Both are now dependent on money raised by subscription and by entertainments. The institutions formerly received appropriations from the various villages in Queens county, but consolidation cut off this source of income, and they now receive for city patients less than it costs to maintain them. St. John's Hospital, in Long Island City, is the only one that receives an appropriation in accordance with its needs. If the hospitals at Jamaica and Flushing close, St. John's will be the only hospital in the borough of Queens.

The Gregory Testimonial Banquet.—A banquet is to be given under the auspices of the St. Louis Medical Society of Missouri to Elisha Hall Gregory, M. D., LL. D., commemorating his fiftieth anniversary as a teacher of medicine, at the Planters' Hotel, St. Louis, Thursday evening, April 17th. The Most Reverend J. J. Kain, Archbishop of St. Louis, will pronounce the invocation. Governor Dockery will speak on The State and the Medical Profession; Dr. Nicholas Senn, of Chicago, on An Organized Profession; Dr. DeForest Willard, of Philadelphia, on The Evolution of Surgery; Dr. Charles B. Nancreade, of Ann Arbor, on American

Surgery; Dr. George H. Simmons, of Chicago, on The Medical Press; Surgeon-General Walter Wyman, of the U. S. Marine-Hospital Service, on Our Teacher; Chancellor Chaplin, of St. Louis, on The Teacher in Medicine; Dr. J. D. Griffith, of Kansas City, on The Profession in Missouri; Dr. N. B. Carson, of St. Louis, on The St. Louis Medical Society of Missouri; Dr. W. G. Moore, of St. Louis, on Ethical Ideals; Dr. C. H. Hughes, of St. Louis, will present a memorial. Dr. Elisha Hall Gregory will respond to the toast, Our Guest. Dr. A. M. Dockery, governor of Missouri, will preside and Dr. Frank J. Lutz will act as toastmaster.

Medical Association of the Greater City of New York.—The stated meeting will be held at the Academy of Medicine on Monday evening, April 14th, when the report of the committee on the death of Dr. E. H. Tucker will be presented. This will be followed by the presentation of a patient successfully operated upon for a high degree of myopia, with remarks on the indications for operative interference, by Dr. Edward Fridenberg. The Present Status and Technique of Radiation Treatment, and the Indications for its Use in Malignant Disease and other Conditions will be treated by Dr. William James Morton and discussed by Dr. Charles L. Leonard, of Philadelphia; Dr. Louis A. Weigel, of Rochester; Dr. Robert Abbe, Dr. Charles W. Allen, Dr. Carl Beck, Dr. William B. Coley, Dr. H. Beeckman Delatour, Dr. George G. Hopkins, Dr. Alexander B. Johnson, and others.

Hospital Appointments Open.—Some twenty-eight positions as internes or clinical assistants will be open soon in the fourteen State hospitals for the insane situated in places in New York State. Although these are hospitals for the insane, yet they are so large that opportunities for experience in general medicine are abundant. Each hospital is well equipped with clinico-pathological laboratory and apparatus, operating rooms, trained nurses, hydrotherapeutic and electrical devices and good medical libraries. The field for study in general medicine is excellent, and surgical operations of all kinds are frequently performed, either by resident or consulting surgeons. Such as desire to continue in special work after the year's service would be eligible for appointments subsequently to salaried positions in the same service. No examinations will be necessary, but application must be made in person with good references, directly to the medical superintendent of any of the above-named hospitals or to Dr. Frederick Peterson, president of the Commission in Lunacy, 4 West Fiftieth Street, New York city.

The San Francisco Board of Health Removed.—Mayor Schmitz, of San Francisco, recently removed Dr. J. M. Williamson, Dr. R. W. Baum, Dr. Vincent P. Buckley, and Dr. William B. Lewitt from their offices as members of the board of health and immediately appointed Dr. J. Coplin Stinson, Dr. A. S. Adler, Dr. T. A. Rottanzy, and Dr. M. E. Van Meter to the vacancies created by the removals. The reasons assigned by the mayor are contained in a notice which was served on members of the board. His Honor states in the notice that their removal from office is the result of the incalculable injury

done to the city and the State by the health board of which they were members in declaring, without foundation in fact, that bubonic plague existed in San Francisco. The mayor holds the members named culpable for repeatedly and persistently publishing the false statement to the detriment of the community. An exhaustive investigation on his part has demonstrated to his entire satisfaction that bubonic plague never at any time existed in that city.

Resolutions Deploring the Death of Dr. Paul F. Mundé were passed at a recent meeting of the New York Obstetrical Society as follows:

Resolved, That in the death of Dr. Paul F. Mundé, the members of the New York Obstetrical Society have lost an old friend and comrade, who for over a quarter of a century has been foremost in our counsels and scientific work. Strong and aggressive in his personality, always generous and warm-hearted, we shall remember him as one who rose by his own efforts to a place of great honor, but never lowered his standard of professional duty.

Resolved, That this resolution be inserted in our minutes and that a copy be sent to the family of our late Fellow.

J. E. JANVRIN, M. D.,
CLEMENS CLEVELAND, M. D.,
HENRY C. COE, M. D.,

Committee.

The Medical Board of the New York Skin and Cancer Hospital, at a meeting held March 29th, adopted the following resolutions:

WHEREAS, Dr. Paul F. Mundé, a member of the Consulting Board of our hospital, has been removed from us by death; be it

Resolved, That in the death of Dr. Mundé the Board has lost one of its most eminent members, one whose professional attainments had given him a high reputation both at home and abroad, and whose noble character and conscientious life work had endeared him to his associates and friends.

Resolved, That our deepest sympathy is extended to his family in their great sorrow, and that a copy of these resolutions be sent to the medical journals for publication.

J. E. JANVRIN, M. D.,
L. DUNCAN BULKLEY, M. D.,

Committee.

The Canadian Association for the Prevention of Tuberculosis will hold its annual convention at Ottawa on Thursday and Friday, April 17 and 18, 1902. The programme will be as follows: *First Session*: Thursday, April 17th, at 3 p. m.: (1) Address by the president, Sir James A. Grant, M. D., K. C. M. G. (2) Constitution of the convention. (3) Appointment of committees of the convention to consider and report upon the following and other matters: Committee I: The permanent organization of and constitution for the Canadian Association. Committee II: (1) The relation of governments and municipal bodies to the crusade for the prevention of tuberculosis; (2) legislation; (3) notification by physicians of the presence of the disease; (4) inspection of schools and examination of children; (5) inspection or warnings against dangerous meat, milk, etc. Committee III: (1) The availability of general hospitals, sanatoria, seaside, and other resorts; (2) the care of public conveyances (steamships, railway carriages, street cars, etc.) to prevent the spread of the disease. Committee IV: The collection and publication of useful information for the education of the people toward securing their cooperation with the medical profession. Committee V: Resolutions. *Second*

Session: Thursday, at 8 p. m., His Excellency the governor-general of Canada in the chair. Address by S. A. Knopf, Esq., M. D., of New York, on The Mission of Societies for the Prevention of Consumption in the Antituberculosis Crusade, with a discussion. *Third Session*: Friday, at 10 a. m. This session is allotted to the various committees. *Fourth Session*: Friday, at 2.30 p. m. (1) Report of Committee I. (2) Election of officers. (3) Report of Committee II. *Fifth Session*: Friday, at 8 p. m. Reports of Committees III and IV. Secretary, H. B. Small, M. D.

The Chicago Health Department Bulletin for the week ended April 5th states that scarlet fever has been for some months and still is more prevalent and more fatal in Chicago than at any time in the last seventeen years. Since the first of the year there have been 167 deaths reported from this disease out of a total of 7,318 deaths from all causes—a proportion of nearly 2.3 per cent. The nearest approach to this was in 1884, when the scarlet-fever mortality formed nearly 2.5 per cent. of the total. Last week there were 243 cases of the contagious diseases reported, of which number 162, or exactly two thirds, were scarlet fever. As has been repeatedly pointed out in the weekly bulletins during the last four months, all conditions during the period have favored an epidemic prevalence of the contagious and infectious diseases, not alone in Chicago, but throughout the world. Small-pox has not been so widespread in thirty years; Asiatic cholera and bubonic plague are more threatening than at any time since 1873; influenza—of a mild type, it is true—is endemic in many parts of this country and Europe. Diphtheria, measles, an whooping-cough have all been unusually prevalent and unusually severe.

Except from convulsions, pneumonia, and scarlet fever, deaths from all the principal causes of death showed a decrease last week. The total, 496 deaths, reported indicate a reduction of 8.9 per cent. from the previous week's mortality, but the rate is still 6 per cent. higher than that of last year. There were but half as many deaths from diphtheria as the week before and but one death from typhoid fever—the least since June, 1901.

	Week of April 5, 1902.	March 29, 1902.	April 8, 1901.
Total deaths, all causes.....	496	544	451
Yearly death rate, per 1,000....	14.19	15.58	13.37

The American Congress of Tuberculosis.—The third annual session of this congress is announced to be held on the 14th, 15th, and 16th of May, 1902, at the Hotel Majestic, Seventy-second Street and Central Park, West, in the city of New York, in joint session with the Medico-legal Society. There will be two sessions each day and no evening session, except on the 15th, when the banquet will be given. This will enable delegates from distant States and countries to enjoy the amusements and attractions of the city. Arrangements will be made with railway companies for a reduced rate of fare, the details of which will be announced to the delegates. The Earl of Minto, governor general of the Dominion of Can-

ada, has accepted the position of honorary vice-president of the American Congress of Tuberculosis and states that that government will be represented by delegates. It is proposed to have a museum in connection with the sessions and all curators of colleges and museums, or of medical schools or societies, and all members of the profession in the United States, the Canadas, or in South or Central American countries who are willing to loan or contribute specimens, drawings, or contributions to such a collection for the use of that congress are requested to be so good as to at once communicate directly with Dr. H. Edwin Lewis, chairman of the committee on museum, at Burlington, Vt., specifying contributions, so that the same may be catalogued and the catalogue presented in advance of the session. The catalogue of the museum of the London Congress occupied 200 pages of printed matter, and embraced drawings, maps, skiagraphs, photographs, engravings, charts, prints, and contributions besides specimens and illustrations of microscopic and biological work relating in any way to the subject.

A Change in the Preliminary Requirements of the College of Physicians and Surgeons.—The forthcoming announcement of the College of Physicians and Surgeons, the medical department of Columbia University, will contain the details of the plan for raising the standard of admission, upon which the president and faculty have been at work for some months past. This plan has received the assent of the trustees, and will go into operation at once. Heretofore admission to the first-year class has been open to any student who presents what are known as forty-eight academic counts, these forty-eight counts being chosen from any subjects of secondary school study. The law of the State of New York provides that a student who has obtained thirty-six of these counts may enter upon the study of medicine, having one year in which to make good the twelve remaining counts, being known as a "conditioned" student. On and after July 1, 1902, no conditioned students whatever will be admitted to the first-year class of the College of Physicians and Surgeons. A much more radical change is announced to go into effect on July 1, 1903, which will apply to the classes entering in September, 1903, and thereafter. By the terms of this part of the plan, no student will be admitted to the College of Physicians and Surgeons who has not obtained a medical student's certificate in one of two ways, as follows:

(1) By having successfully completed at least one full year's course in a college or scientific school in the United States, or having pursued an equivalent course of study at some European institution, the question of the equivalence being determined by the Regents of the University of the State of New York;

(2) By passing an entrance examination conducted in June of any year by the College Entrance Examination Board, or in September of any year by the Committee on Entrance Examinations of Columbia University, or in part by both of these, provided only that if a portion of the examination is taken in June of any year the entire examination must be completed not later than September of the year following

In accordance with the plan prevailing at Columbia University, the candidate for admission to the Medical School must offer 15 points. Of this number, 10 points are prescribed as follows:

English	3
Elementary Mathematics.....	3
" Latin	2, and either
" French or German.....	2

The remaining 5 points that are required may be chosen from any one of the following subjects:

Botany, Chemistry, Drawing, Elementary French (if not offered among the 10 points required), Intermediate French, Advanced French, Elementary German (if not offered among the 10 points required), Intermediate German, Advanced German, Elementary Greek, Advanced Greek, Elementary History, Advanced History, Advanced Latin, Advanced Mathematics, Elementary Physics, Advanced Physics, Physiography, Spanish, Zoology.

While it is the expectation of the president and faculty that these new entrance requirements will materially reduce the number of students of medicine at Columbia, it is confidently believed that the higher standards will result in attracting the very best class of medical students to Columbia, and will pave the way for raising the standard of admission still more in the near future.

The American Laryngological, Rhinological, and Otological Society.—At the last meeting of this society Dr. J. A. Stucky, of Lexington, Ky., read a paper in which he said that uric acid excited inflammatory reaction in mucous membrane. The excessive elimination of uric acid and the inability of the organs to comply with this demand caused it to be deposited in other organs. The local manifestation of the diathesis might not be confined to the larynx, but might make its appearance in the nasal and gastro-intestinal tracts. The attack caused primarily no lesion. It might be ushered in suddenly by a sensation of fulness in the throat, increased by swallowing. There was a constant desire to swallow, and the throat had a rigid feeling and was hot and dry. There was only slight elevation of temperature. The redness and swelling were more marked behind the posterior pillar of the fauces, the other portions of the throat being very slightly congested. The uvula was often rigid, swollen, and œdematous. In most cases there was a pricking and itching as if a foreign body were present. It was sometimes an immediate precursor of articular rheumatism. Overindulgence in eating and drinking was often as much the determining cause as exposure to cold. Local treatment was of value only because of its psychological effect. Marked relief was afforded by an initial cleansing of the nose and throat with a hot alkaline solution. The drugs indicated were those which increased the alkalinity of the blood. The salicylates combined with minute doses of pilocarpine should be given and repeated until a free action of the skin had been secured. Daily exercise, with restricted diet, would give the most favorable and lasting results.

Hospital Buildings and Endowments.—The Foreign Mission Board of the Southern Baptist Convention, located in Richmond, Va., has just accepted an offer of \$2,500, made by relatives of the late Dr. John Stout, of South Carolina, for the erection to his memory of a missionary hospital to be

located in South China. The hospital will be erected at Wuchow, in South China. The Rev. Thomas McCloy, a medical missionary working under the board, will be in charge.—Two subscriptions, one for \$500 and another for \$1,000, have already been received by those interested in the building of a new children's free hospital in Milwaukee. A meeting was held at the residence of Charles Patton, at which the first definite steps for raising a fund of \$25,000 were taken.—The plans for the new Kellogg Sanitarium, to be built in Battle Creek, Mich., are completed and have been practically accepted. The plan calls for a five-story structure, similar in design to the treasury building at Washington, D. C.—A marine hospital at Savannah is now assured. The bill has passed both the House and the Senate; the President has signed it, and steps will be taken at once to carry out the provisions of the act. On hundred and twenty-five thousand dollars has been appropriated for the building.—Papers incorporating the Emergency Hospital of the Sisters of Charity, as approved recently by Judge Kruse, of the Supreme Court, have been filed with the county clerk.—A large laboratory for anatomical purposes is in contemplation at the University of Chicago. The proposed new structure is to be erected on Marshall field, the 'varsity athletes' training ground, across Ellis Avenue from the campus proper, and to cost, so some have estimated, between \$500,000 and \$1,000,000.—The House of Rest for Consumptives, a corporation recently organized by Woodbury G. Langdon, Howard Townsend, and Charles F. Hoffman, has bought a site at the north end of University Heights, in this city. Plans are advanced for the immediate construction of a commodious home. The ground overlooks the Hudson and Harlem rivers. A few old frame houses stand on the tract. The only modern structures in the neighborhood are the big Episcopal House of Mercy buildings.—Mayor Knight, of Buffalo, has vetoed the bill recently passed in Albany by the State Legislature which empowered the city to issue bonds in the sum of \$50,000 for the purchase of a new site for the proposed new Quarantine Hospital.—A new amphitheatre is to be constructed in the Child's Hospital, Albany, for the use of the students who attend the clinics at that institution. The amphitheatre will be located in a room formerly occupied as a sun bathroom, on the Elk Street side of the building, and will have a seating capacity of eighty-five.—It is announced by Dr. L. D. Rogers, of the National Medical University, Chicago, that school buildings are to be erected at a cost of \$1,000,000 to occupy a site overlooking Lincoln Park.—James R. Keene has given to the Good Samaritan Hospital, at Lexington, Ky., \$1,000. The buildings are to be remodelled and \$2,275 was subscribed toward this end. It will be necessary to have \$12,000 in order to make the changes and additions contemplated.—Theodore L. Frothingham, appearing for the Brooklyn Hospital, and Henry W. Maxwell, representing the Long Island College Hospital, have asked the board of estimate for larger appropriations than those two institutions have hitherto received from the city. They declare that the managers of the two hospitals named, as well as those of the other private hospitals

in Brooklyn cannot maintain their institutions on the appropriations they are at present allowed.—According to information received from Washington, an amendment has been inserted in the sundry civil appropriation bill whereby \$60,000 is to be appropriated for a marine hospital in Buffalo.—All the property owned by Mrs. Julia E. Brick in Ocean county, N. J., is devised to the Brooklyn City Hospital for the use and purposes of the corporation. The sum of \$9,000 is bequeathed to the Brooklyn Children's Aid Society.—The German-American Charity Association, of Chicago, has raised donations amounting to \$12,000. The beneficiaries are: Alexian Brothers' Hospital, the Altenheim, German Hospital, St. Elizabeth Hospital, German Society, Uhlich Orphan Asylum, Chicago Maternity Hospital, Home for Destitute and Crippled Children, Visiting Nurse Association, Chicago Orphan Asylum, Chicago Relief and Aid Society and Daily News Fresh Air Fund.—On March 24th, the birthday anniversary of the late Louis Schwabacher, a memorial gift of \$5,000 was presented in his honor to the Mount Zion Hospital, of San Francisco, through its president, William Haas.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 5, 1902:

DISEASES.	Week end'g Mar. 29		Week end'g Apr. 5	
	Cases	Deaths.	Cases.	Deaths.
Typhoid fever.....	18	9	16	2
Scarlet fever.....	328	22	380	28
Cerebro-spinal meningitis.....	0	6	0	2
Measles.....	689	30	614	22
Diphtheria and croup.....	339	46	357	52
Small-pox.....	69	4	75	20
Tuberculosis.....	295	166	262	150

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 5, 1902:

- ARMSTRONG, E. V., Passed Assistant Surgeon. Granted leave of absence for six months on account of sickness.
- BACHMANN, R. A., Assistant Surgeon. Ordered to the Naval Academy.
- CARPENTER, D. N., Passed Assistant Surgeon. Ordered to the Naval Hospital, Newport, Rhode Island, for temporary duty.
- CURL, H. C., Assistant Surgeon. Ordered to the Naval Hospital, Mare Island, California.
- GRIFFIN, W. E., Assistant Surgeon. Detached from the Naval Hospital, Newport, Rhode Island, and ordered to accompany a detachment of marines to the Philippine Islands.
- STONE, M. V., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the *Constellation*.
- WARD, B. R., Passed Assistant Surgeon. Detached from the Boston Navy Yard, and ordered to the *Lancaster*.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending April 5, 1902:

Smallpox—United States.

California....	Los Angeles....	Mar. 15-22....	4 cases.	
"	San Francisco....	Mar. 16-23....	4 cases.	
Colorado....	Denver....	Mar. 15-22....	9 cases.	
Florida....	Jacksonville....	Mar. 22-29....	3 cases.	
Illinois....	Belleville....	Mar. 22-29....	1 case.	
"	Chicago....	Mar. 22-29....	14 cases.	
"	Joliet....	Mar. 15-22....	1 case.	
Indiana....	Evansville....	Mar. 22-29....	3 cases.	
"	Indianapolis....	Mar. 14-21....	21 cases.	
Kansas....	Wichita....	Mar. 22-29....	1 case.	
Kentucky....	Covington....	Mar. 23-30....	13 cases.	
Maine....	Portland....	Mar. 22-29....	3 cases.	
Massachusetts....	Boston....	Mar. 22-29....	15 cases.	4 deaths.
"	Cambridge....	Mar. 22-29....	3 cases.	1 death.
"	Lawrence....	Mar. 22-29....	1 case.	
"	Medford....	Mar. 22-29....	1 case.	
"	Newburyport....	Mar. 15-22....	2 cases.	
"	Taunton....	Mar. 22-29....	1 case.	
Michigan....	Detroit....	Mar. 22-29....	15 cases.	
"	Grand Rapids....	Mar. 22-29....	1 case.	
"	Ludington....	Mar. 22-29....	9 cases.	
Minnesota....	Minneapolis....	Mar. 15-29....	31 cases.	
Montana....	Butte....	Mar. 23-30....	2 cases.	
Nebraska....	Omaha....	Mar. 22-29....	29 cases.	1 death.
New Jersey....	Camden....	Mar. 22-29....	2 cases.	
"	Hudson County....	Mar. 23-30....	38 cases.	7 deaths.
"	Jersey City....	Mar. 23-30....	25 cases.	
"	Newark....	Mar. 22-29....	11 cases.	9 deaths.
"	Passaic....	Mar. 1-15....	2 cases.	
New York....	New York....	Mar. 22-29....	69 cases.	4 deaths.
"	Yonkers....	Mar. 21-28....	2 cases.	
Ohio....	Chillicothe....	Mar. 22-29....	2 cases.	
"	Cincinnati....	Mar. 21-28....	18 cases.	
"	Cleveland....	Mar. 22-29....	1 case.	
"	Dayton....	Mar. 22-29....	1 case.	
"	Toledo....	Mar. 22-29....	1 case.	
Pennsylvania....	Lancaster....	Mar. 1-29....	3 cases.	
"	Philadelphia....	Mar. 22-29....	38 cases.	3 deaths.
"	Pittsburgh....	Mar. 22-29....	5 cases.	
Rhode Island....	Providence....	Mar. 22-29....	2 cases.	
"	Warwick....	Mar. 24-Apr. 1....	10 cases.	
South Dakota....	Sioux Falls....	Mar. 22-29....	1 case.	
Tennessee....	Memphis....	Mar. 22-29....	5 cases.	
Utah....	Salt Lake City....	Mar. 15-22....	1 case.	
Washington....	Tacoma....	Mar. 16-23....	4 cases.	
Wisconsin....	Green Bay....	Mar. 23-30....	8 cases.	
"	Manitowoc....	Mar. 1-31....	20 cases.	
"	Milwaukee....	Mar. 22-29....	3 cases.	

Smallpox—Foreign.

Austria....	Prague....	Mar. 8-15....	8 cases.	
Belgium....	Antwerp....	Mar. 8-15....	13 cases.	4 deaths.
"	Liege....	Mar. 8-15....		1 death.
Brazil....	Rio de Janeiro....	Feb. 9-16....		6 deaths.
Canada....	Halifax....	Mar. 23-29....	1 case.	1 death.
"	Hamilton....	Mar. 1-31....	1 case.	
"	Quebec....	Mar. 23-29....	11 cases.	1 death.
Colombia....	Cartagena....	Mar. 10-16....		1 death.
France....	Paris....	Mar. 8-15....		7 deaths.
"	Rheims....	Jan. 5-12....	12 cases.	8 deaths.
Great Britain....	Cardiff....	Jan. 25-Mar. 8....	1 case.	
"	Dundee....	Mar. 8-22....	2 cases.	
"	Glasgow....	Mar. 15-22....	53 cases.	7 deaths.
"	Liverpool....	Mar. 8-22....	23 cases.	1 death.
"	London....	Mar. 8-15....	450 cases.	81 deaths.
"	Plymouth....	Mar. 15-22....	1 case.	
"	Sheffield....	Mar. 1-15....	6 cases.	
"	Southampton....	Mar. 8-15....	1 case.	
India....	Bombay....	Feb. 24-Mar. 4....		7 deaths.
"	Calcutta....	Feb. 22-Mar. 1....		7 deaths.
"	Karachi....	Feb. 23-Mar. 2....	8 cases.	1 death.
"	Madras....	Feb. 15-28....		4 deaths.
Italy....	Naples....	Mar. 1-15....	16 cases.	3 deaths.
Mexico....	Mexico....	Mar. 9-16....	3 cases.	
Russia....	Moscow....	Feb. 27-Mar. 6....	18 cases.	5 deaths.
"	Odessa....	Mar. 8-15....	1 case.	
"	St. Peterburg....	Mar. 1-15....	15 cases.	3 deaths.
Straits Settlements....	Singapore....	Feb. 1-15....		1 death.

Yellow Fever.

Brazil....	Rio de Janeiro....	Feb. 9-16....	17 deaths.
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Cholera.

China....	Canton....	Mar. 29....	Almost disappeared.
"	Sheshing....	Mar. 29....	Sporadic.
"	Tung Mun....	Mar. 29....	Sporadic.
India....	Bombay....	Feb. 24-Mar. 4....	3 deaths.
"	Calcutta....	Feb. 22-Mar. 1....	158 deaths.
Straits Settlements....	Singapore....	Feb. 1-15....	7 deaths.

Plague.

China....	Tsang Shing....	Mar. 29....	20 deaths.
India....	Bombay....	Feb. 24-Mar. 4....	856 deaths.
"	Calcutta....	Feb. 22-Mar. 1....	347 deaths.
"	Karachi....	Feb. 23-Mar. 2....	84 cases.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days Ended April 3, 1902:

BROOKS, S. D., Surgeon.—Granted leave of absence for one day.

CARTER, H. R., Surgeon.—Granted leave of absence for six days from April 1, 1902, under paragraph 179 of the *Regulations*.

STONER, G. W., Surgeon.—Granted leave of absence for one day under paragraph 179 of the *Regulations*.

Promotions.

The following junior pharmacists to be senior pharmacists: J. E. BECK, from March 15th; C. G. CARLTON, from January 13th; H. E. DAVIS, from February 10th; R. F. Troxler, from March 13th.

Births, Marriages, and Deaths.*Married.*

CARTER—HARTSHORNE.—In New York City, on Tuesday, April 8th, Dr. William W. Carter and Miss Elena Hartshorne.

HAMILTON—TOMLINSON.—In Sioux Falls, S. D., Dr. Allan McLane Hamilton and Mrs. Mae Copeland Tomlinson.

JACOBS—GARRETT.—In Baltimore, on Wednesday, April 2d, Dr. Henry Jacobs and Mrs. Robert Garrett.

JAMES—HUME.—In Georgetown, Washington, D. C., on Thursday, April 3d, Dr. Charles James and Miss Elizabeth Hume.

KOERPER—ALLEN.—In Georgetown, Washington, D. C., on Saturday, April 5th, Lieut. Conrad Epping Koerper, Asst. Surgeon, U. S. Army, and Miss Mary Waters Allen.

VAN SLYKE—JOHNSON.—In New York City, on Thursday, April 3d, Rev. Dr. Evert Van Slyke and Dr. Elizabeth Johnson.

Died.

BLOODGOOD.—In Brooklyn, on Friday, April 4th, Dr. Delevan Bloodgood, retired medical director of the U. S. Navy, in the seventy-second year of his age.

BURKE.—In Williamsburg, N. Y., on Thursday, April 3d, Dr. Ulick W. C. Burke, in the fortieth year of his age.

BUTCHER.—In Monterey, Nuevo Leon, Mexico, Dr. Thomas S. Butcher, formerly of Philadelphia.

CARR.—In Carlinville, Ill., on Wednesday, April 2d, Dr. A. C. Carr.

CHURCH.—In Geneva, N. Y., Dr. George Church, in the sixty-first year of his age.

EDDY.—In Olean, N. Y., on Sunday, April 6th, Dr. John L. Eddy, in the seventy-third year of his age.

HALLOWELL.—In Bethlehem, Pa., on Sunday, April 6th, Dr. Sallie Davis Hallowell, in the forty-fifth year of her age.

LANING.—In Oneonta, N. Y., Dr. John E. Laning, founder of the New York Medical Association, in the seventy-ninth year of his age.

MIDDLETON.—In Davenport, Ia., on Saturday, April 5th, Dr. W. D. Middleton, Dean of the Medical Department of the State University of Iowa.

MALONEY.—In Baltimore, Dr. D. T. Maloney, of New London, Conn.

WILSON.—In Kokomo, Ind., Dr. R. Q. Wilson, in the eightieth year of his age.

GUNNELL.—In Washington, on Saturday, April 5th, Dr. Francis M. Gunnell, formerly surgeon general of the U. S. Navy, in the seventy-fourth year of his age.

Pith of Current Literature.

Medical Record, April 5, 1902.

Pathological, Therapeutic, and Clinical Notes on a Few Cases of Malarial Infection. By Dr. J. Herbert Ford.

The Influence of Suprarenals in Pneumonia. By Dr. Ethan Allen Gray.—The author concludes from his observations of the remedy that we have a most valuable heart stimulant, which we are at liberty to use in the presence of impending heart failure, impeded pulmonary circulation, as in pneumonia, and with coexisting renal inflammation. The author has noted peripheral increase of blood pressure in a few instances, but the sign was not permanent. Illustrative cases follow.

Plastic Operation for Restoration of the Sphincter Ani, with Report of a Case. By Dr. Charles H. Chetwood.—After exposing the lower end of the rectum and the edges of the glutei muscles, a ribbon-shaped piece of muscular tissue, about one fourth of an inch in breadth and one sixteenth of an inch in thickness was dissected on each side from the glutei muscles leaving an attachment above. The right-hand strip was crossed to the left, the left-hand strip was crossed to the right underneath the ligamentous connection between the anus and coccyx. The two muscular strips were made to encircle the gut and were fastened by chromicized catgut. To a very small remnant of sphincter muscle left on either side of the rectum, the new muscular strips were attached by additional sutures. The operation was completely successful.

Unnecessary Antiseptic Treatment in Midwifery. By Dr. Valentine Browne.—The author concludes that antiseptic treatment, as recommended in midwifery by many of the modern text-books, is not only unnecessary, but also is not wholly free from danger to the patient.

What can we Diagnosticate in Acute Appendicitis? By Dr. Charles A. Elsberg.—Up to the present time, the author asserts, we are able to recognize few of the pathological changes that have occurred in the appendix. It would be a manifest error to attempt to diagnosticate the pathological condition of the appendix, and to find in the pathological diagnosis the conditions for or against operation. We must find our indications for operation in the condition of the pulse, the pain, the temperature, the general symptoms, and the results of the physical examination. We may, however, learn more of this disease by attempting to have a better pathological knowledge underlie our principles of operative treatment.

Carbolic-acid Gangrene, with Report of a Severe Case. By Dr. John Glendon Sheldon.

Tetanus: Recovery after Thirty-six Days. By Dr. J. Burton Nowlin.

Report of a Case of Foreign Body in the Trachea. By Dr. Walter W. Stebbins.

Are Seeds Potent Factors in the Production of Disease of the Vermiform Appendix? By Dr. James C. Kennedy.

Medical News, April 5, 1902.

Treatment of Acute Puerperal Sepsis from a Surgical Standpoint. By Dr. Hiram N. Vineberg.—The author lays stress on the following points: 1. Every case of puerperal sepsis is wound-fever or wound-infection, and should be treated on the same general surgical principles applying to wound infection elsewhere. 2. Each case of puerperal sepsis, no matter how slight, should be carefully observed and watched from the outset, for we can never tell whether such a case may not develop into a serious infection which will be a menace to life. 3. When a case of uterine sepsis progresses unfavorably after curetting, irrigation, and proper general treatment, as evidenced by the pulse, the temperature, and the condition of the uterus, we are justified in opening the abdomen and removing the uterus, unless, after opening the abdomen, we find some condition outside of the uterus to account for the persistence of the sepsis, or unless we find some condition in the uterus itself, as a single intramural abscess or a localized gangrene, which would permit of removal without ablation of the whole organ. 4. When a uterine infection extends to a tube or ovary, setting up a violent grade of salpingitis or ovarian abscess, the abdomen should be opened without delay and the affected tube or ovary removed. 5. When a uterine infection sets up a septic inflammation of the peritonæum, the abdomen should be opened and the uterus ablated, the peritoneal cavity flushed with saline solution, and free drainage employed through the vaginal opening. 6. To operate for these conditions when the patient is evidently moribund is unjustifiable, and can serve only to bring discredit upon the profession and upon the operation.

Leucocytosis as a Point of Prognosis in Appendicitis. By Dr. Henry M. Joy and Dr. Frederick T. Wright.—The authors assert that the leucocyte count, aside from its diagnostic value, is of great use in prognosis, a high stationary, or an increasing, count indicating that the severity of the case is abating and that operation may be safely postponed. No arbitrary set of prognostic values to be assigned to various degrees of leucocytosis can be constructed. The important point is to follow any scheme in which one learns to have confidence. The count indicates when operation should be performed for the best interests of the patient. Circumstances often render it desirable to postpone operation in appendicular inflammation. Study of the blood-count enables it to be determined whether this may be done with safety and often renders such postponement permissible.

The Antirabic Vaccinations at the New York Pasteur Institute during 1900 and 1901. By Dr. George Gibier Rambaud.—The author's account places the work of the institute in a very favorable light. The author points out that in all cases the dog itself is the "star witness," and should always be kept for observation. As regards cauterization, he asserts that it should never be relied upon. It will tend, however, to lengthen the period of incubation; but, if it cannot be so treated within one hour it is best to treat it antiseptically as any other infected wound. Nitrate of silver is worthless.

Boston Medical and Surgical Journal, April 3, 1902.

Angina Cruris (Intermittent Claudication) and Allied Conditions, including Painful Cramps, with Remarks on the Importance of Examining the Pedal Arteries. By Dr. G. L. Walton and Dr. W. E. Paul.—The concurrence of the paroxysmal pains of angina cruris with pulseless pedal arteries is too constant to be explained by coincidence, though it is true that pulseless arteries may be found without the pains; and, conversely, that such pains may appear with apparently normal arteries. The painful paroxysms are probably of vascular origin, and result from vascular spasm coupled, perhaps, with increased blood pressure acting on vessels already partially occluded, whether from local or general disease, from senile changes, or from congenital tendency to angiofibrosis. Recurring painful cramps of constant seat probably represent a modified form of angina cruris. It is important to examine the dorsalis pedis and posterior tibial, as well as the radial and temporal arteries, in all cases in which it is desirable to estimate the bearing of the vascular condition upon disease in the central nervous system or elsewhere.

Physiological Heart Murmurs Produced by the Electric-light Bath. By Dr. Thomas Howell.—The author has made a number of experiments demonstrating that little weight should be attached to the mere presence of a murmur in making a diagnosis of heart disease. In all, fifty-two persons were examined, with special reference to the effects of the electric-light bath on the heart, and murmurs were heard in the heart or arteries, generally both in nearly every case. In some instances these murmurs were both short and soft, while in others they were rough and long. As a rule, they were evanescent, but sometimes they persisted for twenty or thirty minutes, particularly in the vessels.

A Congenital Malformation. By Dr. Seabury W. Allen.

Poisoning from the Application of Carbolic Acid to the Unbroken Skin. By Dr. J. W. Wainwright.—In this case the carbolic acid was applied immediately after a hot bath in the form of a four-per-cent. solution for the relief of pruritus. The characteristic symptoms followed.

A Case of Dermatitis Medicamentosa. By Dr. William H. Robey, Jr.

The Sign of "Koplic" in the Diagnosis of Measles. By Dr. Enrico Castelli.

American Medicine, April 5, 1902.

The Function of the Army Medical School. By Dr. George M. Sternberg.—The address delivered at the annual commencement of the Army Medical School at Washington, April 4, 1902.

Notes on some Diseases of the Kidney and Bladder in Infancy. By Dr. John Lovett Morse.—The author's experience leads him to believe that diseases of the kidney and bladder are not at all uncommon in infancy, and that the examination of the urine will render a diagnosis possible in many doubtful cases and throw light on many obscure symptoms. It is not enough to examine the urine only in cases in which diseases of the urinary organs are

suggested, because the symptoms of these conditions in infancy are not only almost never characteristic, but usually misleading. It should be examined as a routine procedure, otherwise most of these cases will be missed, and diseases of these organs will continue to be as uncommon in the future as they have been in the past. If it is examined as a routine measure, the author feels sure, there will be a very sudden increase in the frequency of these diseases, an increase, however, seeming rather than real.

The Use of Eggs as a Medium for the Cultivation of the Bacillus Tuberculosis. By Dr. M. Dorset.—By gently shaking the egg until the whole egg contents are mixed, and then hardening at a temperature of 70° C., the author has obtained a medium from which a growth of the tubercle bacillus can be expected so quickly and with such comparative certainty in cultures made upon it, that he believes it will be found of great value to those engaged in experimental work in connection with the study of the organism which is at present exciting such general interest.

The Surgical Uses of the Hair-pin. By Dr. J. Torrance Rugh.—The author mentions several uses of the hair-pin which ought to suggest themselves to the ingenious. If the surgeon bears in mind its omnipresence and the range of its utility he will find himself better equipped to deal with accidents and emergencies of various kinds than he would otherwise be.

Report of a Case of Bacillus Aerogenes Capsulatus, probably Invading the Body from a Gangrenous Lung; Gas Cysts in the Brain of a General Paralytic. By Dr. J. B. Madison.—The case under consideration seems to be the first case reported of cysts in the brain of a general paralytic, known to be due to gas-forming bacilli. In this case the cysts were small and the dilatation of the circumvascular spaces only a little more than is often seen in general paralysis, and for this reason their true nature might have passed unnoticed, and, perhaps, have been considered a part of the pathological process which the brain had undergone in connection with the general paralysis.

A Contribution to the Ætiology of Appendicitis. By Dr. Arthur J. Patek.—While appendicular inflammation may undoubtedly originate *de loco*, the author asserts that there is no question but that in many cases it is a secondary infection, the primary focus being in the intestine proper, the result of an acute indigestion or of a catarrhal inflammation.

Philadelphia Medical Journal, April 5, 1902.

Colorado and the Consumptives. By a Resident of that State.

The Relation of the Tubercle Bacillus to Pseudo-leucæmia (Sternberg's Disease). By Dr. Joseph Sailer.—The author notes that the prevailing opinion among pathologists of the present day is, that there are three forms of disease of the lymph-glands that may give rise to the syndrome characteristic of pseudo-leucæmia. These are lymphosarcomatosis, tuberculosis, and a peculiar infectious process whose cause has not yet been discovered.

but which by some is regarded as the only true form of Hodgkin's disease. No authority, with the possible exception of Sternberg, is unqualifiedly in favor of the view that pseudoleucæmia is always produced by infection of the lymphatic apparatus with tubercle bacilli. The author points out that there is no reason why lymph-glands, the seat of tuberculosis, might not take on the changes and produce the symptoms of pseudoleucæmia, or that lymph-glands characterized by the morbid alterations of pseudoleucæmia and associated with symptoms of that disease, might not become infected with tubercle bacilli. (*To be concluded.*)

Bacterial Purification of Sewage. By Dr. B. H. Buxton.—In a general way it may be said that the bacterial purification of sewage is effected by running the sewage through tanks and coke beds, in which the bacteria grow and multiply, attacking the organic matter in the sewage and breaking it down into simpler non-putrescible compounds. It is not necessary to seed the tanks and beds with special bacteria, since there are countless numbers of the right kind always existing in the sewage, affording a constant fresh supply. The author's article describes the process in detail.

Light and Radiance in the Treatment of Disease. By Dr. George G. Hopkins.—The present article, the third of the series, treats of The Treatment of Carcinomatous Growths by Röntgen Rays. The various forms of malignant disease that affect the face are amenable to the form of treatment. Malignant disease occurring in this part of the body is more odoriferous than in almost any part of the human system. The odor rapidly disappears, however, while under daily exposure to the x ray. Large surfaces in cases involving the greater portion of the cheek of one side, heal very satisfactorily, but not so rapidly as in some other portions of the body.

A Case of Bubonic Plague; Recovery. By Dr. Thomas W. Jackson.

A Case of Thrombosis of the Left Internal Jugular, Subclavian, Axillary, Basilic, and Median Basilic Veins of Unexplained Origin. By Dr. Charles J. Aldrich.

Journal of the American Medical Association,
April 5, 1902.

Some Points in the Management of the Neurasthenic. By Dr. James H. McBride.—According to the author the crop of neurasthenics will never be reduced unless we use our authority and our influence as physicians to induce those who recover, to live as they ought; to get them to live simple, healthy, and active outdoor lives; have them if possible cultivate a taste for Nature and an interest in, and fondness for, the plain and natural living that is a constant support to the nervous system, weak or strong, and the best defense against the bad effects of work indoors.

Medical Education and the State. By Dr. Walter A. Wells.—The author appeals to the medical profession and to the people at large that they shall adopt as broad views upon the subject of health as upon that of wealth; that they shall never cease their efforts until we have a system of medical edu-

cation equal to the best, and until the products of our institutions, stamped as they are with the seal of government authority, shall no longer be discredited and regarded as spurious coin abroad, but shall pass current in any, even the most enlightened countries of the world.

Further Report of a Previously Recorded Case of Blastomycosis of the Skin; Systemic Infection with Blastomyces; Death; Autopsy. By Dr. James W. Walker and Dr. Frank Hugh Montgomery.

A Service View of Hernia. Its Prevalence among Our Troops in the Orient. By Dr. E. F. Robinson.—The author insists that additional care be exercised in the enlistment of men with absolutely sound abdominal walls, and they should not be over weight. Regular exercise should be insisted upon with troops in the tropics, even during the so-called "field service," that the general physique may remain above par. The old abdominal cartridge belt should be discarded, and some form of belt should be adopted to swing the weight from the shoulders without restricting the abdominal muscles.

Hypnotics—Their Use and Abuse. By Dr. Arthur W. Rogers.

An Emergency Case of Cæsarean Section under the Positive Indication, with Termination in Recovery. By Dr. Michael T. Naughton.—The author notes that a satisfactory method of preventing fluids from entering the abdominal cavity will be found by having a rubber dam of such weight as is used by dentists, about one yard square, which should be kept ready for use in hospitals. Through a central circular opening, from one inch and a half to three inches in diameter, it can be slipped over the uterus, and will effectually prevent fluids from entering the abdominal cavity. The buried suture possesses the advantage that after it is firmly tied the upper half of the wound can be thoroughly cleansed of blood, thereby giving the ideal wound surface with no interposing material. The fœtus should be rapidly delivered; otherwise the contracting uterus may grasp its head.

British Medical Journal, March 29, 1902.

Remarks on Cases of Lymphangeiectasis with Enormous Overgrowth of Cutaneous and Subcutaneous Structures. By W. Whitehead, F.R.C.S.—The author reports the following cases: 1. *Removal of upper limb and scapula for molluscum fibrosum.* The patient, a man aged thirty-two years, had had increasing enlargement of the right arm since five years of age. When seen in 1897, the tumor had attained enormous proportions. The right arm was placed upon, and imbedded in, the tumor, which had grown almost entirely on the extensor surface of the limb and around the region of the shoulder joint. The growth ceased at the level of the wrist below, so that the hand was entirely free and could be moved with ease by the patient, and there was practically no abnormal growth of skin over the flexor surface of the forearm and arm. About the lower three fifths of the growth presented the usual appearances of a huge molluscum fibrosum with pendulous folds. Underlying the entire skin from the elbow to the shoulder-joint, so as to

mask deeper parts, was a huge lipomatous growth. Berger's operation (inter-scapulo-thoracic amputation) was performed and the patient made a good recovery. The tumor, with arm and scapula attached, weighed $70\frac{1}{4}$ pounds. When seen in 1902, the patient was in robust health and entirely free from recurrence. The patient's arm was broken at the age of five years; it would appear that the lymphatic spaces in the neighborhood of the injury were originally damaged and a chronic lymphangitis set up, leading to a retarded outflow of lymph, which, in turn, led to great overgrowth especially of the subcutaneous elements.

2. *Pseudo-elephantiasis*. In this case, that of a girl aged eighteen years, the lymphangielectatic growth was situated on the inner side of the left thigh. It dated from her fourteenth year and followed the use of a splint (for supposed hip-disease) which, from the first, caused pain and discomfort. The pressure of the splint set up lymphangitis, which, in turn, caused overgrowth. The growth was removed through an incision along the inner aspect of the thigh, and the patient has remained well, although she has to wear an elastic bandage. A very interesting feature was the increase in size of the growth and lymphorrhœa with each menstrual period.

3. *Pseudo-elephantiasis*. In this case, that of a woman aged forty years, the enlargement of the right leg followed a sprain of the right ankle seventeen years previously. The right leg was four times the thickness of the left, the swelling not extending beyond the knee. Treatment consisted in systematic massage, elastic pressure with bandages, and compression of the femoral artery by means of Skey's tourniquet. The knee, which had become ankylosed in a flexed position, was straightened by sawing through the site of the original joint. All the induration of the leg disappeared and she was able to walk with comfort and freedom.

Remarks on some Points in the Treatment and Morbid Anatomy of Enlarged Prostate. By C. S. Wallace, F. R. C. S.—Judging from the examination of specimens and attempts in the post-mortem room, it does not appear possible to enucleate the prostate in its normal state; the normal organ has no separable capsule. The connection between the prostate and the urethra is even more intimate than that between the prostate and its fibrous covering. When the organ is the seat of an adenomatous hypertrophy it has long been known that certain tumors are enucleable. These are of very various size and shape; they may be round, oval, lobulated, and are often compound. The ease with which they are removed depends upon two factors: Their situation, and their isolation from the surrounding tissue. If they have so grown as to protrude into the bladder, the line of separation, after the incision of the mucous membrane, is soon reached and the enucleation is quickly carried out.

There are no appearances presented by tumors removed from the prostate and supposed to represent the whole organ, that cannot be accounted for equally well by the supposition that they are adenomata. On this theory, the encapsulation, the ease of removal, the absence of bleeding, and the safety of the ejaculatory ducts, can easily be explained. That is, there is no doubt that so-called total prostatec-

tomy is nothing more than the removal of adenomatous masses. There are unfortunately some cases of enlarged prostate which do not present any easily separable tumors, and any attempt at removal simply results in tearing portions of the organ away piecemeal.

Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. By C. Roberts, M. B.—The author has performed Freyer's operation of suprapubic total prostatectomy, on the cadaver with satisfactory results. In a suitable case he opened the bladder, and, having cut away the mucous membrane, easily enucleated the enlarged prostate. The cavity from which the prostate was removed was quite smooth and the urethra was entirely unaffected. The space containing the prostatic venous plexus was nowhere opened up and no extravasation of urine could have taken place. It was found to be impossible to remove the normal prostate in the same way.

A Short Note on the Use of Subcutaneous Injections of Carbohydrates in Exhausting Diseases, and as a Preliminary to Severe Operations. By A. E. Barker, F. R. C. S.—The author draws attention to a method of introducing compounds into the circulation, which may be looked upon in the light of foods, and not merely an innocuous addition to the blood of the water which is so rapidly lost by the lungs, skin, and kidneys. This is the addition to our normal saline solutions of pure glucose. So far he has limited himself to 25 grammes of glucose in twenty-four hours, equal to a litre of five-per-cent. solution, and has never seen any sugar in the urine.

Intravenous Injection of Normal Saline Solution in a Severe Case of Hæmatemesis. By H. E. Bruce-Porter, M. R. C. S.

Single Non-tuberculous Ulcer of the Bladder; Suprapubic Cystotomy; Cure. By Dr. J. B. Christerpherson.—The author reports the case of a man, aged forty-nine years, who had suffered for two years from vesical pain and irritability, and had lost considerable weight. No tubercle could be discovered in any part of the urogenital tract or elsewhere. On opening the bladder by suprapubic cystotomy, a single, simple ulcer was found on the trigone between the two ureters. It was analogous to an anal ulcer produced perhaps in much the same way, namely, by some traumatic influence, and prevented from healing by similar reasons.

Suprapubic Cystoscopy. By E. H. Fenwick, F. R. C. S.

Lancet, March 29, 1902.

The Comprehensive Study of Thoracic Phthisis. By Dr. F. T. Roberts.—In the first of the Lumleian lectures on the above-mentioned subject the author takes up the questions of ætiology and pathology. After briefly touching on the question of the contagiousness or infectivity of thoracic phthisis, he gives the following comprehensive classification of cases from a pathological and ætiological point of view:

A. *Definite Infection from Without.*

1. Those originated in the post-mortem room or in the pathological or bacteriological laboratory.
2. Those in which the infective agent passes di-

rectly from individual to individual. The frequency of direct infection in conjugal or family life is often exaggerated. It does occur and can be explained by prolonged companionship in a small room, personal devotion in nursing, and, not uncommonly, frequent kissing.

3. Those in which tubercle bacilli are inhaled in a room, office, workshop, or other place where care has not been taken with regard to phthysical expectoration, or where proper disinfection after occupation by phthysical patients has not been carried out.

B. Infection from Within: Auto-infection.

Thoracic phthisis may be secondary to a tuberculous lesion in some other part of the body. These lesions are:

1. Affections of the absorbent glands in the vicinity of the chest, especially in the neck and axilla.

2. Diseases of bones and joints, often of traumatic origin, particularly disease of the lower jaw following injury from tooth extraction.

3. Affections of the throat, pharynx, tonsils, or nasal cavities.

4. Ischio-rectal abscess and subsequent fistula in ano.

5. Other more definite tuberculous lesions affecting structures outside the chest, especially abdominal.

6. Latent foci of infection within the chest. Cases originating from such foci may be recognized as a definite group due to auto-infection.

C. Personal Inherent Predisposition.

1. Heredity.

2. Diathesis and temperament.

3. Bodily conformation and general condition.

D. Causes Acting on the General System—Acquired Personal Predisposition.

1. Insanitary conditions and surroundings as regards overcrowding, poor ventilation, uncleanness personal and domestic, cold, damp, insufficient clothing, and other distressing accompaniments of poverty.

2. Deficiency of proper nutriment, either as regards quantity or quality of food, or both.

3. Intemperance and various other injurious habits as well as faulty modes of living.

4. Occupation.

5. Conditions which occasion a prolonged drain on the system, such as prolonged lactation, menorrhagia, etc.

6. Mental depressing causes of various kinds, such as excessive mental work, prolonged mental worry, or melancholia.

E. External Conditions and Environment.

Under this head come the questions relating to climate, season, temperature, meteorological changes, soil, altitude, locality, residence and its surroundings, as predisposing to thoracic phthisis.

F. Special Causes.

1. Air. The great importance of fresh air and plenty of it cannot be overestimated. Most people are still living more or less constantly in an impure or foul atmosphere, often from choice, which cannot but have a powerful influence in the propagation of thoracic phthisis.

2. Alcohol. The evil effects of intemperance in the use of alcohol in relation to thoracic phthisis are appalling and incalculable.

3. Occupation. This ætiological factor accounts

for an enormous number of cases of thoracic phthisis, directly or indirectly. Outdoor occupations are much more favorable except in so far as they entail exposure to cold or bad weather.

G. Local Causes.

1. Ill-formed and ill-developed chests.

2. Traumatic causes may certainly lead, directly or indirectly, to the development of thoracic phthisis.

3. Local irritants which are inhaled and thus come into direct contact with the air passages and pulmonary structures.

4. Coughing, which, when severe and persistent, has a damaging effect upon the apices of the lungs.

5. Pulmonary hæmorrhage, the relation of which to thoracic phthisis as an ætiological factor cannot be questioned for a moment.

H. Local Predisposing Morbid Conditions.

1. Persistent or repeated catarrh of the throat, larger bronchi, or main air passages.

2. Pronounced chronic bronchitis, usually associated with more or less emphysema.

3. Pneumonia of different kinds.

4. Pleuritic conditions.

5. Pressure upon or other obstruction of the trachea or of a main bronchus.

6. Miscellaneous conditions, such as syphilis of the lung, hydatids, etc.

I. General or Remote Predisposing Diseases.

The relation of thoracic phthisis to measles, whooping-cough, influenza, etc., is well known.

Notes on the Treatment of Furunculosis, Syccosis, and Acne, by the Inoculation of a Staphylococcus Vaccine, and Generally on the Treatment of Localized Bacterial Invasions by Therapeutic Inoculations of the Corresponding Bacterial Vaccines. By Dr. A. E. Wright.—In this article the author sets forth the results of some preliminary work recently undertaken in connection with the therapeutic application of anti-staphylococcus inoculations in the treatment of localized staphylococcus invasions. The vaccines employed consisted in each case of staphylococcus cultures which had been sterilized by heating. Six cases were so treated, all of which showed marked improvement except one. The process of bacterial inoculation as applied to a patient who is the subject of a bacterial invasion is, in reality, a process of temporarily taking away a patient's power of resistance with a view to his receiving back that power with usury. It is, in short, a process of trading upon a patient's balance of resistance, and information should be had beforehand concerning the resisting power of the patient.

The Surgery of Non-malignant Gastric Ulcer and Perforation. By C. B. Keetley, F. R. C. S.—(*A continued article.*)

An Example of Universal Hirsuteness. By A. J. B. Squire, M. B.

A Case of Appendicitis in which the Appendix was Lodged in, and Adherent to, the Femoral Canal. By Dr. J. H. Galton.—The above-mentioned case, occurring in a woman, aged thirty-two years, is worthy of record as one of an unusual position of the appendix.

Presse médicale, March 5, 1902.

The Teaching of Surgery in American Universities. By M. Henri Hartmann.

Angina Due to Friedländer's Pneumococcus.—M. André Descos reports a case of angina from which Friedländer's pneumococcus was grown in pure culture.

Technics of Lumbar Puncture in Intra-arachnoid Hæmorrhage.—M. T. Tuffier and M. G. Milian describe their method, which does not differ in essential respects from lumbar puncture for other purposes. They conclude that blood obtained in this manner has its diagnostic value, especially in cerebral concussions, if one observes the mode in which the blood appears and the subsequent phenomena of coagulation which it presents. The yellowish tinge of the cerebro-spinal fluid obtained by puncture is sometimes, but only exceptionally, indicative of a hæmorrhage of the central nervous system.

Undetermined Ulcerative Neoplasms of the Tongue or Buccal Cavity.—M. E. Lenglet says that when one is doubtful of the nature of an ulcerative neoplasm of the mouth, microscopic examination is the most certain way of determination between syphilitic, tubercular, or malignant growths. The result permits the institution of the proper rational treatment. When biopsy is not possible, the injection of calomel by diminishing the infiltration about an epithelioma, is advised, although it may be dangerous to waste precious time if the growth is malignant. The iodide of potassium is always useful for diagnostic purposes, but it can do so much damage when given in cases of unrecognized epitheliomata, that it should never be used in doubtful cases.

Centralblatt für Chirurgie, March 1, 1902.

History of Gelatin as a Hæmostatic. By Dr. Y. Miwa.

Operative Treatment of Sciatica.—Dr. Roman von Baracz says that many cases of sciatica, especially when there has been an inflammatory process of the pelvis or an injury in the gluteal region, are due to abnormal adhesion existing just above the exit of the nerve from the greater sciatic foramen or at the foramen. He suggests, therefore, that in stubborn cases of sciatica the nerve should be exposed at its exit, and any existing adhesions be broken up with the finger. The author then describes the technics of the procedure.

Gazzetta degli Ospedali e delle Cliniche, February 9, 1902.

A Contribution to the Study of the Infections Produced by the Inoculation of Bacteria into the Bladder. By Professor Livio Vincenzi.—The author used a markedly pathogenic germ in these experiments; namely, the *Bacillo opale agliaceo*, which he described as one of the germs producing pseudo-tuberculosis. The animals employed were guinea-pigs, because they are most sensitive to this germ, and for reasons easily understood only females were employed. A few drops of a broth-culture or agar-culture were introduced into the bladder through a small cannula. The author found

that the alliaceous bacillus introduced into the bladder gave rise to a general infection; that this infection became generalized through the lymphatics; and that the kidneys were infected only by the presence of the bacillus in the blood.

The Cerebro-spinal Syndrome in Lead Poisoning (Progressive Saturnine Paralysis). By Dr. G. Bazzicalupo.—The author gives the following classification of the nervous phenomena of chronic lead poisoning:

- A. Nervous symptoms characteristic of lead poisoning:
 - (1) The classic paralysis of lead poisoning.
 - (2) Lead colic.
- B. Nerve symptoms which have features common with typical neuropathies:
 - (1) Cerebral symptoms,
 - (a) delirium;
 - (b) epileptiform convulsions;
 - (c) apoplexy;
 - (d) coma;
 - (e) hysteria.
 - (2) Cerebellar symptoms.
 - (3) Spinal symptoms; which comprise,
 - (a) the irritative form, or neurasthenic form;
 - (b) the form resembling disseminated sclerosis;
 - (c) the tabetic form, and
 - (d) the form resembling amyotrophic lateral sclerosis.
 - (4) The cerebro-spinal syndrome, manifested by progressive paralysis.

The latter class of cases is accompanied by the ordinary symptoms of paralytic dementia produced by other causes, and only the concomitant signs of lead-poisoning can point to the cause of the affection. Neither the suddenness of the onset, nor the test of treatment, can be regarded as a criterion in the diagnosis of these cases, for both are fallacious. Progressive saturnine paralysis is manifested by a gradual decadence of all the functions of mind and body, but the grouping of the various symptoms is not always the same in different individuals. In some cases there is an initial stage, which is characterized by the symptoms of locomotor ataxia or by those of sclerosis in plaques, and these are simply cases in which the morbid process becomes differently localized at the beginning. Another, more frequent, form begins with epileptiform or apoplectiform symptoms, which gradually merge into the dementia. The course of the disease does not differ from that of progressive paralysis from other causes; there is a slow invasion interrupted by periods of comparative quiescence. Death is inevitable, and is almost always due to apoplexy, bulbar symptoms, diarrhœa, cystitis, infection due to bedsores, pneumonia, or to general marasmus. The author reports a case of this class, which he studied in detail. Unfortunately no autopsy was obtained.

Riforma medica, January 27, 28, 29, and 30, 1902.

The Surgical Treatment of Complete Prolapse of the Uterus by Chiarleoni's Method. By Dr. Antonino Noto.—The author reports twenty-one cases in which he operated for complete prolapse of the uterus by the vagino-plastic method of Chiarleoni (*Rassegna di Ostetrica e Ginecologia*, Naples.

1898). His experience with this method leads him to conclude that, in cases of complete prolapse of the genitals, with or without elongation of the vaginal portion of the cervix, Chiarleoni's method is the best, not only on account of the indirect benefits, but also on account of the immediate effects—the prevention of recurrences. Among the gynæcological operations performed by the vaginal route it is the simplest, and is without danger to the patient. This method, moreover, does not interfere with the functions of the internal and external genitals.

January 31, 1902.

Intestinal Perforations Produced by *Ascarides*.

By Dr. Sante Solieri. — A man, aged sixty-seven years, was suddenly taken with a violent pain in the abdomen, followed by vomiting, tenderness, and swelling of the belly, and associated with general symptoms of collapse. On admission, he was unconscious, with a small, very rapid pulse, a dry tongue, foetid breath, frequent vomiting of stercoraceous material, constipation, pronounced meteorism, and suppression of urine. A reducible hernia of the linea alba above the umbilicus, and another in the right femoral region, were noted. The diagnosis was acute general peritonitis with probable gangrenous perforative appendicular inflammation. On laparotomy the peritonæum was found full of pus, fæces, and ascarides. The intestinal loops were distended, of a reddish brown color, and full of fæcal masses. In one of the loops of small intestine, not far away from the cæcum, a round perforation was found opposite the insertion of the mesentery, through which fæces and ascarides protruded. The portion of intestine, which was perforated, was rapidly excised, an artificial anus on the right side was formed, and the toilet of the cavity completed. The patient died nine hours after the operation. At the autopsy the perforation was found to be situated three metres away from the stomach. The perforation was probably due to the round worms.

Roussky Vrach, March 2, 1902.

On Oxidizing Ferments. By N. O. Sieber-Schumoff. — The investigations into the nature of the enzymes has placed the question as to the difference between life and death into the front rank of all biological questions, and has somewhat altered the status of this question. It has been shown that certain processes which heretofore have been regarded as belonging exclusively to living organisms, may take place in the juices or extracts of living cells. Here, the boundary between the living and the dead is removed, for can these processes be attributed to the action of enzymes, or to that of protoplasm or living proteids? The oxydases, or oxidizing ferments, can be isolated from various organs and tissues of the animal organism by different solvents, and their chemical constitution is as yet but little known. The process of oxidation taking place under their influence includes the absorption of oxygen and the emission of carbonic acid. The author has studied the effects of the oxydases upon the toxins of bacteria, and upon abrin, as well as upon simpler inorganic substances, such as calcium peroxide. She has found that the oxydases destroy toxins of bacterial origin, and is now engaged in preparing oxydases of all varieties, in order to test

their effect on bacterial poisons. She found that, notably in fishes, oxydases were abundantly present. In the slime covering most fishes a large proportion of this ferment was found, but oxydases were especially abundant in the gills of fishes, in the genito-urinary organs, and the roe of these animals. In oysters, oxydase can also be easily obtained, and can neutralize bacterial toxins. These facts are to be noted in connection with the question of using oysters as food for the sick. In conclusion, the author urges the importance of oxydases in the life of both animal and vegetable organisms, and predicts that if these ferments could be isolated in a sufficiently pure form, they could be employed as a means of increasing the resistance of the organism to bacterial toxins.

Banti's Disease. By Dr. Sergey Grousdieff (*concluded*). — The author's exhaustive study on Banti's disease leads him to the following conclusions: 1. There are reasons to suppose that the disease described eight years ago by Banti, of Florence, as *splenomegalia con cirrhosi epatica* is not so rare as is generally supposed, and that an acquaintance with its features is a necessity, from the point of view of diagnosis. 2. Of all the teachings of Banti concerning this disease, the weakest is his complete denial of the influence of malaria upon its causation. An exclusion of malaria to such a positive degree is hardly possible in practice. Further investigations should therefore be directed to clear up this point. 3. The scarcity of available data makes it impossible to say what relations to Banti's disease are borne by certain rare forms of cirrhosis of the liver, yet the elucidation of this point will probably throw a great deal of light upon the obscure question of liver cirrhoses.

Some Urological Observations. By Dr. M. L. Krebs (*continued*). — A case of chronic pyelitis is reported, in which catheterization of the ureters and irrigations of the pelvis of the kidney induced a cure. The patient was a middle-aged woman, who had been suffering from symptoms of cystitis for ten years. After a month's treatment enough boric-acid solution could be introduced into her bladder to make cystoscopy possible, but, as the fluid became turbid very rapidly, the ureters could not be observed. After another month's treatment the ureters were seen, and it was found that the urine from the right ureter was clear, while that from the left was turbid. On catheterizing the left ureter and examining the excretion of that kidney, it was found that the urine contained numerous pus cells and gonococci. After another month's treatment of the bladder with irrigation, it was found that no improvement resulted in the frequency of urination and the character of the urine, and the catheter was introduced once more into the left ureter, this time up to the pelvis of the kidney. The latter was then flushed out with 10 grammes of four-per-cent. boric-acid solution, and then with the same quantity of one-per-cent. silver-nitrate solution. The irrigation of the pelvis of the left kidney was repeated twelve times, with a marked improvement in the pyelitis. The pus diminished considerably and the gonococci disappeared. Catheterization of the ureters and irrigation of the renal pelvis are indicated only in ascending pyelitis of inveterate character, and should not be practised in

primary affections of the kidney followed by pyelitis. Other cases are reported in which the ureteral catheter was used as a diagnostic, prophylactic, or therapeutic measure. A case of polypoid growth of the bladder, removed with the operating cystoscope, was also reported.

Erratum.—In the issue of April 5, 1902, the title of the journal abstracted on page 610, first column, should read *Roussky Vrach*, instead of *Vratch*, February, 1902.

Roussky Archiv Pathologii, Klinitcheskoy Meditsiny i Bakteriologii, January 31, 1902.

The Presence of Osteoid Substance in the Protoplasm of the Osteoblasts. By Dr. S. Liguine.—The author has studied the formation of osteophytes in hens, and has found certain spherical bodies in the protoplasm of the osteoblasts, and the nature and source of these bodies give ground for the belief that they are drops of osseous intercellular substance which is forming in the interior of the osteoblasts.

The Bacteriological Diagnosis of Diphtheria. By Dr. S. Korchoune.—After having obtained from the throats and noses of sick and healthy persons twenty-three cultures of a bacillus resembling morphologically that of Klebs-Löffler, the author studied the biology of this germ, and the literature of the subject. He concludes: 1. That a bacteriological examination is necessary for the positive diagnosis of diphtheria. 2. Bacteriological examinations play an important part in the prevention of diphtheria. 3. The pseudo-diphtheritic bacillus of Hoffmann-Willenhof is an entirely different germ from that of Löffler, and belongs to a different biological group. 4. The absence of an acid reaction on ordinary bouillon with peptone of neutral reaction excludes the bacillus of Löffler. 5. The absence of polar granules staining with Neisser's method in germs taken from cultures grown on serum for from nine to twenty-one hours, after repeated search excluded the Löffler bacillus. 6. A single bacteriological examination is sufficient in most cases for a correct diagnosis, without inoculations into animals. 7. In doubtful cases such inoculations give positive proof of the presence or absence of diphtheria.

The Bactericidal Value of Hippus's Apparatus for the Pasteurization of Milk. By Dr. L. B. Bilick.—The author says that the existing pasteurizing apparatuses of Freeman (1893) and Oppenheimer (1899) do not correspond to the ideal requirements. The chief fault of these appliances is, that in them the milk is heated to 75° C., at which temperature one of the chief soluble proteids of milk, lactalbumin, is precipitated, as the result of which the milk becomes less nourishing. It is especially difficult to regulate the temperature of the American apparatus in which such control only depends upon the quantity of milk and the size of the vessel. Hippus, at a meeting of the Moscow Pædiatric Society, in January, 1902, demonstrated a new apparatus, the purpose of which was to limit the temperature of the milk to 65° C. By means of this apparatus the milk is kept at a temperature of from 60° to 70° C. for two hours, and the temperature never exceeds this level. A chemical examination

showed that the milk so pasteurized did not change in any respect. The number of germs in the milk so treated was found not to exceed that commonly occurring in milk sterilized in Soxhlet's apparatus. In some cases the pasteurized milk was found aseptic, especially after interrupted pasteurization. The author's investigations with a series of pathogenic bacteria, such as occur in milk, show that the claims of Hippus's apparatus to be an efficient sterilizer are founded on facts, and that the milk prepared in this manner approaches the ideal raw milk, both in taste and composition. Laboratory experiments, however, are not enough, as the author remarks, and the real test will come in practice.

A Case of Traumatic Tetanus Treated with Serum. By Dr. E. S. Koslovsky.—A peasant lad, aged eighteen years, developed tetanus of average severity, and was treated successfully with anti-tetanic serum. In the course of five days the patient received 90 cubic centimetres of the Pasteur serum, and 10 grammes of the Tizzoni's dry antitoxine. The author comments on the case as one of unusual severity, and one in which more antitoxine was used than commonly. The successful issue was, in his opinion, ascribable solely to the action of the antitoxine. The turn for the worse, which occurred during the first few days of the illness, did not discourage the attendants, as has been usually the case with the majority of those who have reported cases. The exacerbation which took place on the eighth day, after the first dose of Tizzoni's serum had been exhausted and a new dose had to be sent for, serum from the Pasteur Institute being used in the meanwhile, was rather unexpected; but it was followed by a gradual improvement, which came after the injection of the second dose of antitoxine. Bromides and chloral had no influence on the course of the disease.

Miscellaneous.

Enormous Mammary Hypertrophy at Puberty.—Daniel Garcia, director of the Military Hospital of Tepic (Pamphlet, San Luis Potosi, 1900; *Medical Review*, February, 1902) reports the case of a girl who, at thirteen years of age, menstruated for the first time. Precisely when menstruation appeared she ate a quantity of myrtle berries, a fruit of the country which contains much tartaric acid. Menstruation suddenly stopped and never reappeared. She soon noticed that the breasts began to enlarge, but there was no pain or discomfort. They continued to increase so rapidly that at the end of a year she had great difficulty in dressing herself. The right breast reached to the waist, the left still lower. In the second year the left breast extended much lower and more outward than the right, was harder and heavier, and at times the patient experienced a sensation as if it were being compressed.

When an opportunity occurred, the author weighed and measured the breasts with the following results:

Maximum circumference of right breast....	80 cm.
Circumference of pedicle.....	58 "
Maximum circumference of left breast.....	108 "
Circumference of left pedicle.....	60 "
Weight of right breast.....	12 kilogrammes
Weight of left breast.....	28 "

Letters to the Editor.

CHANCROID OF THE EYELID.

40 WEST TWENTY-FIRST STREET,
NEW YORK, March 24, 1902.

To the Editor of the *New York Medical Journal*:

SIR: I was much interested in the article by Dr. M. L. Foster (in the *New York Medical Journal* of March 15th last) upon Chancroid of the Eyelid and in the details of his case, and I was much surprised that the reporter had been unable to find a single case on record in which chancroid of the eyelid had been observed. It so happens that in the *Archives of Scientific and Practical Medicine*, New York, May, 1873, Vol. i, No. 1, I published a case of this affection under the title A Case of Cephalic Chancroidal Ulceration Resulting from Artificial Auto-inoculation, which must have escaped Dr. Foster's search into medical literature. Since this case is so rare, as shown by the publication of my case in 1873 and the second one by Dr. Foster in 1902, these two being probably the only ones on record, I take the liberty of presenting the essential points of my case, which came to my venereal service in the New York Dispensary January 7, 1870. The patient was an Irish laborer who suffered from chancroids of the prepuce and resulting phimosis. Twelve days after my first examination of the case, I observed the following facts, which I copy literally from my original article:

"January 19th.—I noticed to-day an unusual state of affairs over his left eye. Directly over the outer margin of the left supra-orbital ridge, upon which the eyebrows are not developed, and running up to the median line along the ridge, and in this position among the eyebrows, I noticed a thick greenish-brown crust, which was about half an inch in width and an inch and a half in length. In direct continuity with this thick crust, and extending nearly to the median line, was quite a number of smaller and thinner crusts which were somewhat lighter in appearance. Around the large crust the integument was very red for the space of half an inch, and around the smaller crusts was a similar red areola. There was no escape of pus from beneath any of the crusts. The left eye was entirely closed in consequence of the very extensive and active oedema of the upper lid. When I elevated this lid, I saw on its conjunctival surface shreds of a thin fibrinous membrane which resembled somewhat the croupal or diphtheritic membranes observed in this situation. The palpebral conjunctiva was intensely red and thickened; the ocular membrane was not so much inflamed. There was not to be observed any very copious secretion from the eye, and I thought it was serous in its character rather than purulent. From the intensity of the morbid processes, I was convinced that it was more than an ordinary inflammation. Upon questioning the man, I learned that on the 15th of January, while ascending a ladder, carrying a hod on his shoulder, he had stumbled and struck his forehead very violently against one of the higher rungs. The wound had bled quite freely at first and received no other attention than the application of a handkerchief bound around the head. He noticed that on the next day he experienced a

smarting sensation in it and that his eyelid swelled. The swelling continued until it closed the eye, and the smarting sensation became worse. Such were the appearances observed and facts elicited on the fourth day after the accident.

"As I knew the man's uncleanly habits, and that there was a copious discharge from his chancroids, I felt certain that the unusually active condition of the ulceration of the wound on the brow was due to the fact of his having inoculated it with chancroidal pus. By means of applications of water I was enabled to remove the crusts, detaching those on the hairy part of the brow by cutting the hairs which held them. This being accomplished, I saw an ulcerated surface, presenting typical chancroidal appearances and covered with a quantity of pus. The undermining of the edges was very noticeable. The ulceration at the outer angle of the ridge was of a depth of fully half an inch, and it became more shallow as it reached the median line, toward which, on the spots which had been mere abrasions of the epidermis, the ulcerations were superficial yet characteristic. There were evidences of rapid destruction of tissue, particularly in that portion in which the wound had extended through the whole thickness of the skin nearly to the bone. In order that I might verify my suspicions, I made an inoculation with a lancet charged with some of the pus of the ulcer on a spot on the abdomen on a line with and three inches to the right of the umbilicus, which I covered over with a pad of lint three inches in each diameter, and strapped on with strips of adhesive plaster. I took this precaution for fear my puncture should perchance be inoculated by the pus from the penis."

The inoculation puncture developed into a typical chancroid and thus conclusively proved that the ulcer on the eyelids were chancroids. Under proper treatment the patient was cured.

I recall with pleasure the fact that this case was seen on several occasions by my old-time friend, Dr. Foster, the present editor of the *New York Medical Journal*, and many confrères who were then on the staff of the New York Dispensary.

ROBERT W. TAYLOR, M. D.

Book Notices.

Phototherapy. By Professor NIELS R. FINSSEN, Copenhagen. Translated from the German Edition and with an Appendix on the Light Treatment of Lupus, by JAMES H. SEQUEIRA, M. D. Lond., M. R. C. P., Dermatological Assistant and Medical Officer in Charge of the Light Department at the London Hospital, etc. London: Edward Arnold, 1901. Pp. iv-79.

Professor Finsen's book is divided into three parts, devoted respectively to the chemical rays of light and small-pox, light as a stimulant, and the treatment of lupus vulgaris by concentrated chemical rays. In the preface attention is called to the fact that a public institution was established in Copenhagen in 1896, "to make and support scientific research concerning the action of light upon living organisms, and especially to apply the results to the service of practical medicine." As an appendix to

the article on the treatment of lupus, the translator has given a *résumé* of the present status of the treatment, based upon a recent paper by Dr. Forchhammer.

Finsen first proposed the light treatment of small-pox in July, 1893. The theoretical aspect of the question in general is discussed very fully and in a scholarly manner. The influence of sunlight in the destruction of bacteria, on the motion of the earthworms, on the proteus, and on color changes in the chameleon is dwelt upon in particular. The nature of erythema solare in its relation to pigmentation is also explained.

In speaking of the effects of the chemical rays upon the human skin, Dr. Maklakow's experiments are detailed, the chief results of which were: 1. That under the influence of all the rays of light, except the ultra-violet, the skin was unaffected. 2. That under the influence of all except heat rays, a characteristic inflammation developed, thus proving that the ultra-violet and not the heat rays produced the peculiar irritation of the skin. In studying the action of the chemical rays upon the healthy body Finsen finds the tadpole particularly well adapted for experimentation. The sun's rays cause an exudation of leucocytes and red corpuscles, the latter also changing their shape. The action of heat was excluded by the constant application of cold water. In moderate amount the chemical rays are certainly useful; an excess produces harm. The action of light as an ætiological factor in xeroderma pigmentosum, in pellagra, and in the summer prurigo of Hutchinson is thus explained.

After reviewing very fully the history of the influence of light on small-pox, the author comes to the conclusion that the patients must be protected from the chemical rays with as much care as the photographer uses for his plates. Only a candle is permissible for examination and during meals. Treatment should be continued until the vesicles have completely dried up. It should be begun as early as possible after the appearance of the rash. Suppuration will generally not occur, and no scars, or only almost invisible cicatrices, will result. In an appendix to this article the experience of four years is given, up to the year 1898. Fourteen physicians have published their researches. With the exception of perhaps two, all agree in recognizing the happy results of this method of treatment. Out of a total of 140 to 150 cases, in one instance only was phototherapy inefficacious. Finsen adds that one might be less severe in practice as regards the exclusion of light. The results in a room less dark are still good, while perhaps not so striking.

The three portraits accompanying the article show typical cases, and the appended fever charts bear out the statement that no suppurative stage of the disease developed.

The following chapter, Light as a Stimulant, is an interesting but purely theoretical dissertation on the influence of the chemical rays on the lower animals.

The appendix to this article, written in 1899, is a continuation of experiments regarding the influence of direct sunlight. In concluding, the author makes some remarks about the electric-light bath, that is, the exposure of the whole body to chemical rays of light. He says that the incandescent electric-light baths, of American origin, have recently, espe-

cially in Germany, come into somewhat general use and that a great deal of charlatanism has arisen in certain quarters in connection with these baths. He points out that the light from the incandescent lamp contains hardly any chemical rays, certainly not so many as there are in ordinary diffused daylight, and says it must be assumed that the heat rays encouraging diaphoresis contain the therapeutical agent. Finsen's electric-light baths are arranged in the following manner. The patients walk about naked in a court in the sunlight. By frequent sprinkling of water or, if necessary, douches, a low temperature is maintained; or, if the electric light is used, the bath consists of a circular room in the middle of which two chemical arc lights of 100 ampères are suspended about six feet from the floor, and by numerous radiating partitions bath chambers are formed in which the patients lie naked upon couches; the temperature of these baths is so low that artificial heat has to be applied to prevent the patients' being chilled, and the chemical influence upon the skin is just as great as with strong sunlight. Some people are affected with a well-marked erythema at the end of a sitting of ten minutes' duration, while others can bear the same amount for hours, and the skin will be only slightly reddened.

The last chapter, the subject of which is the treatment of lupus vulgaris by chemical rays, written in 1899, naturally excites our keenest interest. Unfortunately, it is very short. The apparatus is described. It consists of a hollow planoconvex lens twenty to forty centimetres in diameter, filled with ammoniacal solution of sulphate of copper and mounted upon a metallic support in the form of a fork which allows the glass to be moved about a vertical and horizontal axis and to be raised and lowered at will. This is all that is necessary when sunlight is used; but for the electric light a more complicated apparatus is necessary. The chamber of the telescope filled with water stained blue by sulphate of copper is dispensed with in the more recent apparatus. Between the two systems of lenses of the telescope, at the distal and proximal ends, there is a layer of ten quarts of distilled water. The intensity of the arc light is given as from thirty-five to fifty ampères. In order to exclude the blood from the regions to be submitted to the action of the light, the author has constructed a compressing apparatus composed essentially of slightly convex plates of glass enclosed in a middle ring furnished with from two to four prolongations; by the aid of elastic bands attached to these and the parts around the heat the apparatus can be fixed in such a manner as to exercise at a given point a uniform and continuous pressure.

During a period varying from several days to several weeks an area of from one to three centimetres in diameter is submitted to the light for at least an hour daily. When the spot appears to have been sufficiently treated, another undergoes the same process, until the whole of the affected area has been subjected to the light. Each patient is attended by a nurse, whose care it is to keep the spot in focus and to see that the light falls perpendicularly upon the pressure glass.

The author adds that during the last six months he has treated some cases of lupus by an improved process with a therapeutic effect which is extremely

rapid. He uses a voltaic arc light of eighty amperes, with lenses of rock crystal. This substance allows the ultra-violet rays of the spectrum to pass, and the bactericidal action of these rays is much more powerful. By means of this process he has succeeded in killing the *Bacillus prodigiosus* in one minute, and he has observed also a lupus of the size of a pea completely disappear after having been subjected to treatment for only fifteen to twenty minutes. Of a total number of fifty-three patients, twenty-three were cured, and some of the remaining thirty are almost well.

The appendix, by the translator, is a *résumé* of a paper read by Dr. Forchhammer before the German Dermatological Society at Breslau, in 1901. Of 456 patients with lupus in whom treatment had been completed at the end of 1900, 130 were known to have been free from recurrence for from one to five years. Of the 117 cases now under treatment there is a prospect of a successful result in forty-two. Fifty-three are described as obstinate cases, and in twenty-three cases the disease recurred under treatment. Forty-four cases of lupus erythematosus were treated, with fourteen cures and fifteen improvements. Among forty-nine cases of alopecia areata, thirty were cured. The treatment was also applied in cases of rodent ulcer and acne vulgaris. No benefit was seen in cases of favus, ringworm, and syccosis. Dr. Sequeira admits that the expense and the length of time of the treatment are drawbacks. He mentions simpler apparatus constructed by Lortet and Genoud, and also a still more recent device by Dr. Bang, of Copenhagen. Unfortunately, no description is given of this apparatus. After finishing the little book one cannot but feel disappointed in finding so little practical information; in fact, it demonstrates that phototherapy has as yet not got beyond the experimental stage. A matter of special regret is that the descriptions of the apparatus are not more definite. The degree of candle power of the arc light, the amount of ampérage necessary, the manner of properly focusing the light into the teloscopic part of the apparatus, etc., are points which allow of so many combinations that unless positive data are given regarding them uniform results can hardly be looked for.

The Principles of Hygiene. A Practical Manual for Students, Physicians, and Health Officers. By D. H. BERGEY, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 495. [Price, \$3.]

The author states that this work has been prepared to meet the needs of students of medicine in the acquirement of a knowledge of those principles on which modern hygienic practices are based; to aid students of architecture to comprehend the sanitary requirements in ventilation, heating, water supply, and sewage disposal; and to aid physicians and health officers to familiarize themselves with the advances made in hygienic practice in recent years. The aim has been to give general principles rather than exhaustive descriptions of the various subjects

of sanitary science; and while this may result in a brevity that will leave some students with the impression that their knowledge is less comprehensive than they might wish for, yet the work is well adapted for the general purposes intended.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, Useful in the Treatment of the Sick. Edited by SOLOMON SOLIS-COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume I. Electrotherapy. By GEORGE W. JACOBY, M. D., Consulting Neurologist to the German Hospital, New York, etc. In Two Books. Book I. Electrophysics—Apparatus required for the Therapeutic and Diagnostic Use of Electricity. With 163 Illustrations. Book II. Diagnosis—Therapeutics. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xxii-17 to 242; xii-17 to 323.

These two volumes, which are the first of the series of eleven, in which number will be completed a system of physiological therapeutics, are especially worthy to introduce the system to the American medical public. The system itself is the first of its kind to appear in the English language. Numerous handbooks on the subject of the use of remedial agents other than drugs have appeared in foreign languages, especially in German and French. In fact, the first of a new system appeared in the early part of the year in Germany under the editorship of Goldscheider and Jacob, a work which will be almost encyclopædic in this branch. We are happy to see that America follows so quickly the best efforts of Germany. The fact that this system is edited by Dr. S. Solis-Cohen promises that it will be worthy of American medicine. The fulfilment of the promise is attained in the treatment of the subject of electrotherapy by Dr. George W. Jacoby. The reviewer knows of no other English book on electricity which presents the subject so clearly and in language so freed from technical detail that the simplest mind can understand it. It is, perhaps, owing to the fact that the entire subject of electricity has been dealt with by text-books from the mathematical and technical standpoints that the subject has been so ignored by physicians, who as a class are barely conversant with its fundamental laws. Dr. Jacoby has succeeded in presenting his subject, not only clearly and, as we have said, free from technical and mathematical details, but in a manner which carries interest from chapter to chapter.

The subject is divided into five parts: Part I deals with electrophysics, its fundamental conceptions and the laws based thereon, the various forms of electricity, the effects of the electric current, and the varieties of electromotive force, such as continuous and alternating, sinusoidal, and so on. The second part considers the apparatus required for the therapeutic and diagnostic use of electricity. This section will especially appeal to those who use the street current for remedial purposes, as it deals in detail with such topics as currents from central stations, direct and alternating currents, the dangers of high voltage currents, the methods of using street currents, leakage, rheostats, and limit resistance. A special chapter is devoted to the Röntgen rays.

Part III deals with electrophysiology and electropathology, and concerns itself with the physical behavior of the electric current in the human body, with the electrophysiology of motor nerves and muscles, as well as their electropathology; then follows a similar consideration of sensory nerves and reflex contractions. Part IV deals with diagnosis and prognosis based on the relations of electricity to muscles and nerves. Part V is restricted to electrotherapeutics, and the subject is presented in two sections, the first concerning itself with general and the second with special electrotherapeutics. The work is completed with special articles on electricity in surgery, by Dr. J. C. Da Costa, in diseases of the eye, by Dr. E. Jackson, of the throat, nose, and ear, by Dr. William Scheppegegrell, in gynecology, by Dr. Franklin H. Martin, and in diseases of the skin, by Dr. Ohmann-Dumesnil.

The illustrations are numerous, and fully explanatory of the text.

Libertinism and Marriage. By Dr. LOUIS JULLIEN, Surgeon of Saint-Lazare Prison, Paris, etc. Translated by R. B. DOUGLAS. Philadelphia: The F. A. Davis Company, 1901. Pp. v-169.

There is much in this book which will be of great service to the physician, more especially to the family physician, in helping him toward a right conclusion in many of those ethical "cases of conscience" which from time to time confront him in regard to gonorrhœa and marriage. The author deals with all the various questions that are likely to arise in this connection, and deals with them, on the whole, in a sound, scientific, philosophical, and withal professional method. He points out in unmistakable terms the fallacy of the popular idea of the comparative harmlessness of gonorrhœa, and gives instances of various "difficult questions" that have been, or might be, put to the practitioner, in solving which the latter has to steer his course to a right decision amid shoals and quicksands. It is not always so easy as it seems for a conscientious practitioner to give an *ex cathedra* reply on the moral and ethical aspects of some of the problems which occasionally confront him in this subject, and we fancy that he will find himself better equipped to meet such emergencies after a careful study of this little book. There will even be occasions when he may commend it for perusal to some of the laity; but the style in which it is written does not, in our opinion, render its general reading by the laity advisable. Instead, the family doctor and the specialist would do well to master its contents, and, having digested them and assimilated as much as is assimilable under the action of their own knowledge, to lose no seasonable and proper opportunity of enforcing such teaching as tends to the public good, such teaching as will lead to the result so well expressed in the following words of the author in his preface: "Let them" [*i. e.*, candidates for matrimony] "approach the hymeneal altar either quite pure or in the plenitude of regained health. Let them do this by the force of moral conviction, by pride, or even to serve their interests; and such is the power of the currents which carry the world along that I would that Fashion should so direct them, and [should] feel myself honored to have provoked such divine 'snobbery.'"

For decades and perhaps centuries Fashion has lent its influence to the support of vicious customs, as when it decreed that "no gentleman could go to bed sober," "no man could make a good husband who had not sown his wild oats," and, at least tacitly, settled that "a man who had never had a clap was a milksop."

The first of these decrees is already dead, and its throne held by its opposite; the second is dying; let the third also be overthrown among the people, as it is already among the medical profession and the better informed of the public, and let us realize and act upon the truth that, as for a vice, so for a virtue, there is no surer way of making it triumphant than by making it fashionable.

A Text-book of Obstetrics. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania, etc. Third Edition, thoroughly Revised, with 704 Illustrations, 36 of them in colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. ii to 873. [Price, \$5.]

This edition shows the interest of the author in keeping his popular text-book up to date by the addition of new text and new illustrations. Of the latter, more than fifty are new, including three colored plates. They are not only new, but also almost all original. The text has not increased much in extent; on the contrary, judicious pruning in some chapters and additions in others have kept the book of about the same size as the former editions. The most recent literature has been consulted and the most important references of the past three years are given. The improvements in the volume are sufficiently numerous to make the work decidedly superior to the former editions.

BOOKS, ETC., RECEIVED.

A Practical Manual of Insanity. For the Medical Student and General Practitioner. By Daniel R. Brower, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, etc., and Henry M. Bannister, A. M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 5 to 426. (Price, \$3.)

Morphinism and Narcomanias from other Drugs. Their Ætiology, Treatment, and Medicolegal Relations. By T. D. Crothers, M. D., Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 5 to 351. (Price, \$2.)

Text-book of Anatomy and Physiology for Nurses. Compiled by Diana Clifford Kimber, Assistant Superintendent, New York City Training School, Blackwell's Island, N. Y. New York: The Macmillan Company, 1902. Pp. xvi-276. (Price, \$2.50.)

Sewage and the Bacterial Purification of Sewage. By Samuel Rideal, D. Sc. (Lond.), Fellow of the Institute of Chemistry, of the Chemical Society, and of the Sanitary Institute of Great Britain, etc. Second Edition. London: The Sanitary Publishing Company, New York: John Wiley & Sons, 1902. Pp. iii-308. (Price, \$3.50.)

The Röntgen Rays in Medical Work. By David Walsh, M. D., Edin., Physician to the Western Skin Hospital, London, W., etc. Part I.—Apparatus and Methods. Rewritten by Lewis Jones, M. D., Cantab., F. R. C. P., Medical Officer in Charge of the Electrical Department of St. Bartholomew's Hospital. Part II.—Medical and Surgical

(Brought up to date with an Appendix.) Third Edition. New York: William Wood & Company, 1902. Pp. xiv-15 to 316. (Price, \$2.50.)

The International Medical Annual. A Year-book of Treatment and Practitioner's Index. By Various Contributors. Twentieth Year. New York: E. B. Treat & Company, 1902. Pp. xi-688.

Diseases of Women. A Manual of Gynæcology designed especially for the Use of Students and General Practitioners. By F. H. Davenport, A. B., M. D., Assistant Professor in Gynæcology, Harvard Medical School. Fourth Edition, Revised and Enlarged. With 154 Illustrations. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. xv-17 to 405. (Price, \$1.75.)

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. Being Two Lectures delivered at the Medical Graduates' College and Polyclinic on October 2 and 9, 1901. With an Appendix consisting of Two Letters published on November 23, 1901, and on January 11, 1902, in the *British Medical Journal*. By Sir Felix Semon, M. D., F. R. C. P., Physician Extraordinary to H. M. the King, etc. London and New York: The Macmillan Company, 1902. Pp. vi-7 to 130. (Price, \$1.)

Johnson's First Aid Manual. Suggestions for Prompt Aid to the Injured in Accidents and Emergencies. Illustrated. Edited by Frederick B. Kilmer. New Brunswick, N. J.: Johnson & Johnson, 1901. Pp. 2 to 119.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. Th. Puschmann, Weiland Professor an der Universität in Wien. Herausgegeben von Dr. med. Max Neuburger, Docent an der Universität in Wien, und Dr. med. Julius Pagel, Professor an der Universität in Berlin. Dritte Lieferung. Jena: Gustav Fischer, 1902. Pp. 353 to 528.

New York University Bi-weekly Bulletin. Volume II. February 15, 1902. No. 2. March 15, 1902. No. 3.

Transactions of the Luzerne County Medical Society for the Year ending December 31, 1901. Volume IX.

Transactions of the Obstetrical Society of London. Volume XLIII. Part IV. For the Year 1901.

Annual Report of the New York State Reformatory at Elmira for the Fiscal Year ending September 30, 1901. Twenty-sixth Year Book.

Ninth Annual Report of the State Charities Aid Association to the State Commission in Lunacy. November 1, 1901.

Miscellany.

John Lettsom, a Quaker physician and surgeon born in the West Indies in 1744, who rapidly rose in his profession until before the end of the eighteenth century he had become the fashionable physician of London, seems to have been a victim of a wag of his day, who recommends his place in the roll of Fame as follows:

When People's ill they comes to I,
I, John Lettsom
Physicks, bleeds an' sweats 'em.
Sometimes they live; sometimes they die,
What's that to I? I Lettsom.

F. G.

The Creosote Treatment of Pneumonia.—Dr. I. L. Van Zandt, of Fort Worth, Texas, asks us to publish the following:

"In order to prepare a statistical table showing the results of the treatment of pneumonia with creosote or creosote carbonate, I ask the aid of the profession. Let every physician who has given the treatment a trial send me on a postal card during April, 1902, the number of cases treated and num-

ber of deaths. State whether of record or an approximation. Please answer yes or no to the following questions: 1. Do you believe creosote ever aborts pneumonia? 2. Do you believe the majority of cases are mitigated by it? 3. Have you found cases which, having plenty of time, were entirely uninfluenced by it?

"To every one favoring me with a report I promise to mail a copy of the condensation of reports. If the remedy is what some of us think, the world ought to know it. If we are deceived, we ought to be undeceived. Therefore send on the reports."

The Anatomy of the Levator Ani in Women.—

At a meeting of the New York Obstetrical Society, held on February 11th, Dr. W. E. Studdiford read a paper in which he first reviewed the various opinions which had been held by different authorities with regard to what constituted the main support in the pelvic floor. It was the difference of opinion among writers with reference to this point which had led him to make a series of dissections and frozen sections of this region of the body. The paper was offered as a preliminary report of some of the findings of the investigations.

The levator ani muscle, together with the external sphincter, undoubtedly formed the chief supporting structure of the pelvic floor, and the layers of the pelvic fascia, except in so far as they formed a sheath for the muscles, might be disregarded. The levator ani was usually described as forming with its fellow of the opposite side a sling or horseshoe-shaped muscle, consisting of numerous thin, flat bundles of muscular fibres that were often separated from one another by bands of connective tissue, and the whole as being bound together by the rectovesical and anal fasciæ. The origin of the muscle was partially bony and partly fascial. The posterior portion, arising from the inner side of the spine of the ischium, was inserted into the third or fourth coccygeal vertebra. The middle, or fascial, portion of the muscle arose from the tendinous arch that marked the division of the pelvic fascia into the rectovesical and the obturator fasciæ. The fibres were often widely separated and, passing downward and backward, often becoming tendinous, were inserted into the tip of the coccyx.

These two portions of the muscle, on sections made in the planes of the pelvis, had the shape of a wide V which narrowed as the outlet was approached. They were probably not required to bear much of the strain placed upon the pelvic floor. The anterior portion of the levator ani was the important portion of the muscle. It arose from the inner surface of the horizontal portion of the pubic bone, about half an inch from the middle of the symphysis and three fourths of an inch from the lower border of the ramus. Its fibres passed almost horizontally backward, forming a well-rounded band that was in marked contrast to the other portions of the levator. The muscle passed along the side walls of the vagina, with which its fibres were strongly united. The belly of the muscle swept backward in close relation with the external anal sphincter, was closely attached to the rectum, and, surrounding its lower end, united with its fellow of the opposite side. The relations of the fibres to the external anal sphincter had not been sufficiently em-

phasized. The fibres interlaced so intimately that separation of the two muscles by dissection was almost impossible. The insertion of the anterior fibres of the levator also seemed to vary in different subjects, while many of the fibres, occasionally all, surrounded the lower end of the rectum, a distinct portion of them usually passing directly backward to the tip of the coccyx. This variation, it seemed probable, depended largely upon the size and strength of the external sphincter; when it was small, the levator fibres passed around the lower end of the rectum and aided the action of the sphincter, so that a distinct strong band of muscle passed from the pubes to the coccyx, most frequently by direct fibres, but often through the attachment of the external sphincter.

On making sections parallel to the long axis of this muscle, it was seen that they did not form the sling-like muscle so often described, but were more like a narrow V, the sides of which had a slight convexity toward the median line, and its opening was situated at the tip of the coccyx. The vagina appeared as a crescentic opening, and the rectum as a slit parallel to the long axis of the muscles. In the space between the vagina and the rectum there was a spindle-shaped band of tissue, distinct to the naked eye, lying between the two halves of the levator ani; it was about one fourth of an inch in width in the median line and three eighths of an inch where it joined the levator. This band of tissue, upon microscopical examination, seemed to be made up almost entirely of involuntary muscle, the fibres running in every direction and being closely attached to the levator ani.

That these fibres were important, a study of their relations to neighboring structures and their probable action would at once determine. Clinically, as shown by Dickinson, the levator ani muscles could be felt about half an inch inside the vaginal opening as they pass along the sides of the vagina, and continuous with these, where the pelvic floor was intact, a muscular band seemed to surround the posterior portion of the vagina; this band of tissue was capable of great distention, and also had power of marked contraction, as seen in cases of vaginismus. These fibres corresponded in location to the involuntary fibres already described. By their action the two portions of the levator ani were drawn close together, the posterior portion of the vagina was drawn upward under the pubes, and, with the halves of the levator approximated, the muscles were in a better position to draw the rectum and coccyx forward. These fibres also seemed to be in close relation with the anterior end of the external sphincter, and tended to draw it nearer the pubes.

The presence of this band of involuntary fibres would seem to put an end to the criticism that the levator did not furnish a continuous support. The probabilities were that under normal conditions the supporting mechanism was so nicely adjusted that little action on the part of the levator was required, and that when action was necessary, it was regulated by these involuntary fibres that acted automatically. It was known that during pregnancy there was an increase in the pelvic-floor projection, and that the perineal body was increased in length and bulk. It seemed reasonable to suppose, although as yet an opportunity had not been given to

prove the proposition, that this involuntary band of fibres increased in size and thickness the same as the uterus; as a result the levator and muscles were strengthened to withstand the added pressure of the ante-partum period. At the same time dilatation of the vulva during labor was more readily explained and seemed to be analogous to dilatation of the cervix. When injury to the pelvic floor occurred, it was these fibres that were torn, usually at or near their junction with the levator ani.

Involution probably took place in these fibres just as it did in the uterus, and the process was interfered with if laceration took place, unless such injury was at once repaired or healed spontaneously. If the injury persisted, relaxation of the pelvic floor must be the inevitable result, the degree depending on the extent of the injury to these fibres. The levator fibres were no longer bound together, and could not act with the same force, the vagina could be drawn so close to the symphysis, and the external sphincter, having lost more or less of its anterior attachment, sagged downward and backward, and the normal sigmoid curve found in the lower end of the rectum became straightened or lost entirely. The levator muscles were no longer so well regulated in their action, and the pelvic contents, losing their equilibrium, began to gravitate toward the outlet until there was the inevitable prolapse of the vaginal walls, with all the uncomfortable symptoms attending it.

Having these anatomical relations in mind, how should such injuries be repaired? The success of Emmet's operation, when properly done, seemed to be due, not to the restoration of the fascia, but to the fact that the sutures drew some of the torn involuntary fibres together and restored the relation of the external sphincter to the levator. During the past eighteen months, in Dr. Coe's service at Bellevue Hospital, the following procedure had been practised with success: The usual triangular or butterfly denudation had been made, choice depending on the amount of relaxation, the depth of the sulci, and the increase in surface area of the vaginal mucous membrane; after drawing together the upper angles of the denudation by Emmet's method, one or two sutures of either chromicized or large-sized plain catgut were buried in the following manner: The suture entered the upper margin of the external sphincter, the sphincter was then drawn forward and the needle reintroduced under the denuded tissues and passed out to or through the muscle of that side and then down to the point of entrance; when this suture was tied not too tightly, the pelvic floor was drawn up and the levator fibres were approximated. The mucous membrane was now united by interrupted sutures; the suture was somewhat similar to the crown suture of Emmet, except that it had three definite points at which it was attached. While some of the points brought out were in a measure new and were not absolutely proved, they seemed to explain some of the mechanism of the pelvic floor that heretofore had been obscure.

The extent and direction of the involuntary muscle fibres could only be determined by several sections in normal pregnant and post-partum subjects; material and apparatus for such investigation had not been at hand, but when they were obtained the result would be reported to the society.

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Special Articles.

CHOLELITHIASIS, CHOLECYSTITIS, AND CHOLANGEITIS.

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II.—TREATMENT OF CHOLELITHIASIS; CHOLECYSTITIS.

Treatment.—While nearly every case of a fully formed stone in the urinary bladder calls for surgical interference to get rid of it, scarcely one out of twenty, and in my experience but one out of thirty, of those who suffer from gallstones will ever need to undergo an operation. This fact should be emphasized, because the judgment of surgeons is prone to be influenced by their experience, and as they see, not ordinary cases of cholelithiasis, but rather extraordinary ones, they are apt to look upon most chronic cases at least as hopeless without surgical measures. In such a question hospital experience is misleading, not only because properly surgical cases are proportionately more numerous in hospitals, but particularly because the after-history of the patients who recover without operation is rarely obtainable. On the other hand, general practitioners are often able to report cases of repeated attacks accompanied by the most serious symptoms and recurring for years together, but ending finally in complete recovery. Thus, to cite my own experience on this question, out of a much larger number seen in my private practice, I have full notes of thirty-one cases, in each of which I was able to follow the patient's subsequent history. Of these thirty-one private patients, six were males and twenty-five were females. The attacks were single, or happened only once, in four, all women. There were multiple attacks in all the remainder, occurring at different times in one year in nine, two males and seven females; occurring through two years or less than three years in eleven, one a man, the rest women; through three or less than four years in three women; during four to six years and over in four, one a man and three women. Of these thirty-one patients, only one was recommended to submit to a surgical operation. Her hepatic symptoms dated back about a year and a half, and her case has

been referred to already as one of suppuration of the gall-bladder with seventy-six calculi removed at an operation. Four of the above-mentioned patients, all women, died afterward from other causes, with one possible exception, as the particulars of her last illness I have not been able to obtain. It must be further stated that many of them were not only chronic, but severe cases. Thus, one patient, a man, had frequent violent attacks covering a period of four years; another, a woman, was repeatedly jaundiced for five years with a tendency also to subcutaneous hæmorrhages; another, a woman, became greatly emaciated from recurring attacks accompanied with jaundice for five years; and another woman had her attacks extend over ten years, in one of which she was confined to bed for two months with grave symptoms of septicæmia. Besides these, I have seen a number in consultation with other physicians, and naturally these were of a more or less serious character to be brought finally to me for advice. One, an elderly lady, had become greatly reduced in flesh by attacks extending over four years, but after two months' treatment, in 1895, she has remained well since. Another patient, a man, began with his attacks in 1890, first about every three months, with the intervals growing shorter till they occurred every three weeks, until in four years they came every other day, accompanied with persistent jaundice and great emaciation. When I saw him, in March, 1894, he could find no relief except by hypodermics of morphine. He soon began to improve after the treatment recommended, which he kept up for three months, and his physician reports in January, 1902, that he has remained well ever since. Another patient, the wife of a physician whom I saw six years ago, had suffered for nine years with attacks accompanied with jaundice until at my visit she rarely escaped a week. After four weeks' treatment she recovered permanently.

In none of these severe cases was the relief immediate, so that it could be ascribed to the passage at one time of a single calculus, with consequent cessation of symptoms. The gradual and not sudden recovery, with recurring but progressively milder attacks till final relief occurred, is a suggestive clinical fact, as we shall see.

The practical question which such a record raises is Why should medical treatment alone suffice to relieve the great majority of patients with biliary

calculi, while only a surgical operation can be recommended for one with a urinary calculus? The first answer is that a urinary calculus is a stone, while a biliary calculus is not a stone, but something very different. It is the erroneous impression which the term "stone" conveys which so commonly obscures all discussions about treatment. The constituents of gallstones instead are in the majority of cases derived from the decay of albuminous structures, and these concretions are so light that they float in water when dried, so that they resemble pieces of hardened cheese more than stones, and bacteria accordingly can live in them indefinitely, while their composition is such that they are soluble in quite a variety of media. This has long been known in the case of oils, and while it is a mistake to imagine that gallstones can be directly reached in the body by oils taken by the mouth, yet some observations on this subject are worth notice, because, as I shall show, oils specifically increase the flow of secretions which are themselves efficient solvents. Thus, Dr. Lindley Scott¹ reports his experiments with gallstones immersed in olive oil at 98° F. In experiment 1, on the calculi (number not stated) of "about the size of a green pea," passed by a patient, they lost approximately one quarter of their weight in twelve hours, one half in twenty-four hours, and in thirty-six hours little was left but the nucleus. In experiment 2, the stones were removed from the gall-bladder by operation, were somewhat larger than cherry stones, and seemed to contain a larger proportion of pigment and salts. They dissolved much slower, but lost 52 per cent. of their weight in four days. In experiment 3, the stones, also removed by operation, were as large as filberts, and it was not until fifteen days' immersion that they lost 53 per cent. of their weight, showing that the rate of solubility was inversely proportional to the weight of the stone.

While such experiments only show that gallstones are readily dissolved outside the body, clinical experience as certainly suggests that something analogous often happens inside the body. Patients with unmistakable attacks of the kind constantly recover without operation, but how?

There are only three ways in which we can suppose that an offending gallstone can be disposed of. One, and in my opinion the least common way, is for the calculus to be discharged into the intestine. It might be supposed that this was the usual event, but I venture to say that, even with the most careful search for it in the passages from the bowels, a gallstone is found in not more than one in ten of those who have just recovered from a severe attack. The impression that a gallstone must have passed out after both pain and jaundice have subsided is due to

confounding biliary with urinary calculi, for the latter have only one way in which they can pass, because the stream which carries them flows only in one way. But the flow of bile which carries a calculus is first from the gall-bladder and then back into it. If, therefore, a calculus has distended either the cystic or the common duct for a certain distance, it is much easier for it to be carried back through the distended portion by the normal regurgitation of the bile when that occurs than to pass on through the still undistended part. Something of this kind must always occur in those cases marked with intermittent jaundice, in which the calculus seems to act like a ball valve. That a bile duct, once distended, is apt to remain so is further rendered probable by the fact that those who do finally pass a gallstone *per anum* are very likely to do the same again with the next attack, while others may have twenty attacks without a gallstone being found once.

The second possible mode of relief is that the calculus is simply floated back into the gall-bladder, there to remain, as ninety-five per cent., according to Kehr, of gallstones do, without giving further trouble, or else it may act like a piece of cork which has been forced into a partly full bottle and which engages in the neck or floats back again, according to the movement of the contained liquid. The third possible explanation is that the bile itself in time dissolves the calculus into a detritus which is finally expelled without being discoverable in the fæces.

I believe that this last process is much more common than is generally supposed, and that, if so, one of the chief indications in the treatment of gallstones is to increase as much as possible the flow of normal bile, for it should be remembered that, as previously stated, gallstones do not come from the liver and are not formed out of bile. It is only when concentrated bile becomes loaded with the products of a local mucous catarrh induced by bacterial infection that such concretions can form, and nothing would be more likely to arrest this abnormal condition than a free influx of pure limpid bile, which is itself a very watery liquid with marked solvent properties. Now, it is a significant fact which tends to support this view that all the remedies which have been found beneficial in the medical treatment of cholelithiasis have this in common, that they increase the flow of bile. This, however, would be just the reverse of what should be desired if gallstones were insoluble in bile and grew by addition from bile, nor, as it is, should this aim be sought in the case of a hard impacted calculus in the common duct, which nothing but an operation can remove.

If, on the other hand, normal bile is capable of dissolving gallstones, we can readily see that it may require a free flow for a number of weeks to do so.

¹British Medical Journal, September 5, 1897.

as it would have first to check the catarrhal process in the walls of the biliary passages while it was also acting on the concretions themselves. The clinical history of the patients whom I have watched as they recovered under treatment from chronic cholelithiasis fully bears out this surmise.

The first indication in the treatment of cholelithiasis is to prevent bacterial invasion from the intestines. The commonest condition which favors this infection is an unhealthy state of the intestinal walls, induced by chronic constipation, for it is noteworthy how commonly these patients admit that they have always been constipated and have had to use laxatives for years to have their bowels move at all. This condition also naturally explains the special proclivity of women to this complaint. It is doubtless due to the clearing away of adherent mucus in the "dry" catarrh of the intestinal walls in chronic constipation that the waters of Carlsbad, as well as many other saline laxatives have gained such a reputation in the treatment of gallstones. I regard these agents rather as preventive than curative in their operation, but of such undoubted efficacy as such that their systematic administration is always indicated. A serviceable procedure for this purpose is to prescribe alternating doses of two drachms of sodium sulphate, or sodium phosphate, or Carlsbad salts to be dissolved in a tumbler of hot water with ten grains of sodium salicylate every morning on rising, the water to be sipped slowly. By changing the saline every few mornings the laxative effect of the prescription is much prolonged. A weekly or a biweekly mercurial laxative taken at night is also of the greatest service for intestinal antisepsis and I never fail to enjoin it. With some elderly patients, however, castor oil works better than anything else, and should always be tried when mercurials seem to cause more than a day's discomfort.

As true cholagogues, we may safely rate the sodium salicylates and the sodium benzoate. I prescribe them constantly together, to be taken for prolonged periods in doses of ten grains each, one hour after meals, either in capsules with Vichy water or in solution in the same mixture. Larger doses, especially of the salicylates, are not necessary. In old persons with thickened arteries and weak hearts, four or five grains of the sodium iodide is a good addition. In former years, owing to its marked effect in increasing the flow of bile, I prescribed the *spiritus ætheris compositus*, or Hoffmann's anodyne, for prolonged administration in cholelithiasis, and, as I think, with very good results. But many persons find it difficult to take it, from the gastric uneasiness which it occasions. The same objection applies to the spirit of chloroform.

Much the most efficient agent against gallstones is olive oil when properly administered. For some

time a natural prejudice against this remedy was excited by mistaken views of its mode of action and of the quantity needed therefor. It was recommended in doses from half a pint to a full pint, to be taken at one time, apparently on the theory that a part of this bulky prescription might pass up and lubricate the biliary passages themselves, and the masses of saponified oil which were afterward found in the passages were taken for softened gallstones. Some patients were undoubtedly relieved by this procedure, for reasons which I shall soon explain, but there is no necessity whatever for any one to be asked to stomach such a formidable potion as that. The true mode of operation of oils in cholelithiasis, to whose efficacy physicians all over Europe and America are now bearing testimony, is that there is nothing like oils to induce a watery flow from mucous membranes, whether applied locally or taken internally. One has but to introduce a few drops of olive oil into his nose to prove that, and as a domestic remedy mothers have been accustomed from of old to grease the nostrils of children with a cold in the head. No sialagogue can equal a teaspoonful of olive oil held in the mouth, on the principle that the contact of oils at the mouth of any secretory duct will start the flow from that duct. Taken internally, medicinal oils are absorbed into the blood and then, according to their kind, pass out by different mucous tracts, exciting an abundant flow of watery secretions derived directly from the blood vessels of the part, so as specifically to modify their local circulation when congested or inflamed. We see this illustrated in the use of castor oil in colitis, but so general is the action of this oil in increasing watery secretions in other tracts also that I consider it a risky prescription to give a dose of castor oil to an infant with bronchitis which has already more fluid in its bronchial tubes than its feeble mechanism of expectoration can raise. On the other hand, I have long advocated an emulsion of linseed oil as much the most efficacious prescription in the treatment of either acute or chronic bronchitis in patients not infants. The action of olive oil in cholelithiasis I conceive to be this. In the first place, it is a food oil and as such, if taken in a quantity which would not disturb the stomach, that is, about one to two ounces, it is soon passed into the duodenum to excite there, as all fats do so excite, an increased flow of the normal duodenal secretions, namely the biliary, the pancreatic, and the secretions of Brunner's glands. No larger amount than from an ounce to two ounces is needed for this purpose, because increased secretion from intestinal tracts lower down is not indicated in this condition, while a free flow of watery bile is just what we should aim to secure with as little disturbance of other functions as possible. For this purpose I direct the oil to be

taken in a cup of hot milk at night, the milk greatly assisting the tolerance by the stomach of such a quantity of free oil. To patients with cholelithiasis this dose is taken for ten consecutive nights, then interrupted for about a week to avoid gastric disturbance, and then resumed again for ten more nights.

If recorded clinical experience is to be admitted at all, I think that I can claim from my notes of the histories of patients with this complaint a measure of success demonstrated which cannot be accounted for by any doctrine of chances. The record is not that of immediate relief in any case, but instead a progressive amelioration of symptoms with the paroxysmal attacks becoming lighter and fewer until they ceased permanently. The duration of the treatment above outlined varies as a rule, according to the previous chronicity of the case, from two weeks to four months.

The gastric derangements accompanying cholelithiasis, as before remarked, require careful management, both dietetic and medicinal. Fried articles are injurious, also mayonnaise dressing for salads and concentrated sweets. On general principles, the patient should avoid whatever he has found to be for him difficult of digestion. On the other hand, if gastric digestion is in a fair condition, rigid dieting is uncalled for. Medicinally, I have found very serviceable for this subacute gastritis pills of one twentieth of a grain of bichromate of potassium with three grains of bismuth half an hour before meals, and five grains of resorcin in solution half an hour after meals.

Indications for Surgical Operations.—My experience of patients with cholelithiasis requiring surgical procedures has been almost wholly limited to consultation or hospital practice, but any one of them would be enough to warn a physician not to rely too long or too exclusively on medical treatment when certain conditions are present. But to subserve clearness of clinical insight we should first have clear views of pathology. Thus, the chief dangers which arise from gallstones are only in a minority of cases due to the simply mechanical action of the calculi themselves. While this may occasionally be the main factor, as it always is with urinary calculi, yet many of the worst accidents in cholelithiasis are due chiefly to a virulent sepsis causing suppuration, ulceration, or gangrene with the most varied disasters as a result. The signs of such infection are therefore of the first importance, whether we are sure of gallstones being present or not. We should carefully weigh the evidence that gallstones were the probable exciting cause by such facts in the clinical history as previous attacks of pain in this area with signs of inflammatory processes there, but often the existing conditions of the parts make a specific diagnosis impossible. Therefore, taking

the danger signals present in the order of their importance, I would put a continued fever first. The readings of the thermometer are often very characteristic with all the marked irregularity of sepsis conjoined also with the continuousness of true sepsis and the temperature shows no resemblance to the transient rise which often follows single paroxysms of biliary colic. In this fever, delirium, even if only occasional, is always of grave import. Meantime the pulse continues rapid without much reference to the temperature and is generally small. As they progress the constitutional symptoms may be termed typhoid, including dryness of the tongue and occasional sweats. As before urged, the blood should certainly be examined for hyperleucocytosis. Local examination, of course, should be as complete as possible, and if tenderness and rigidity are also found there is no excuse for postponing laparotomy.

Some may naturally object that it is neither fair to the patient nor to the surgeon to allow a case of suspected cholelithiasis to reach such a perilous condition before having recourse to operation. The answer is that the beginning of such conditions is commonly no different from that of those which will never need an operation. What gives them their serious turn is the supervention of a sepsis for which there is no sure distinctive clinical sign except one, and that is continued fever. Neither a long history of pain, jaundice, or emaciation, etc., affords any certainty that such an outcome is imminent, while on the other hand such grave conditions develop as often as not in patients who did not previously suffer severely from symptoms of cholelithiasis any more than others.

This has actually been the case in every instance of the kind which I have met with; in one patient particularly I made the diagnosis, although no history of gallstone symptoms was obtainable. The gall-bladder may be found full of both pus and gallstones, and yet without any story of attacks of biliary colic, and fatal infective cholelithiasis has been frequently reported without gallstones being found anywhere at autopsy. I repeat that it is mainly from infective processes and not from gallstones *per se* that these perils supervene, and hence the clinical importance of that unfailing sign of a bacterial toxæmia—fever. When such a fever cannot be traced to other toxins, *e. g.*, of tuberculosis or rheumatism, and signs of cholelithiasis coexist, the physician should not delay having recourse to the surgeon, his decision being based not so much on the degree of the fever as on its persistence. Lately a physician consulted me for obscure hepatic pains accompanied by four months' fever which had been daily noted with the thermometer. Though the temperature range had never been high and the patient kept about the whole time, yet empyema of the

gall-bladder was found at the operation, and found in time to save life. I believe also that in every case of those terrible accidents when a gall-bladder or duct bursts and gallstones with infected fluids make their way into the peritonæum or elsewhere, a continued fever precedes it all for weeks or months, but because it may have been moderate in degree it was but little noticed.

The history of chills is not by itself conclusive of suppurative processes, as these often occur in ordinary attacks of biliary colic, but chills accompanying a persistent febrile state are of more serious import.

When impacted gallstones as such furnish the reasons for resorting to operation the symptoms are usually definite enough. The first to mention is from complete occlusion of the cystic duct, usually by a single large calculus. The gall-bladder then swells, as already described, into a palpable and sometimes a very large tumor caused by secretion from its walls. When that follows there is little chance of a spontaneous change in the location of the calculus, and meantime there is danger of an infective cholecystitis from bacteria reaching it through the blood, just as micro-organisms may so infect the urinary bladder. Nothing but a surgical operation can be expected to relieve this condition.

The second condition requiring operation is in cases of chronic obstructive jaundice from impaction by one or more calculi in the common duct. Chronicity is the chief guide here, both for diagnosis and treatment. Naunyn very justly states that a jaundice lasting more than a year is almost surely due to gallstones, because new growths causing jaundice will show further progress in other symptoms in less time than that. As before remarked, gallstone jaundice usually varies in degree from time to time, while jaundice from tumor pressure does not. While the liver may be enlarged, with elongation of the right lobe, the gall-bladder in obstructive gallstone jaundice may shrink up to the size of a walnut. The refractory nature to medical means of these long-retained calculi in the common duct is because they become coated with bilirubin-calcium locally produced by the chronic inflammation of the walls of the duct until they do resemble stones in hardness. If therefore a few months' systematic medical treatment does not seem appreciably to relieve such a case, an operation should be advised, not only to forestall local accidents, but to save the liver from that biliary cirrhosis which supervenes upon long-standing occlusion of the common duct. In some cases an operation may show that the obstruction is due to stenosis of the common duct caused by antecedent inflammatory processes around it. Hepatic surgery has made such remarkable progress in recent years that I need

only refer to the writings of Mayo Robson, Kehr, Brewer, Richardson, Keen, Halsted, and others for full particulars relating to such surgical subjects as the perforation of the gall-bladder or ducts with extrusion of gallstones and the consequent mischiefs.

CHOLECYSTITIS.

This affection may be chronic or acute, and if the latter it may be mild or one of the most severe and rapidly fatal of all maladies. Whatever its form, it is due to infection. In the chronic forms the symptoms are much like those of cholelithiasis. It is almost certain that gallstones will be present, but instead of regarding them as the cause of the gall-bladder being inflamed, it is more probable that the disease of the bladder wall is the cause of the gallstones. In chronic cholecystitis the local tenderness is more persistent and not with definite points of sensitiveness to pressure, as with gallstones. The best procedure to elicit it is to have the patient sit on the edge of a chair and lean forward till his forehead touches the back of a chair in front of him. This relaxes the abdominal muscles enough for the examiner standing behind him to press his hand well under the liver. When advancing the hand from the flank forward he will come upon the distended and painful gall-bladder much better than when the patient is on his back. This manipulation of the inflamed viscus often sends the pain up to the epigastrium in front and through the liver to the back. Colicky pains often occur during the course of the disease, but as a whole the history of the pain is of a dull aching character referred to the liver, with a frequent sense of weight at the epigastrium from coexisting chronic gastritis. Moderate jaundice is common from an induced catarrh of the ducts. As just remarked, a continued fever accompanying such symptoms is suggestive of empyema of the gall-bladder supervening, and an operation should be advised.

Acute cholecystitis may set in as suddenly as an attack of gallstones and at first be indistinguishable from it. The pains are severe and paroxysmal, frequently with nausea, vomiting, and chills, with rapid development of fever to 103° or 104°. The tenderness, however, is much more diffused from the start and commonly involves the epigastrium, which often projects like a tumor. The liver also often becomes enlarged and tender. Jaundice may be insignificant or wholly absent. In mild attacks the fever diminishes in twenty-four hours and the tenderness in the course of a few days, by the application of an ice bag following the use of leeches.

We have reason to suspect acute cholecystitis to be present when the above-mentioned symptoms develop, though not preceded by any symptoms of gallstones, if the patient has passed through a recent

attack of typhoid fever, pneumonia, or malarial fever. In the former two affections, as well as in some other fevers, the attacks are due to the dissemination of their specific micro-organisms through the system, just as the pneumococcus may cause an otitis or a meningitis. In the hepatitis common in malarial fevers the infection of the gall-bladder may be either by the ordinary pyogenic organisms or by the bacillus coli.

Gravely contrasting with such cases are the forms aptly termed fulminating cholecystitis. They certainly are not due to gallstones, though these may be present, as they may be present in patients who die from apoplexy. In fifty-nine operations by M. H. Richardson on the gall-bladder he reports ten cases of acute cholecystitis without known reason whatever, and with no gallstones present. The clinical course of these severe cases is that, beginning with the above-mentioned symptoms of acute cholecystitis, the patients rapidly grow worse and soon present the most pronounced signs of general poisoning. In one case which I saw in consultation the patient was moribund in about thirty hours from the first symptoms and with a temperature of 107° F.

When one considers how many different organs lie together in the abdomen enwrapped in the same peritonæum, a violent outburst in one of them may quickly develop such an array of symptoms that all localizing of the lesion by them becomes impossible. Some persons with cholecystitis have been operated upon for appendicitis and others for supposed intestinal obstruction. The pain is so generally diffused as to be no guide, while both gastric and intestinal symptoms may overshadow all others, especially as adhesions are often present which occlude the intestines sufficiently to stop the passage of gas and of fæces. The inflammation of the gall-bladder itself may be accompanied with perforative sloughing or gangrene, and though at the beginning the viscus may be distended, yet the accompanying rigidity of the abdominal walls makes it useless to attempt to map it out. In fact, the physician in such a case had better not attempt to make a diagnosis, but recommend a surgeon to enter forthwith, for laparotomy gives the patient his only chance.

Suppurative cholangitis is almost always an accident supervening on chronic cholangitis caused by retained gallstones. It is curious how long cholangitis may exist from such irritation, leading to widespread dilatation of the biliary canals, and yet not become suppurative. When it does so, a case which I saw in consultation illustrates its course very well. The patient had been accustomed to use liquors freely, and he lived in a malarious district, so that his frequently recurring chills were ascribed to ague. But he had repeated attacks of biliary

colic with intermittent jaundice, and finally a remittent fever set in, which never left him for three months. His liver was enlarged and tender, and I found signs of an abscess in the right lobe of the liver. This was opened and drained, but his other symptoms continued the same, and another smaller abscess was opened above the site of the former one, and after that a third posteriorly. He gradually sank and died, and the autopsy showed the liver riddled with purulent collections communicating with dilated suppurating biliary canals. Osler says that recovery never takes place in such cases, but I saw one patient in consultation in 1896 who has been operated upon three times and who is now well. Fortunately, suppurative cholangitis is not a very common affection, but, by one of those curious coincidences which occur in medical practice, I once found two patients in contiguous beds who had been admitted the same afternoon at the Roosevelt Hospital. I correctly diagnosed the first as multiple abscesses of the liver, and was inclined to do so in the second case, but, the general peritonitis present preventing much examination and the patient being unable to give an account of himself in English, I had him operated upon for appendicitis. Both patients proved on autopsy to have been almost duplicate cases of suppurative cholangitis with multiple hepatic abscesses, while examination of the hospital records showed that nine years had elapsed since a similar case had been admitted.

23 EAST FORTY-SEVENTH STREET.

HÆMATURIA.

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The presence of blood in the urine is a symptom denoting the occurrence of a lesion in some portion of the genito-urinary tract, which may be of only trifling significance or may indicate the existence of disorders which will inevitably prove fatal. Always alarming to the patient, it becomes especially important for the physician to determine accurately the source and occasion of the hæmorrhage, in order to arrive at an exact diagnosis and logically to apply therapeutic measures for relief.

Although, as a rule, the presence of blood may be determined by ocular examination alone, cases do occur in which this condition is so closely simulated that it becomes necessary to employ other means for its identification. Blood may be present in such small amount as to be invisible to the unaided eye and at the same time possess an extremely important diagnostic significance. On the other hand, the hæmorrhage may be so profuse as to resemble a passage of pure blood, coagula forming in the urinary passages. The color of urine with an admixture of

blood varies from a faint rosy tint through various shades of red to dark brown or even black, according to the amount of blood present or to chemical changes which may have taken place either before or after it was voided.

It has been demonstrated by Ralfe that one part of blood to fifteen hundred parts of normal urine will produce a decided smoky tint, and one to five hundred a bright cherry red. If the blood corpuscles in the sediment remain intact and oxyhæmoglobin is present, the color is light red and the corpuscles settle completely on standing and form a bright red layer beneath the clear yellow urine. Urine containing disintegrated blood corpuscles, however, is colored brown or black, due to methæmoglobin which has become dissolved, while the detritus of the blood corpuscles does not settle completely, so that these urines appear brownish red even after several hours' sedimentation. Urines having a decided alkaline reaction, or when blood and pus are both present in considerable quantity, have a brownish green tint.

If a small quantity of liquor potassæ is added to the suspected urine, and the specimen heated to the boiling point and then allowed to stand for a time, the earthy phosphates will be precipitated as basic salts, carrying the blood pigment down with them, and will appear colored, either bright red by the oxyhæmoglobin, or brownish green if methæmoglobin has formed. If the blood is present in but small quantity, these colors will be dichroic, giving a greenish tint by transmitted light.

If the urine is alkaline, and heating with liquor potassæ fails to separate the earthy phosphates, from the fact that they have already been precipitated, a few drops of magnesium solution will form an artificial precipitate which on warming will bring down the coloring matter as well as do the earthy phosphates. Or a solution of tannin may be used, a little ammoniac or sodic hydrate being first added, and finally sufficient acetic acid to produce a distinctly acid reaction. If blood is present, a colored precipitate forms which quickly settles and which consists of the tannate of hæmatin.

A simple test, though not one always to be entirely depended upon, since other substances besides blood may give the reaction, consists in filling a test tube one third full of fresh tincture of guaiac, with an equal amount of oil of turpentine, and shaking them together until an emulsion is formed. The urine to be tested is then carefully added, and at the point where it comes in contact with the emulsion, if blood is present, a bright blue precipitate will be formed; if there is no blood, this precipitate will be white or dirty green.

A positive test for blood consists in the production of the so-called Teichmann's crystals. This is done

in the following manner: The urine having settled, the supernatant fluid is poured off, leaving two or three drachms of sediment, which is then carefully filtered. A small quantity of the sediment is transferred on the point of a knife from the filter to a glass slide and allowed to dry in the air. A little chloride of sodium is then rubbed with the point of a pen-knife to a very fine powder on the slide by the side of the dried sediment, and a few drops of glacial acetic acid are added. Over this a cover glass is laid, one edge of which is raised by a hair placed beneath it. The slide is then heated over a flame until the acid forms bubbles, when it is removed from the flame and glacial acetic acid added under the cover glass as long as it continues to evaporate. After cooling, the microscope will demonstrate, if blood was contained in the urine, brown crystals in the form of staves or of rhombic discs, which represent hæmin or chlorohæmin. These crystals are often small and imperfectly developed, but are easily recognized with a high objective.

The detection of blood corpuscles in the urine by means of the microscope affords the best and most positive indication of the presence of blood. If these have remained in the urine for a short time only, they will be intact and have the same appearance as those from the veins, the normal disc form with a central depression and of a reddish yellow color. They are not found sticking together in the form of a rouleau of coin, except in the case of very severe hæmorrhage. If the corpuscles have been exposed to contact with the warm urine for some time, they become considerably altered. The hæmoglobin of the blood corpuscles becomes deoxidized by the urine, and they assume a brownish hue. If the urine is very dilute, especially if it has become slightly ammoniacal, the corpuscles swell, the central depression disappears, they assume a spherical form, after a time become indistinct, and finally disappear. If, however, a concentrated solution of sulphate of sodium is now added, they will be rendered visible again, but will appear angular, irregular, and distorted.

The presence of blood in the urine may also be definitely determined by means of the spectroscope. If the clear filtered specimen, which should be very much diluted, contains blood, when examined by means of the spectroscope, it will exhibit absorption bands between the lines D and E in the yellow and green, the band situated nearer D being the more sharply defined and also disappearing later than the other on dilution. If the blood corpuscles are destroyed and the urine contains methæmoglobin, characteristic bands will appear between the lines C and D, somewhat nearer C than D.

Under certain conditions the presence of other coloring matters may lead to the supposition that

blood is present when it is not. This is especially the case after the internal use of certain drugs, such as rhubarb and senna, which contain chrysophanic acid, the urine being at the same time alkaline. The differential diagnosis may be made by the addition of an acid, when, if the color is due to a vegetable pigment, the red changes to a pale yellow, to reappear again upon the addition of an excess of ammonia. If such a urine is heated with liquor potassæ, the precipitate is often colored blood-red, but this precipitate is never dichroic, and by long exposure to the air becomes violet. The absence of albumin, which is always present when there is blood, no matter in how small amount, also demonstrates that the color of these urines is not due to the presence of blood.

Brown urine simulating the presence of methæmoglobin is often found in cases of icterus, when the gall pigment has become so altered that tests for bile no longer yield the characteristic green reaction showing that only bilifuscin and bilirubin are left. This may be demonstrated by dipping a piece of white filter paper into the urine and allowing it to dry, when, if altered bile is present, it will be colored brown. Or if the urine is heated with liquor potassæ and the earthy phosphates are precipitated, the urine becomes much darker than before heating, and the precipitate is colored brown.

A black color is imparted to the urine by poisoning with carbolic acid or after the use of some of the new antipyretics, which can be determined by the use of a solution of barium chloride or nitrate, enough of which is added to a normal urine to cause a dense milky deposit of the normal sulphates, which serves as a standard in testing suspected urines. If the addition of the same amount of the barium solution to the suspected urine fails to cause a precipitate, or if it is strikingly diminished, carbolic acid is present, which both tends to prevent the escape of the soluble sulphates and changes those which are eliminated into sulphocarbates, which are not readily thrown down by the barium salts.

The presence of blood in the urine having been demonstrated, the next step will be to discover the source of the bleeding and to locate as definitely as possible the situation of the lesion from which the hæmorrhage emanates. In order to accomplish this, the more readily we may somewhat arbitrarily divide the urinary tract into four portions, as follows:

1. From the meatus externus to the compressor urethræ muscle.
2. The prostatic urethra.
3. The bladder.
4. The kidneys, their pelves and ureters.

When the bleeding point occurs between the meatus externus and the compressor urethræ muscle,

the flow of blood will be continuous, and, if sufficient in amount, will exude from the meatus, as there is no obstacle to its exit in this direction. If the urine is passed in two portions, the first half will be stained with blood, while the second will be clear, the blood having been washed out from the urethra by the first portion of urine.

If the urethra is pressed upon with the finger from beneath, so that the bleeding from the meatus is stopped, and the finger gradually worked from the meatus backward until a point is reached where bleeding begins again, the site of the lesion will be more exactly shown, or it may be definitely located and its character ascertained by means of the urethroscope.

If the point of hæmorrhage is in the posterior urethra, the prostatic portion, the outflow of blood no longer takes place, the external sphincter preventing it completely, and blood is passed, mingled with the urine, only during micturition. If the hæmorrhage is small, blood appears only at the beginning or more frequently only at the end of urination. The urine from the bladder itself contains no blood, and more or less urgency of urination is usually present. If the hæmorrhage is more profuse, the blood, overcoming the resistance of the internal sphincter, which is composed of involuntary muscular fibres and is weaker than the external, flows into the bladder, uniformly colors the urine, and renders a diagnosis difficult. In some instances short, thick, round clots will form in the posterior urethra, the shape of which indicates their origin. Diagnosis by means of the urethroscope in hæmorrhage of the deep urethra is apt to be unsatisfactory, as the instrument, even in the most skilful hands, frequently causes bleeding by its introduction.

When the hæmorrhage occurs within the bladder, the examination of the urine will usually show a high or normal specific gravity, while in renal hæmaturia it will be lowered according to the amount of polyuria present, but this symptom is so exceedingly variable that it can only be accepted as giving a faint hint as to the probable diagnosis. Nor does the urinary reaction possess any great value as a guide, for if the hæmorrhage is at all profuse, the alkali of the blood serum tends to neutralize the acid reaction of the normal urine, or the urine from the kidneys may be alkaline at the time of excretion, especially if made soon after eating. When, however, the alkalinity is due to an ammoniacal fermentation, this has taken place in the bladder, as this condition does not occur in the kidney.

The direct examination of the bladder gives much more positive information; frequently a bimanual examination with one finger in the rectum or vagina, the other hand pressing firmly above the pubes, will enable us to map out a new growth or other condi-

tion showing the bladder to be involved, and this procedure should never be neglected. The examination of the interior of the bladder may be made, first thoroughly cleansing it of blood, by injections of cold water which has been boiled or of some mild antiseptic solution. This is best done through a silk catheter of about 20 F. calibre, having a large hollow eye to allow of the easy passage of clots. The use of a hand syringe of three or four ounces' capacity is preferable to that of an irrigator, as it permits the stirring up of the bladder contents, and by reversing its action the withdrawal of clots is greatly facilitated. If there are no clots present, the bladder will be readily freed from blood if the bleeding proceeds from the kidneys, so that the fluid flows clear after one or two syringefuls have been injected. Considerably more irrigation will be necessary if the lesion is in the bladder, while it is particularly characteristic of vesical hæmorrhage that, even after the irrigating fluid returns from the bladder free from blood, the last few drops which flow from the catheter will still be bloody. This may also be the case if clots have been allowed to remain, but in this event the last drops, instead of being stained with bright red blood, will be dark red or brown. When the fluid returns through the catheter quite free from blood, a syringeful should be injected and allowed to remain while the instrument is moved about over the bladder walls, which will cause the bleeding to begin again if the lesion is within the bladder, and bright red, fluid will flow from the catheter; this will not be the case if the bleeding point is situated in the kidney.

The established fact that the normal bladder is capable of absorbing very slowly, so that solutions of even very soluble salts injected are taken into the system only after a considerable time, may be utilized in the following very beautiful test, for when the bladder is denuded of its protective epithelium at any point, this power of resistance is lost and the raw surfaces are capable of rapid absorption. If, therefore, a solution of some soluble salt, such as iodide of potassium, is introduced into the bladder and allowed to remain, if a lesion is present, rapid absorption will take place through the unprotected surfaces, and the presence of iodine may be detected in the saliva within a very few (ten) minutes, while if the bladder remains intact, this will not occur for a very much longer period (over an hour).

The test is made as follows: The bladder having been thoroughly irrigated with cold water which has been boiled, two ounces of a one-and-a-half-percent. solution of potassium iodide are introduced and allowed to remain, the catheter being removed. After the lapse of fifteen minutes the patient is requested to spit into a glass, a few drops of a solution of boiled starch are stirred into the saliva, and a

drop or two of C. P. nitric acid added, when, if iodine is present, the characteristic blue color will immediately appear. Iodine therefore has been re-absorbed from the bladder, which consequently presents a surface denuded of its protective epithelium from which the hæmorrhage probably emanates. In order to avoid a possible fallacy, it should be ascertained beforehand, in making this test, if the patient has been taking iodine in any form. After a considerable experience with this method of examination I consider it practical and to be relied upon whenever positive results are obtained.

The ocular examination of the bladder by means of the electrocystoscope will usually definitely locate the site of the lesion, and, if the hæmorrhage is not too profuse, will also indicate its character. The mouths of the ureters can be examined, and it can be determined not only whether the bleeding proceeds from the kidneys, but also, when this is the case, which kidney is at fault. The ureters may also be catheterized by this means and a distinction between the kidneys made, but when the question of a hæmaturia alone is to be considered, this is rarely a necessary or desirable procedure. In making the cystoscopic examination, the hæmorrhage may be so profuse as to obscure the lesion; nevertheless, the general direction of the bleeding will be of value, especially if it is located at a distance from the ureteral openings, showing that it does not come from the kidneys.

It will rarely be necessary to use a general anæsthetic, as the use of the instrument is not painful, and the introduction of half a drachm of a four-percent. solution of cocaine into the deep urethra will usually prove sufficient to obviate any great discomfort.

The bladder should be washed as clean as possible, as a very small amount of blood renders vision indistinct, and from five to ten ounces of clear fluid introduced. The cystoscope should be lubricated with glycerin or some other soluble substance to avoid dimming the prism, which occurs when oil or vaseline is used. Immediately after its introduction, the beak of the instrument should be inverted and the trigonum and mouths of the ureters examined while the fluid is clearest; for not only is the information in regard to the kidneys thus obtained, but it is also in this region that tumors of the bladder most frequently occur. If the blood proceeds from either kidney, it will serve as a direct guide, arising from the mouth of the ureter on the affected side and spreading out in intermittent puffs of rosy smoke. If it is ascertained that the bleeding does not come from the kidneys, the rest of the bladder should be carefully inspected; and here, again, if slight bleeding is present, the hæmorrhage may be easily followed to its source.

At times when the bleeding is more profuse the irrigating form of the cystoscope will prove serviceable, as it enables the operator to change the fluid in the bladder when it becomes too rosy, without removing the instrument; but not infrequently the bleeding is so rapid as to immediately obscure the entire field, which renders the cystoscopic examination impracticable.

It is evident that if by means of the preceding methods the bladder and urethra can be excluded, the source of the hæmorrhage must lie in the superior portion of the urinary tract, the kidneys or ureters; this is not always easily determined, and it often becomes necessary to look for further indications from the kidneys themselves in order to complete the diagnosis.

The character of the hæmorrhage is sometimes indicative of its source, blood from the kidney being

comes from the healthy kidney and is therefore clear; and this is almost pathognomonic of kidney hæmorrhage. Sometimes, however, this condition is closely simulated when the lesion is in the bladder. When more blood is found in the morning, after rest, it indicates that the hæmorrhage is probably of renal origin, exercise increasing vesical hæmorrhage, but, as a rule, being without effect on that of renal origin. The microscope is frequently of great service in rendering a diagnosis possible in these obscure cases, and the presence of blood casts is pathognomonic. So also are the fibrin casts of the larger divisions of the kidney pelvis, so that all clots passed in the urine should be carefully floated out in water, in order to recognize, if possible, in what portion of the urinary tract they were formed. Long, round clots resembling angle worms and about as thick as the ordinary lead pencil are formed in the ureters, while frequently unmistakable casts of the pelvis or calices of the kidney will be passed, rendering the diagnosis absolute.

The illustration exhibits a very beautiful example of this, from a case of Professor Samuel Alexander's, in which a fibrin cast of the entire renal pelvis and calices was voided in the urine.

The symptom of pain about the kidney region, especially if it is unilateral, is of considerable importance in forming a diagnosis, and pressure should always be made in this region to ascertain if the kidney is sensitive. This pressure should not be made with the whole hand, but with one finger in the costovertebral angle, *i. e.*, between the root of the twelfth rib and the vertebral column. A careful bimanual examination should also be made in order to ascertain if the kidney is enlarged or a tumor present.

In spite of all the means at our disposal, it occasionally happens that the location of the source of the hæmorrhage is an exceedingly difficult matter, so that it will often be necessary to keep these pa-

tients under observation for a considerable time before a positive diagnosis can be made; and it should be borne in mind that all the symptoms indicative of renal hæmorrhage may be simulated by hæmorrhages of vesical origin, especially when the lesion is connected with the ureteral orifices.

More Newspaper Medicine.—It is interesting to learn from a recent issue of one of our New York dailies that the "disease known as hemiplegia is rare." That being so, we must gladly welcome a report of a case, even in a lay newspaper



Fibrin casts of the pelvis and calices of the kidney

intimately mixed with the urine and the first portion equally colored with the last, while vesical hæmorrhages are apt to be terminal, the last portion containing the most blood. Renal hæmorrhages may also be terminal, and this is most often seen when the kidney bleeds so profusely that pure blood is poured into the bladder during micturition.

Occasionally the hæmaturia will be intermittent, so that the urine passed will sometimes be clear, sometimes bloody during the same day. This is due to a temporary stoppage by a clot of the ureter on the affected side, so that all the urine secreted

Original Communications.

SOME REASONS
AGAINST THE PUBLIC REGISTRATION
OR NOTIFICATION OF CASES OF
PHTHISIS PULMONALIS.

By E. L. SHURLY, M. D.,

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The writer has been led to present the following reasons against the public registration of phthisis pulmonalis, or pulmonary tuberculosis, mainly by the excellent and strenuous articles which have lately emanated from the pen of Dr. Flick, of Philadelphia, and other native and foreign writers in advocacy of such registration.

In combating the renaissance of this antiquated notion, The Contagiousness or Communicability of Phthisis Pulmonalis, the writer is conscious that he may be placing himself in disfavor with a vast number of speculative thinkers, many of whom, while seeming to follow the lines of *scientific demonstration*, have really been cavorting in fields of hypothesis. Such persons will undoubtedly bear with ill grace any attitude savoring of heresy or skepticism concerning the doctrine of the *contagiousness* of phthisis pulmonalis and its *sole* origin by the implantation of the tubercle bacillus.

Nevertheless, believing that clinical experience and broad observation should always have "a right of way," the following reflections—feeble as they may appear—are offered. Viewed from the standpoint of experience, the contagiousness of phthisis pulmonalis and the propriety of its classification with small-pox, scarlet fever, diphtheria, cholera, etc., as advocated by *some* boards of health and so-called sanitarians, presents several points meriting discussion.

Granting that there are instances of pulmonary phthisis having appeared to *originate* from person to person in houses apparently infected. Is not the proportion very small in comparison with the large number of similarly contaminated houses in which no further development of the disease has occurred? In this connection it may be noted also that but *few* if any genuine examples of the acquirement of phthisis pulmonalis in hospitals where such cases have been continually harbored are known, whether the hospitals are general or whether especially devoted to the care of "consumptives." Moreover, this statement will apply to the *ante-* as well as the *post-*tubercle bacillus Era. Furthermore, in forming radical conclusions, what estimate has been taken of the other ætiological factors, and what statistical records, if any, have been made of the vast number of *direct* exposures which have taken place without

any resulting contamination or infection? Again, cannot almost any clinician of experience cite cases of phthisis pulmonalis which have occurred in persons (wives, or mothers, or sisters) who have been attending with great fidelity cases of typhoid fever, compound fractures, paralyses, or other protracted cases of illness? Notwithstanding these facts, the assertion is often made that if phthisis pulmonalis is contagious or communicable *at all*, it should be classed and treated publicly or hygienically the same as small-pox, scarlet fever, etc. Now, why should we not recognize gradations of communicability between diseases in dealing with the public health, as well as in dealing with any other social or ethnic problems? Why should not a disease which is *feebly* contagious, communicable, or infectious be so recognized, and accordingly classified in differentiation from a more virulent infectious one? To illustrate: We may say that the definition of a zephyr is air in motion; likewise; that the definition of a cyclone is air in motion. Would it be reasonable, therefore, to classify equally in respect to their results upon life and property a zephyr and a cyclone? Or, again, a furuncle may be communicated directly from one person to another under certain circumstances; would it therefore be proper to classify furuncle with small-pox, scarlet fever, etc.?

It has been asserted, and in a way demonstrated, that the cause of cancer lurks in houses, so that we have had our attention called to the fact that there are "cancer houses"! Undoubtedly it is true that there are houses in which two or more persons have had cancer consecutively. But the question arises: Did "the seeds of the disease" (cancer) lurk in a given house and actually and wholly bring about the disease in the subsequent occupants, or were these phenomena merely coincidental and, like the coincidence of "presentiments," belong properly outside the law of cause and effect.

Concerning infected houses, the writer has investigated thoroughly three or four houses which seemed to be veritable tuberculous houses, as well as a room in a hospital which had been occupied by persons with advanced phthisis pulmonalis for a long time, with results which were not always convincing; for instance, in one house, the inhabitants of which were of filthy habits, the first case (after thirteen years of occupation by the family) was in an infant who died of meningitis; the next case was a "grippal bronchopneumonia," followed by phthisis pulmonalis, and the next, a case of "pneumonic phthisis." Scrapings from a picture and a wall (which had been expectorated upon) of this house showed a few tubercle bacilli only in five out of thirty mounts. Now, according to late promulgations on this subject, *many* germs from the outside (and not a few as formerly believed) are necessary

to produce the disease, and if these, even, are well enclosed by dried mucus or other organic material the germs may not "get free" so as to become properly pathogenic. Concerning the dust from the hospital room mentioned above, infusions of it were made and injected into healthy guinea-pigs, but with negative results. Up to a recent date it was asserted positively by not only the spectacular scientists, but by honest, capable bacteriologists and pathologists, that the progressive existence of this dread disease, pulmonary tuberculosis, was kept up mainly through the agency of dried sputum contained in the dust of streets, public halls, conveyances, etc., and also by the ingestion of infected meat, milk, and other animal foods. This dogma, however, has undergone signal modification, since the various new morphological characters, modes of invasion, and activities of the tubercle bacillus have become known, together with the recent discovery—by Koch—that bovine and human tuberculosis are not probably intertransmissible, all of which should serve somewhat to quiet apprehension and modify our positivism in relation to the contagiousness or communicability of phthisis pulmonalis under *natural* conditions. In short, from a practical standpoint very few examples have ever been furnished of the disease having originated from circumambient dust or the ingestion of food.

However, neither time nor the rules of propriety will allow of an extended discussion here of the various theories concerning the implantation of the tubercle bacillus and its status outside the body. Suffice it to say that we do not probably know exactly the early part the micro-organism really plays in the course of phthisis pulmonalis—a disease which presents so many different pathological and clinical phases in its earlier stages; it is manifestly erroneous, however, to suppose that the behavior of the bacterium under artificial culture and artificial inoculation is either a just measure or analogue of its behavior under *natural* relations or conditions of life—when the micro-organism is devoid of artificial ferment. Undoubtedly the tuberculous process, so to speak, always develops, at first at least, in some part of the lymphatic apparatus of the body, and then only when some sort of degenerative cellular change has occurred to furnish a nidus for its development.

If, then, phthisis pulmonalis is only *feebly* communicable directly or indirectly from individual to individual, and each successive individual must be "out of health" or possess "a tendency" in order to acquire the malady, why should it be classed with and publicly treated the same as small-pox, scarlet fever, diphtheria, cholera, etc.?

Registration; Notification.—It is urged that the public registration of phthisis pulmonalis is *no*

hardship because the notification may be kept secret; further, that in this way only can patients and their families be *instructed*, and those coming in contact with them be properly protected from the infected sputum, etc., and, lastly, that in this way only can proper statistics for our further guidance be obtained.

Now, regarding secrecy, the idea is fallacious, for in this State (Michigan) no public documents can legally be kept from the gaze of any citizen who makes the demand to peruse them. This being the fact, how many newspaper reporters would refrain from publishing the names of those reported as suffering from phthisis pulmonalis? And, then, how many landlords would willingly rent their premises to a person so reported, or how many employees would continue to work in shop, store, or office with a man or woman who had been reported as suffering from pulmonary phthisis? Hence it is obvious that the subject of the disease would be practically quarantined without any special action of that sort becoming necessary on the part of the board of health, for the associates of the victim would promptly do that after the registration was made.

Then, again, suppose an erroneous diagnosis had been made?—an untoward circumstance, very likely to happen at any time as long as the State allows any sort of human jackdaw to practise the healing art. Nor would our statistical knowledge of the disease be improved at all, because many practitioners, either moved by compassion or by some other influence, would often "cover up" the real nature of the patient's malady by making a false diagnosis in some way. This would be an added calamity, scientifically considered, although it would undoubtedly show a great decrease in the number of cases of the disease on the health board records. Another thing worthy of consideration in this connection is the slow, intermittent course of the majority of cases of phthisis pulmonalis. Think of the hardship to be endured by a fellow creature who may be sequestered or quarantined (for public registration amounts to that) for a period of time ranging from two to ten or fifteen years, thereby prevented from advancing his temporal interests or, perhaps, providing for his family? To say that in this regulation there is no *hardship* seems like "idle talk." But the advocates of public registration contend that such regulation is *necessary* for the preservation of the public health and the "stamping out" of the disease! If that is so, then, of course, no self-respecting citizen, professional or lay, ought to raise an objection. But what are the facts as shown by history for the last century? First, that under regulations at times strictly and almost brutally imposed, no general diminution of the prevalence of the disease has followed; it still maintains its place in the cate-

gory of scourges the same now as in the pre-bacillus days, its apparent diminution, like that of other diseases, being due to the general advance in sanitary methods of living gradually becoming adopted by all civilized communities. Communities are no less afflicted by it in proportion to other prevailing diseases and population than they ever were. Indeed, since the advent of *la grippe* into this country, phthisis pulmonalis has probably increased in populous districts. The slightly lessened mortality shown by mortuary statistics may justly be attributed to improved methods of general hygiene and treatment, all of which militate proportionately against phthisis pulmonalis as well as against other forms of disease.

Another objection to registration is a commercial one, viz., that it would cost the State an immense sum of money to support and pay damages to these sequestered people, whether they were rightly reported or not to the health board. This burden, added to the already overlaid taxpayers, is one deserving of notice in view of the doubtful necessity of a regulation requiring such registration.

In conclusion, the writer would state his belief that if our health authorities would take an unbiased attitude in investigating the many aspects of this complex disease in its social and political, as well as its hygienic and pathological, aspects, and at the same time enlist the cooperation of the medical profession in the work, some substantial data might be evolved upon which to establish rational conclusions regarding the real origin, the communicability, and possibly the prophylaxis of so-called pulmonary tuberculosis. At present, however, it must be conceded that our statistics are *far from being accurate*, for undoubtedly phthisis pulmonalis is not so fatal as cancer, pneumonia, or infantile diarrhoea, not so prevalent as influenza or typhoid fever, and not so dangerous to the public health as small-pox, scarlet fever, diphtheria, and syphilis.

THE EFFECT OF OSTEITIS OF THE KNEE ON THE GROWTH OF THE LIMB.*

By HENRY LING TAYLOR, M. D.,

NEW YORK.

It has recently been shown (1 and 2) that retardation of growth of the limb is an important cause of shortening after osteitis of the hip in children. A year or more after the onset of the disease the long bones of the affected limb are considerably shorter than those of the sound side, and this difference increases during the period of growth. The examination of specimens and skiagraphs shows that the bones are narrower and less dense, as well as shorter, and that the corresponding side of the pelvis is simi-

larly affected (3). Occasionally a slight lengthening of the limb may be detected in the earlier stages.

When the tuberculous process affects the knee joint, the results are somewhat different. It has been noticed by various writers that processes involving long continued reparative activity not far from the epiphysial junctions of the knee may result in a lengthening of the affected bone. This may occur after osteomyelitis of the shaft of the femur or tibia, after fractures (4), and even after a knee excision, (5) not compromising the integrity of the epiphysial junction. A common cause of such lengthening is osteitis of the knee, to which attention has been called by Dr. J. J. Berry (6), Dr. V. P. Gibney (7), and others. Out of 116 cases Gibney and Berry found lengthening of the affected limb in 62 per cent.; in most cases the lengthening was in the femur.

Ménard and Bufnoir (3), in twenty cases, found lengthening of the femur and tibia seven times; of the femur alone, five times; of the tibia alone, five times. In three cases the tibia was shorter. In two of these, the femur was longer by an equal amount; in one the femora were equal. The most recent and elaborate study is by Dr. F. P. Leusden (8) in Professor Braun's clinic, in Göttingen. Leusden studied his cases by measurements of skiagraphs as well as directly; out of 24 cases, 13 showed lengthening of the femur and only two shortening. Few of his cases, however, were of very long standing.

In the present study, not only the femora and tibiae, but also the feet and patellæ were measured and compared, and the patients were grouped according to the time which had elapsed since the onset of the disease, as the duration was believed to be a very important factor in the comparative growth of the limbs. Measurements were made in 40 cases:

The limbs were measured from the anterior iliac spine to the internal malleolus in all but two cases (Nos. 13 and 39), when, owing to considerable flexion, the length was reckoned by addition; in the remaining cases the deformity was slight; there are, nevertheless, a few apparent discrepancies in the figures due to this and other causes.

The upper segment was measured from the anterior iliac spine to the depression between the femur and tibia on the inner side of the knee. The tibia was measured from the latter point to the internal malleolus; the foot from the tip of the great toe to the end of the sole; and the transverse diameter of the patella was taken.

The cases have been grouped according to the onset of knee-joint symptoms in three classes: First, those in which the disease had existed less than three years; second, those in which the duration was at least three, and less than five, years; and third,

*Read before the Orthopædic Section of the New York Academy of Medicine, November 15, 1901.

where the affection had begun more than five years before the examination.

In the first class (see table) there were 20 cases between the ages of three and sixteen years, with a duration of symptoms from a few months to two years and a fraction. In this class the measurements of the limbs, from the anterior iliac spine to the internal malleolus, showed lengthening on the affected side in all the cases but two. In one where the duration was of only two months the limbs were equal; and in one, the affected limb was one quarter inch shorter. This patient was sixteen years old, the oldest of the group, and therefore past the period of active growth. The remaining 18 cases showed lengthening of from one eighth to seven eighths of an inch on the affected side, with an average lengthening of about one quarter of an inch. This lengthening was in 17 cases mainly or entirely in the femur, which showed a difference of from one quarter to three quarters of an inch in favor of the affected side. In one case only (No. 3) was all the lengthening in the tibia. In the sixteen-year-old case the femora were of equal length, and in one very recent case (No. 1) the femora were not measured.

The affected tibia was shorter in 10, equal in 4, and longer in 6. In all the cases of equality the disease had been of short duration; in three, less than a year. The shortening, in the 10 cases, was from one eighth to one half of an inch. Lengthening in the 6 cases was from one eighth to three eighths of an inch. The average difference for all the cases measured about one tenth of an inch of shortening.

The foot of the affected side was shorter by one eighth to one half of an inch in 12 cases; in 4 cases it was equal, and 4 not measured.

The transverse diameter of the patellæ was in 3 cases of short duration equal, in 4 cases not measured, and in 13 cases the patella of the affected side was from one eighth to one half of an inch narrower.

In 10 cases with a duration of the disease of from three years to four and a fraction (Class II) the affected limb was longer by one quarter to three quarters of an inch in 7 cases; in 1 the limbs were equal, and in 2 the affected limb was shorter by one eighth to one quarter of an inch. The average was a lengthening of about one quarter of an inch.

The affected femur was longer in 7 cases by one quarter to three quarters of an inch; and the femora were equal in 2, and not measured in 1; the average was a lengthening of one third of an inch.

The affected tibia was shorter in 4, longer in 2, and equal in 4 cases.

The feet were compared in 8 cases, and in all there was shortening. The average shortening was greater than in Class I.

The patella was narrower in 6 cases, equal in 2, not measured in 2.

In Class III are recorded the measurements of 10 cases where not less than five years had elapsed since the beginning of the disease; it happened that no cases presented themselves with a duration of five or six years, so that the duration was actually seven years or more. In many of these cases the disease had long ceased to be active.

In this class the affected limb was shorter in 7 cases by one half of an inch to 4 inches, longer by 1 inch in 2, and equal in 1. The 3 cases not showing shortening were under ten years, and the youngest in the class. They were still in the period of rapid growth, and the disease was probably still active. The older patients had either stiff joints or but little motion. They were not seen until the disease had run its course.

It is probable that cases running a milder course, and making a functionally better recovery, would show less shortening, and in some instances lengthening.

In 7 cases the femora were measured and 4 showed marked shortening; in the 3 young cases there was considerable lengthening.

In these 7 cases the tibia showed shortening in 5, in 4 marked; slight lengthening in 2.

There was marked shortening of the affected foot and narrowness of the patella in all the cases measured.

The results of this study tend to show that:

1. Gonitis in childhood usually causes lengthening of the affected limb when approximately straight, and this may persist for eight years or more.

2. This lengthening is mainly due to overgrowth of the femur, and may often be detected within six months of the onset. In adolescents and adults, after cessation of active disease begun in childhood, the femur and limb may be considerably shortened.

3. The tibiæ are usually equal in length in the early stages; afterward the affected tibia may be slightly longer for a time, but is more often shorter, even in the first two years; this shortening increases in the older cases, and after subsidence of inflammation.

4. With limbs of equal length and a duration of disease of several years, the femur of the affected side will be found longer, the tibia shorter than its mate (Cases 30 and 33).

5. The feet and patellæ show a difference in favor of the sound side after a year's duration and often before.

6. Stimulation of growth at the lower end of the affected femur, and more rarely and in less degree at the upper end of the tibia, is usually accompanied by retarded growth in other parts of the limb; growth in the femur itself is finally retarded, and the final

result, after many years, may be considerable shortening of the femur, tibia, and limb.

CLASS I.

Difference—inches.

No.	Sex.	Age.	Side.	Dura- tion, years.	Limb.	Femur.	Tibia.	Foot.	Patella.
1...	M.	8	R.	1-6	=	=	=	=	=
2...	M.	8	L.	1/2	3/8	1/2	-1/8	=	=
3...	F.	4	L.	1/2	3/8	=	3/8	-1/8	=
4...	F.	3	R.	1/2	1/4	1/4	=	-1/8	=
5...	F.	3	L.	1/2	1/4	1/4	=	3/8	-1/8
6...	M.	8	L.	1	3/4	1/2	1/4	=	=
7...	M.	9	R.	1	3/4	3/4	=	=	-1/4
8...	F.	16	R.	1	-1/4	=	-1/4	=	=
9...	F.	8	L.	1	1/4	3/4	-1/2	=	=
10...	M.	5	R.	1	3/8	1/4	1/8	=	-1/4
11...	M.	8	R.	1	1/8	1/2	-1/4	-1/8	-1/4
12...	F.	3	R.	1	1/2	1/2	-1/8	-1/2	-1/8
13...	M.	5	L.	1	3/8	1/4	1/8	-1/8	-1/4
14...	M.	13	L.	2	1/4	1/2	-1/4	-1/2	-3/8
15...	F.	3	L.	2	7/8	1/2	1/4	-1/4	-1/4
16...	F.	8	L.	2	1/8	3/8	-1/2	-1/4	-1/4
17...	F.	3	L.	2	1/2	3/8	1/4	-1/8	-1/4
18...	F.	11	L.	2	1/8	3/8	-1/2	=	-1/4
19...	M.	12	R.	2	1/2	3/4	-1/4	-1/8	-1/8
20...	M.	9	L.	2	1/8	5/8	-3/8	-1/2	-1/2
Average				.27	.42	-.09	-.18	-.19	

CLASS II.

21...	F.	10	L.	3	1/4	1/2	-1/2	-1/2	-1/8
22...	M.	5	L.	3	-1/8		-1/8	-1/2	-3/8
23...	F.	3	R.	3	1/4	1/4	=	-1/4	=
24...	M.	6	L.	3	3/8	1/4	=	-1/4	-1/8
25...	F.	8	R.	3	3/4	3/4	=	-1/4	-1/4
26...	M.	7	L.	4	-1/4	=	-1/4	-1/8	=
27...	F.	7	L.	4	1/2	1/4	1/4	=	=
28...	M.	8	L.	4	3/4	=	1/2	-1/4	-1/8
29...	M.	8	L.	4	1/4	1/4	=	-1/4	-3/8
30...	M.	13	R.	4	=	3/4	-1	=	=
Average				.27	.33	-.11	-.29	-.17	

CLASS III.

31...	F.	14	R.	7	-3	-1	-2	-3/4	-3/8
32...	F.	9	L.	8	1	3/4	1/4	-1/8	-1/8
33...	M.	9	L.	8	=	3/8	-3/8	-1/4	-1/4
34...	M.	16	L.	8	-2 1/2	-1 1/4	-1	-1/2	-5/8
35...	F.	9	L.	8	1	3/4	1/4	-1/8	-1/8
36...	M.	14	L.	10	-1				
37...	F.	26	R.	10	-1/2				
38...	F.	24	R.	13	-2				
39...	M.	21	R.	17	-4	-1 1/4	-2 3/4	-1 1/4	
40...	M.	45	R.	42	-3	-2	-3/4	-3/4	-1/2
Average				-1.4	-.52	-.91	-.54	-.33	

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See also several papers by Ollier.

GUNSHOT WOUNDS ON THE ISTHMUS OF PANAMA.

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During the recent revolution on the Isthmus of Panama a very good opportunity presented itself for comparing the wounds made by the old .45-calibre lead bullets used in Remington and Springfield rifles with the wounds made by the 7-millimetre Mauser bullets. The large lead bullets revolve in the neighborhood of 800 times per second as they leave the muzzle of the gun; the Mauser bullets revolve about 2,400 times a second or about three times as fast as the large lead bullets. Considering the difference in size and the difference in velocity of the two missiles it is no wonder that the wounds present great differences.

The vegetation at the scenes of the different fights between the insurgent and government forces was very dense and impassable. All the fighting took place along the railroad line between Panama and Colon. The insurgents usually occupied trenches commanding the railroad. The government forces were compelled to keep on the open track while they charged the insurgents. The fighting consequently was at very close range; often only a few yards separated the combatants. One of the insurgents, on being asked how close they fought, replied that the opposing forces often could swear at one another while they were shooting.

On account of the close range of the fighting most of the wounds were perforating. The wounds produced by the large lead bullet were always larger than the Mauser wounds; the exit wound was usually larger than the entrance wound. The Mauser wounds, when they were received at short range, except in those cases in which the bullet had struck the compact substance of a long bone or the skull or abdomen, were nice clean wounds and presented the ordinary small wound of entrance and the small wound of exit, and in some cases were not infected.

Several cases presented large wounds of entrance with much bone destruction. The wounds were not perforating and had the appearance of having been made by a large lead bullet, but operation revealed in at least three cases a much deformed Mauser bullet. These wounds were in all probability made by a Mauser bullet that had already struck some object and had been deformed. The bullet had continued its flight and its irregular outline, revolving still at a high rate, had torn and perforated the skin and the bullet had been arrested by the energy it had used up in shattering compact bone.

The wounds produced by the large .45-calibre lead bullets were characteristic. Where the wound only involved the soft tissues and had been received

at short range and the bullet had penetrated without deformity, the exit wound was only slightly larger than the entrance wound. Where the soft lead had been mushroomed out by contact with bone substance the exit wound was large and ragged; shreds of muscular tissue frequently protruded.

Several cases of grooving of the spongy portions of the long bones without fracture were observed in wounds produced by the large lead bullets; these wounds were received at close range.

The lead bullet, going at a comparatively high velocity, was noticed in several cases to have been deflected; the Mauser bullet at close range, on the other hand, usually kept a straight course when it perforated.

There were several cases in which a large lead bullet had struck a bone obliquely with considerable force, as shown by the deformed bullet, and had been deflected without fracturing the bone; on the other hand, two cases were observed in which the bullet had penetrated the soft tissues and produced a fracture of a long bone without comminution. One case was seen in which a lead bullet of large size had flattened out on the anterior surface of the tibia without injury to the bone; the wound had the appearance of a punched-out ulcer.

The mode of treating wounds by the combatants was cruel in the extreme. No first-aid packages were carried, and as the insurgents had no doctors and the government doctor who had been with the troops was sick, the wounded received no attention until they were picked up by passing trains, oftentimes many hours after the receipt of the injury.

On receiving a wound the first and only thing done was to look for some mud, of which there was an inexhaustible supply; this having been provided, was quickly smeared over the wound and vicinity. The wound was then considered dressed. Tetanus is prevalent in this locality, and if any cases develop among the wounded it will not be difficult to trace the origin of the disease.

Oftentimes it was twelve to forty-eight hours before the wounded were picked up by the trains and received medical attention. During this time they had usually been drenched by pouring rains and had had nothing to eat. All the troops were infected with malaria, and the disease assumed an acute form for a day or two on the receipt of a wound until treatment had been instituted.

Most of the wounds produced by the large lead bullets were infected. A large mass of irregular lead revolving through the tissues devitalizes them, and so infection readily occurs. If the wound was of any duration, say two or three days, it was very apt to be surrounded with offensive discharges. The infection was to be expected on account of the manner in which the wounds had been handled; the low-

ered vitality and malarial infection were probably also elements to be considered.

The men killed in action were usually shot in the head or abdomen. These wounds were very fatal. The large lead bullet at close range produced frightful destruction when it struck the skull; the same may be said of the Mauser wounds. Some of the men who had extensive brain injuries were brought into Panama on the trains. If they had been injured over twelve or eighteen hours the protruding brain substance gave rise to a very offensive odor. Dead tissues decompose very rapidly in this moist, hot climate. All of the subjects with extensive brain injuries died in the course of one or two days.

The cases of abdominal wounds made by the large lead bullet usually died on the field from either shock or hæmorrhage. A few were brought in on the trains; the poor fellows all presented symptoms of peritonitis. Notwithstanding the fact that their brains were clear, it was easy to see their end was not far distant.

The following are some of the most interesting cases observed:

CASE I.—Mauser wound through patella and knee joint, small wound of entrance, wound not infected; ball lodged under skin in popliteal space, from which position it was removed. The knee joint apparently normal five days after injury.

CASE II.—A .45-calibre, perforating wound of forearm involving ulnar and muscles of forearm; wound not infected; middle portion of ulnar for a distance of $1\frac{1}{2}$ inches carried away; remaining fragments not fissured. The splinters of bone were removed, the muscles trimmed and sewed together; wound drained.

CASE III.—A .45-calibre bullet, perforating wound, involving both bones of forearm and muscles; wound infected. Entrance wound an inch in diameter, exit wound four inches wide. Fragments of bones remaining were not fissured. The splinters of bone were removed, the bones resected and wired together, the muscles were trimmed up and brought into apposition.

This patient, four days after operation, is doing well, and the man has prospects of having a good arm.

CASE IV.—Wound by large lead bullet. Struck point of chin, carried away soft tissues and portion of inferior maxillary without fracturing body of bone. Bullet went into neck and along clavicle, producing a wound as if made by a machete; the bullet then perforated the trapezius muscle and lodged under the skin on back of shoulder. The wounds were all infected and of interest on account of a beginning aneurysm of the common carotid.

CASE V.—General Alban's orderly was struck in the thigh by a large lead bullet; the femur was shattered throughout almost its entire length into splinters; the artery was also injured and there was considerable hæmorrhage. This was the only case seen in which a temporary tourniquet was required during transportation. The thigh was removed

through its upper third and the man, five days after operation, is doing well. There is very little infection, and the stump looks well.

CASE VI.—Non-perforating, large entrance wound by a deflected Mauser bullet, which struck the middle of the femur. The bone was broken into several splinters for a distance of four inches; the muscles were much torn and pulpy; the wound was infected and the sensation imparted to the hand when introduced into the thigh through an incision was as if there were present a large abscess cavity in which there were loose splinters of bone. The patient had been injured five days previously and was in a very weak and septic condition. The thigh was removed through its upper third. Condition of patient after operation was very critical, but he gradually rallied, and now, three days after operation, is in fair condition, and, as the wound looks well, ought to recover. If this case had been operated on several days sooner the leg could have been saved, but the condition of the patient at the time of operation demanded that all septic material should be removed immediately.

CASE VII.—Non-perforating, infected wound of pelvis by Mauser bullet which, judging by the large wound of entrance, was made by a deflected missile. Operation performed four days after injury. The ilium was found to be fractured in several directions, the peritonæum was pushed inward by a collection of pus; at the bottom of this cavity a flattened, deformed steel jacket of a Mauser bullet was found. The lead had left the jacket, perforated the ilium, and imbedded itself in the muscles of the thigh. A sharp piece of the fractured ilium which protruded into the abdominal cavity was removed and the wound was thoroughly drained. Patient died two days after operation of septic infection. At time of operation patient's temperature was 104° F. If this case had been operated upon earlier and free drainage established from the site of fracture of the pelvis the man might have recovered, for his peritoneal cavity was not involved.

CASE VIII.—Mauser wound of forehead. Wound of entrance small and not infected; bullet probably lodged in frontal sinus; no cerebral symptoms. On account of the septic surroundings it was thought advisable not to interfere. Will be a favorable case for future operation.

This bullet was undoubtedly near the end of its flight, for there was little perforating energy left. The small wound produced is of interest.

CASE IX.—Wound by large .45-calibre lead bullet. Ball entered middle of arm on external surface, struck humerus obliquely, and was deflected into deltoid muscle, from which position it was removed. Bullet showed flattening; bone was not fractured.

CASE X.—A .45-calibre lead bullet pierced right triceps, making two wounds; then pierced tissues over right scapula, came out and entered skin on left side of spinal column, traversed the tissues under the skin for a distance of five inches and finally came out into the world and went on its way rejoicing in the fact that it had produced six separate wounds in one individual.

CASE XI.—Perforating Mauser wound of left lung. Entrance and exit wounds of the same size

and not infected. At time of receipt of injury patient coughed up a little blood. Two days after injury breath sounds over pierced lung were normal.

Patient's malarial trouble, which had been quiescent, became active after injury, but quickly subsided after the administration of a few good doses of quinine.

CASE XII.—Perforating wound of face by a large .45-calibre lead bullet at close range. Ball entered left cheek, produced a comminuted fracture of the left side of the inferior maxillary, and carried away three teeth. It then almost severed the tongue and went out of buccal cavity through right cheek.

CASE XIII.—One of the most remarkable examples of vitality was observed in a man who was shot through the abdomen by a Mauser bullet at close range. The ball entered the back on the left side, just missing the kidney, traversed the abdominal cavity, and made its exit three inches to the left of the umbilicus. The wound of exit was larger than the wound of entrance. When the man was taken on the train he had been exposed to severe rains for thirty-six hours and had had no attention during that time. He was suffering a great deal of pain and presented signs of peritonitis. When placed on his abdomen about a pint of liquid intestinal contents ran out of the anterior abdominal wound. The man was given one grain of morphine in the course of half an hour, with the idea of making his last moments comfortable. Four days later the man was seen still alive and in much better condition than he was when first noticed. He had very little fever, his abdomen was still swollen and somewhat tense. Both wounds were discharging intestinal contents freely. To just what extent the intestines were injured is, of course, hard to say, but there must have been several lesions. The surgeon in charge intends to let Nature take her course for about a month, and if at the end of that time the patient's condition justifies, an attempt will be made to close the fæcal fistulæ.

There were a large number of flesh wounds and wounds of bones that presented no special symptoms.

When the wounded men were received on the trains, the mud which was plastered over their wounds was removed and a wet bichloride (1-1,000) dressing of gauze was applied. The wounded, when they arrived in Panama, were distributed among the different hospitals; some went to their homes. Outside of the brain and abdominal cases the wounds have done very well, despite the fact that many of them are infected. The treatment usually instituted has been free drainage and wet bichloride dressings applied to the wounds, quinine, and plenty of food for the malarial and run-down condition.

The same battles could have been won and lost as they were, the same results could have been attained, much human suffering could have been averted, and much human tissue could have been saved, if both sides had used the small calibre, modern rifle.

Issues and Events of the Day.

THE COMING UNIFICATION OF THE MEDICAL PROFESSION.

REMARKS MADE BEFORE THE PHYSICIANS' CLUB, OF
DAYTON, OHIO, MARCH 20, 1902.

By CHARLES A. L. REED, M. D.,

CINCINNATI.

The invitation to address the Physicians' Club, of Dayton, on this, its initial meeting, is one for which I am profoundly grateful. This gratitude is all the more deep and real because the basis of your organization and the objects which you have before you are in consonance with views that I have long entertained and that I have never hesitated to express on all proper occasions and possibly—as I have heard intimated—on some improper ones. I do not know what your constitution and by-laws may set forth, but I infer that you are so highly evolved, that you so thoroughly understand yourselves and your aims, that you are—as I know you to be—such gentlemen, that you have no necessity for written compacts of government. The basis of your organization and the objects that you have in view are, however, so admirably set forth in your announcement that I may be pardoned if I employ your own language. "It was argued," in a preliminary conference, so your circular says, "that the State provides that certain persons, having shown by an examination that they are qualified therefor, shall be known as physicians; to them is committed the care of the sick and wounded; they are also expected to devise and execute sanitary measures for public and private welfare; in this the State recognizes no 'schools' or 'sects,' but holds all to be equal and equally responsible. Therefore it would be greatly profitable to these physicians if they could meet together and harmoniously discuss such things as are of importance to the public welfare and of interest to themselves professionally, politically, and commercially."

It seems that, actuated by the throbbing impulses of your profession and encouraged, as you state, by the example of your Present-day Club—an organization that, from such contributions as that of our distinguished colleague, Dr. J. C. Reeve, on politico-economic questions, has attracted the attention of the country—I say, thus prompted and encouraged, it would seem that you have proceeded systematically to give tangible expression to what must be recognized as the spirit of the twentieth century. In keeping with this idea, it appears that the representatives in your midst of the so-called "schools" or "sects" met and organized a governing committee, subject to the censorship of which any legal practitioner of medicine may become a member of

your club—your Physicians' Club—and "physician," too, without a qualifying adjective. I am further advised, confidentially, that in effecting the initial organization, the sectarian question was discussed and equitably recognized; I am told, also, that I am at liberty to allude to it in a more or less indefinite way this evening, but that from now henceforth the man who shall bring the ancient theme into these councils shall have his voice drowned by the derisive notes of a song that makes some reference to "The Times of Old Rameses." It would seem, indeed, that this event is the inauguration of a new régime—new in your city, new in our State—and it is eminently gratifying to see the good round hundred of loyal and high-minded men who are here to celebrate the event.

I congratulate you, in the first place, upon having effected this organization upon the broad basis of good citizenship. You have recognized the primacy of the law, not only by conforming to its provisions in your individual relations to the State, but tonight you have gone further, by bowing with loyalty to that sentiment that makes law possible. This sentiment, more important in a democracy than the law itself—the sentiment that, while underlying the law, rises above it—must be recognized in all walks of life, in all ranks of society, as a chief safeguard of the Republic. That profession, craft, or calling which, in its organized capacity, declines to recognize that which the law recognizes lends itself to the propagation of a sentiment that is inimical to law itself. It is not to be inferred from this that I advocate the surrender of the highest ideals on the part of the individual, not that I believe, for a single moment, that we should relinquish our efforts to secure the crystallization of those ideals in our laws; on the contrary, I am convinced that the very way to secure the desired end is, first, to foster the sentiment upon which law in general depends; next, to disseminate the very ideals that we desire to have established by statute, and finally by union and concert secure the necessary legislative action. I have stated that I am convinced of the truth of the foregoing conclusions, and my language may be construed to imply that I look upon them as mere deductions from theoretical premises. As a matter of fact, I feel that I am presenting, not a theory, but a condition—that I am dealing with actual affairs as they are exemplified in every State that is blessed with a medical law.

The second point of my discourse must be addressed to the soon-to-be-tabooed subject of sectarianism and its relation to the State whose interest, I feel, you are subserving by your example to-night. It is needless to speak of the genesis of sectarian medicine or of dogmatic therapy; it has existed, in one form or another, from Ptolemy Soter to Theo-

dore Roosevelt, and there is no period in the history of the world when it has not been a factor in social development. Sects have arisen around a central idea, have met their varying fortunes, and have passed away, while their central ideas, if true, have been absorbed into the great body of medical learning. This fact, however, has no relation whatever to the practical question that to-day confronts, not only the medical profession, but society at large. The State, by authority of the governed, has authority, not only to protect society against imposition, but to secure to it the best developments in any department of science. In the exercise of this authority the various States of the Union with unanimity have declared that one who shall assume responsibility, professionally, for the treatment, care, and conduct of the sick and injured shall have a certain knowledge of the fundamental branches of medicine, which include anatomy, physiology, chemistry, hygiene, obstetrics, and surgery; and the States have, with almost equal unanimity assumed, in effect, that physicians who are competently educated in these departments may be left either to themselves or to the supervision of their sectarian associates in matters of therapeutics. This has been and is the wise middle ground the fruits of which are obvious all over the country—are obvious here to-night—where, with a complete understanding upon the fundamental branches, and with an abandonment to the spirit of truth, an open, frank, free, and understandable discussion may be had upon all correlated subjects of science. But the essential, the paramount question, is that of the fundamental studies without which, as a basis, no system of medicine, whatever its sectarian title, can lay the slightest claim to being scientific.

When gentlemen, after having mastered these fundamental studies to the satisfaction of the State, entertain peculiar views upon purely subsidiary topics, they should be left to the exercise of the largest possible discretion. On the other hand, however, when an alleged sect comes into a State, as that of Osteopathy comes into Ohio, and asks to have its adherents examined in these subjects, not by the thoroughly non-sectarian and absolutely independent machinery of the State, but by examiners who have been educated in their own alleged and certainly questionable schools, that sect subjects itself, circumstantially, to the suspicion of interested motive—to the certain conviction of a desire to evade reasonable responsibility. It looks very much as if the State was being asked to grant a special license for the blind to lead the blind. The situation is not improved in the least by the specious excuse that these new sectarians are not whole doctors, but just partial doctors, as they admit, who wish to treat only certain cases, and refer others to real doc-

tors; for the ability to do this implies a knowledge of the fundamental subjects such as is demanded under the reasonable requirements of the State. It is certainly to be hoped that the great State of Ohio, having taken the advanced position that it has in the protection of society, through the regulation of the practice of medicine, will not be induced to adopt a retrogressive policy. The chief hope of averting such a disgrace is to be found in the complete organization of the profession of the State along the lines indicated by the Physicians' Club of Dayton.

I have already said that cooperation in the profession is no longer a theory but a condition. As a matter of fact, the régime that we are inaugurating so auspiciously in Ohio to-night, and the principles of organization, such as you have here adopted, have become rather extensively established in the American medical profession. It began as long ago as 1876, when the physicians of California assembled without reference to denominational predilections, and secured the adoption of the first effective law for the regulation of the practice of medicine anywhere in the United States. It is true that those conferences, called for temporary purposes, did not assume the form of permanent organizations for social and scientific purposes, such as you have here established, but the principle of reciprocal recognition and cooperation was then and there promulgated. The same steps were taken during the succeeding few years in Illinois, Alabama, and Colorado. In each instance the movements resulted in the establishment of State licensing boards, composed of representatives of the different "schools" or "sects," who consulted, yes, actually consulted, not upon the trivial question of a dose of medicine, but upon the vastly more vital question of the qualifications of those who were to practise the healing art. Thus it happened that, under the influence of the State, instigated by the profession itself, the lines of demarkation between the contending denominations of physicians were subjected to the gradual but sure process of effacement. From these beginnings the process has spread all over the country, and it has been accomplished, with but a single exception, with that smoothness characteristic of evolutionary growth.

The only exception was that of the State of New York, in which the physicians of the dominant and controlling school of practice, as a result of doing precisely what had been done without protest in the other States—as a penalty for doing precisely what you are doing here to-night—was subjected to the penalty of excommunication by its national organization. This action has stood for twenty years as the one conspicuous stain upon the escutcheon of the American medical profession. I am happy to state that, under the broader knowledge of to-day, this wrong is about to be remedied. I feel that I am

violating no confidence when I state here to-night that committees, representing the affiliated body of the national organization on the one hand and the excommunicated State organization on the other, each actuated by the *Zeitgeist* of the twentieth century, are arranging a few purely trivial details with the object of reestablishing the complete unity of the national profession. I may go a step further and say to you, in all confidence, that the great sentiment of the American Medical Association touching this unfortunate incident is such that it awaits with impatience the successful completion of these negotiations. You may, therefore, look forward with confidence to the meeting to be held in Saratoga in June as the date which shall mark the close of that period in our national profession when a reputable physician shall be denied recognition and fellowship because he exercises the most fundamental prerogatives of individual liberty.

It is not unknown to you that this consummation has been made possible by the important steps that were taken at the last meeting of the American Medical Association. On that occasion delegates were received from societies that had received into their membership, and that had formally adopted by-laws by which they could receive into their membership any legal practitioner, without reference to his educational antecedents. Recommendations were adopted looking to the organization of the profession in the different States along the same broad and catholic lines. These recommendations, in the hands of a committee of which Dr. P. Maxwell Foshay, of Cleveland, is the chairman, are now being formulated with reference to their formal adoption at the next meeting of the Ohio State Medical Society. Similar steps are being taken in a number of the other States of the Union. I mention these facts to show that you are to-day, while distinctly in the lead, only exemplifying the spirit which is dominating the profession all over the country.

And now that I have said thus much by way of gratulation, permit me to add a word by way of admonition. This is a reform movement, and, like all reforms, it may defeat its purpose in an effort to go either too fast or too far. I should look with extreme apprehension upon any agitation that had for its object the coercion of individual physicians into membership. No member is so dangerous as an unwilling one. It must be remembered that opinions long entertained are surrendered slowly, and the more slowly when honestly entertained. In many instances it is necessary to demonstrate that the changed relation does not, after all, involve so much a surrender of conviction as what the individual himself is surprised to discover are his prejudices. It must be remembered, also, that there are established personal and professional relations that imply

established material interests, and that these, in many instances, must undergo a more gradual process of adjustment before the individual feels at liberty to act. It seems to me that the ultimate success of a movement of this kind must come from a demonstration of its desirability—desirable to the personal, professional, social, and intellectual welfare of the individual. It is needless to say that in the light of such demonstration all desirable physicians will wish to be identified with the movement, and it is likewise needless to add that, when they manifest such a desire, they will be greeted with the right hand of fellowship. And now that you have taken this step—that *we* have taken this step, for I wish most heartily to be counted in—I fancy that we shall discover to-morrow that we are very much the same men that we were yesterday. Our relations will not have changed to any appreciable degree, but we shall know each other a little better and feel a little more kindly and do our duty with a little more lightness of heart—that is all. And as time moves on, so shall we, with a little more impetus that we have received to-night, and we shall move on convergent lines until finally we shall arrive at the standpoint of complete abandonment to the spirit of truth, the standpoint of complete professional unity, the standpoint of complete devotion to the highest exactions of citizenship.

It is, indeed, the dawn of a better epoch, when members of a learned profession, and a profession with growing liberality, maintain an open tribunal before which may be represented any scientific truth. It bespeaks an era when the professional mind, untrammelled by dictum or authority, shall assume a judicial poise. It is an era in which the chief point of pride shall be, not to maintain a preconception for the sake of personal achievement, but gladly to yield it in the light of demonstrated truth. With such a spirit dominating our profession, and with the unwritten code of the gentleman controlling the personal conduct and the professional relations of its members, we may feel that we are in the way of fulfilling, in the highest degree, our functions as the conservators of the public welfare. In conclusion and just as the sun is breaking in richest effulgence upon this new day, I can only congratulate you for having thus earnestly and auspiciously demonstrated what is meant by that increasing purpose that runs through the ages and by those thoughts of men that broaden with the procession of the suns.

Sometimes, Alas! too True.—*Punch* teaches a lesson in the following:

Nurse (who has been many hours on duty) to patient's mother.—"When do you think I shall be able to go to bed?"

Patient's Mother.—"Go to bed? I thought you were a trained nurse!"

Therapeutical Notes.

Eserine in Intestinal Atony.—According to the *Semaine médicale* for November, 1901, Professor von Noorden, of Frankfort on the Main, has employed eserine in intestinal atony, though this drug is used but little at present except as a myotic. In veterinary medicine it has been used for a long time when it was necessary to stimulate the intestinal muscles and thus favor peristalsis. Von Noorden has used eserine in five cases of abdominal tympanites after operation or due to typhoid infection, and has obtained a rapid disappearance of this symptom. He has prescribed eserine salicylate in daily doses varying from $\frac{1}{40}$ to $\frac{1}{20}$ of a grain, divided into three or four parts.

Owing to the quick decomposition of solutions of eserine, which rapidly become tinged with red, von Noorden recommends the use of this drug in powder only. In order to avoid accidental poisoning, he never gives more than $\frac{1}{60}$ of a grain at a single dose, and never more than $\frac{1}{20}$ in twenty-four hours, and even these doses should be reached only gradually. If, in spite of these precautions, unpleasant symptoms should arise, atropine injections subcutaneously seem to constitute the most efficient antidote to eserine.

The Treatment of Fever in Pulmonary Tuberculosis.—According to A. Meyer (*Memorabilien*, March 15, 1902, page 314), the fever of patients with pulmonary tuberculosis is of great prognostic importance; for patients without fever, as a rule, recover more frequently and more rapidly. The exact determination of the temperature is of great importance. When fever occurs, the patient must be put to bed and must remain there until repeated measurements show absence of fever for three days. The author does not favor the so-called rest cure in the open air, but proper care should be taken to secure free access of fresh air to the patient's room. It is not necessary, however, to keep his window open during the night in all weathers. A bland, fluid, diet is indicated so long as high temperature is present, for solid food delays the disappearance of the fever. The nourishment must be plentiful, however, and antipyretic drugs should be avoided. They depress the heart's action and reduce the temperature only temporarily. Cold packs around the chest and back are excellent and should be made more frequent and cooler, the higher the temperature rises; but the patient must never be allowed to become chilled. All other forms of hydrotherapy exhaust the tuberculous patient. Guaiacol carbonate in pill-form, in doses of two grains daily, acts favorably upon the rise of temperature.

The Treatment of Pulmonary Hæmorrhages by Means of Gelatin Injections Subcutaneously.—Thieme (*Münchener medizinische Wochenschrift*, 1902, No. 5) reports twelve cases in which he used this method of treatment. The site of injection was always in the thigh, and no marked pain was experienced by the patient. The gelatin solution was used in a strength of two per cent., with the addition of a small amount of soda. The swelling caused by the injection was vigorously rubbed with the thumb until absorbed and the puncture was covered with iodoform gauze saturated in a solution of aluminum

acetate. In two cases in which the last two manipulations had been purposely omitted, extensive necrosis of the skin took place, which confined the patient to bed for some time. The amount of injection given in each case was 100 cubic centimetres. The author concludes that the success of gelatin injections in pulmonary hæmorrhages cannot be doubted, and that this method of treatment should not be reserved as a last resort in cases of very severe uncontrollable hæmorrhage, but should be used without fear, provided the proper precautions are observed.

The Treatment of "Inoperable" Cancer.—Mr. Alfred Cooper, F. R. C. S. (*West London Medical Journal*, November, 1901), in a presidential address to the society, gives the results of his investigations into the treatment of inoperable cancer by the following methods: The inoculation with the streptococcus of erysipelas. Subcutaneous injection of Coley's fluid. Subcutaneous injection of anticancerous serum. Oophorectomy. Thyroid feeding. Lymph-gland feeding. By Röntgen rays and by Finsen's light treatment. By the injection of various irritating substances and the production of aseptic suppuration. By electricity. By drugs. Some of these remedies are applied locally, while the remainder are supposed to act by altering the character of the blood serum or of the general nutrition of the body in such a manner as to check the growth.

As a result of his review of the different remedies which have been recommended, we may, he thinks, arrive at the following conclusions:

(1) That in cases of inoperable sarcoma, more especially of the spindle-cell variety, the patient should have the option of Coley's fluid given to him, since a certain number of cases have been cured. (2) In cases of inoperable cancer of the breast in women of about forty years of age, in whom the menopause has not occurred, the operation of oophorectomy should be proposed; and this treatment may be combined with thyroid feeding. (3) In cases of inoperable rodent ulcer, and in the superficial malignant ulceration in other parts, the Röntgen rays give a good hope of improvement. (4) In cases where these other methods are declined or are inapplicable, the internal administration of celandine is worthy of trial, and when the case appears quite hopeless, morphine should be pushed without hesitation. (5) The parenchymatous injections of acetic acid are also worthy of trial. Finally, he would suggest that before trying any of these remedies the risk should be fully pointed out to the patient, the faint hope that most of them afford should not be magnified, and the discomfort of treatment should be fully discussed. In fact, the surgeon should not do more than offer the treatment, and leave the patient to accept or refuse it.

The Society of Medical Jurisprudence met at the Academy of Medicine on the evening of April 14th, the paper of the evening being on The Legal Prohibition of Unprofessional Mental Healing, by Charles M. Demond, a member of the New York Bar. The author recommended the enactment of strict laws prohibiting the exercise of mental healing by any one not a physician.

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RECIPROCITY IN STATE LICENSING.

We fear the day is still somewhat distant when there can be brought about complete reciprocity among the various States of the Union in the matter of granting the license to practise medicine, but we have long felt, and have more than once said, that it was quite feasible for groups of contiguous States to take reciprocal action. It seems likely that such action will before long be taken by the States of Illinois, Wisconsin, Indiana, and Michigan. Representatives of the boards of medical examiners of those States held a meeting in Chicago in January and organized the Confederation of Members of Reciprocating State Medical Examining and Licensing Boards, with Dr. J. R. Currens, of the Wisconsin board, for president, Dr. J. M. Dinnen, of the Indiana board, for vice-president, Dr. B. D. Harison, of the Michigan board, for secretary, and Dr. W. A. Spurgeon, of the Indiana board, for treasurer. Another meeting is to be held in May, and it is to be expected that then action will be taken, though of course only of an advisory character, that will much facilitate the establishment of reciprocity. In the mean time the secretary, Dr. Harison, has prepared a statement of what he conceives it practicable for the confederation to achieve, and has sent copies to the members of various examining boards.

Dr. Harison feels confident that a properly arranged system of reciprocity, far from favoring lax requirements, will tend to promote such emulation among the medical schools in the States concerned as will result in raising their standards for the diploma. Under reciprocity, he says, it would be necessary for a college to conform to the highest requirements in force in any of the participating States; otherwise its graduates would be at a disad-

vantage when they sought to avail themselves of the reciprocity arrangements. Moreover, the States would become emulous in matters of medical legislation. "For example," he says, "Michigan never would be content with a medical law that prevented her from having her certificates recognized in the leading States simply from the fact that the requirements for her license were inferior." Consequently, he continues, she would make every effort to bring her requirements up to the mark. The boards entering into reciprocity will not, he thinks, fix a standard in years, such as a "four years' course of six months in each year," but will set the course in hours, "itemizing each subject and laboratory course, as has been done by the Michigan board in its standard for the recognition of colleges."

Finally, Dr. Harison recognizes—and we presume that the members of the confederation agree with him—that it will never answer to do an injustice to the older members of the profession. After citing an opinion recently given by the attorney general of Wisconsin to the effect that, under the law, a person who had graduated from a reputable medical college under a two years' course some years ago had the same standing in law as a graduate of the same college under a four years' course at a later date, he says: "Reciprocity would be a failure if it did not take care of those physicians who have been in practice several years, but who graduated from reputable colleges previous to the advance of such colleges to a higher standard. If this proposition was not acquiesced in, then, men of the very highest standing and experience could not be included in any reciprocal exchange of State certificates, and only very recent medical graduates could obtain the benefits of reciprocity." This is an important matter and one that ought not to be lost sight of in any scheme of exchange licensing.

THE DAYTON PHYSICIANS' CLUB.

It was eminently fitting that a medical society organized on so liberal a basis as that of the Physicians' Club, of Dayton, Ohio, should secure the presence at its first meeting of such a leading exponent of broad-mindedness as Dr. Charles A. L. Reed, of Cincinnati, whose remarks on the occasion we are happy to be able to lay before our readers in this week's issue of the *Journal*. A few years ago the admission of adherents of the various sects in

medicine into one common society, with the simple requirement that they should be legally recognized practitioners, would have been hazardous, but the peril would have been due to the laxity of the legal requirements of the times rather than to the existence of sectarianism. Now the conditions are so changed, at least as regards the younger members of the profession, that there is really no danger of discord. The Physicians' Club has had the discernment to see this, and is well worthy of all the congratulation that Dr. Reed gave it.

As is well known, almost all the difficulty that has heretofore been met with in procuring legislation really desired by the entire medical profession has lain in lack of unanimity as to precisely what it was expedient to ask for. The formation of such societies as the Dayton Physicians' Club seems to us to promise much in the way of remedying that lack of agreement as to details. It is mainly for this reason, we think, that their establishment is to be commended. As Dr. Reed well says, the medical profession does not seek to exclude anybody from the license to practise simply on account of his belief in one or another of the so-called therapeutical "schools"; it merely asks that uneducated persons, those who do not know the rudiments of medicine, shall be excluded, and this it asks quite as much for the protection of the public as for its own sake.

We have for some time felt confident that the obstacles to the restoration of normal relations between the American Medical Association and the medical profession of the State of New York would soon be overcome, and we are glad to have Dr. Reed's assurance to that effect. It may be taken for granted that he speaks on the strength of accurate information, and it must never be forgotten that it will be mainly owing to his masterly management and his personal influence that such a desirable consummation is brought about.

THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

This organization held its annual convention in Ottawa on Thursday and Friday of this week, under the presidency of Sir James A. Grant, M. D., K. C. M. G., who delivered the opening address. The only other formal address announced in the programme was by Dr. S. A. Knopf, of New York, on the subject of The Mission of Societies for the

Prevention of Consumption in the Antituberculosis Crusade. The president's address was replete with the originality and cogency for which Sir James Grant has long been renowned. As to Dr. Knopf's address, we need only say that we esteem it a privilege that we shall be enabled to lay it before our readers within a very short time.

Apart from matters pertaining to permanent organization and provision for future work, the topics considered included the relation of governments and municipal bodies to the crusade for the prevention of tuberculosis, questions of legislation as to the disease, the reporting of its presence by physicians, the inspection of schools and examination of children, the inspection of meat, milk, etc., with respect to the danger of imparting the disease, the availability of general hospitals, sanatoria, and seaside and other resorts for the subjects of tuberculous disease, the care of such public conveyances as steamships, steam railway cars, and street cars with a view to limiting the spread of the disease, and the collection and publication of information calculated to educate the people and secure their cooperation with the medical profession in the movement to check the prevalence and fatality of tuberculous disease. All these items, it will be seen, are of prime practical importance, and we may be sure that they were considered in a manner well fitted to enlighten the profession and the community.

Our Canadian brethren are always alert in affairs pertaining to the betterment of conditions of living, and it was to be expected that they would accept their full share of the task of overcoming tuberculous disease. International congresses and organizations embracing great nations in their entirety will not suffice to accomplish the object; all collections of civilized men and women, State, colonial, or provincial, must be brought to see the need of a well-ordered campaign against such destructive diseases as tuberculosis, and we are glad to see that Canada has taken so prominent a part in the work.

UNTIDY STREETS AND DISEASE.

The intelligent and well-informed portion of the community does not need to be told at this late day of the connection between dirty streets and the spread of infectious disease, but there seems to be no general appreciation of the pathogenic part that may be played by streets that are simply littered with refuse but not appearing to the eye to be dirty in the

ordinary sense of the word. On this account we think the commissioner of street cleaning, Dr. Woodbury, did well to bring the matter forcibly forward in a recent address to the Civic Club. "In two sections of this city," he said, "the people throw shoes, oilcloths, and everything else right out on the streets. . . . The people don't think, and as a consequence a growing ground is afforded for the worst possible diseases. Four hundred and twelve sweepers are now on the sick report with bronchial diseases and phthisis because of the germs they have inhaled." Refuse not only serves as a nidus for morbid organisms itself, but it also very greatly obstructs the automatic cleansing that the gutters are designed to accomplish, and it increases the difficulty of the sweepers' work.

GOVERNMENT SUPERVISION OF ANIMAL THERAPEUTIC AND PROPHYLACTIC PRODUCTS.

A bill has been introduced into the Senate "to regulate the sale of viruses, serums, toxines, and analogous products in the District of Columbia, to regulate inter-State traffic in said articles, and for other purposes." It has been said in support of the bill that, while the individual States can adopt suitable protective measures with regard to products prepared within their own boundaries, it would be difficult for them to do so in the case of imported articles, the word imported covering those brought from other States as well as those from foreign countries. We are not convinced that any great difficulty would be encountered, and, though the recent terrible consequences of lack of care in the preparation of diphtheria antitoxine in St. Louis emphasize the importance of closer supervision, we believe that it had better be left to the several States.

THE NEW COURT FOR JUVENILE OFFENDERS.

Perhaps nothing more characteristically marks the broad humanity of the modern spirit than the establishment of special courts for the trial of juvenile offenders. The object of these new courts is to guard children against the exposure to, and an environment of, crime, which, in the past history of the world, has not infrequently created criminals out of offenders by no means radically bad. The laws that fitly apply to adults, who, if mentally responsible, have, or ought to have, arrived at a stage of sufficient judgment and self-control to avoid doing "those things they ought not to have done," are entirely unsuited to dealing with juvenile offenders in the formative period of their characters.

New York, which has lagged behind somewhat in this eminently humane work, such courts being al-

ready in operation in various cities in Pennsylvania, Illinois, and Wisconsin, is at last coming into line with the advance, as Governor Odell signed a bill, on April 14th, providing for such a court in the city of New York, and it is expected that the court will be in operation by the middle of May. It is a good work, and we hope and believe that it will be the means of making useful citizens in the future of many who, under the old régime, would probably have developed through enforced criminal associations, the result of early lapses, into habitual criminals.

THE NEED OF MORE HOSPITALS FOR CONTAGIOUS DISEASES.

The provision of suitable accommodation for the isolation and treatment of patients afflicted with contagious and infectious disease is a necessary corollary to modern regulations for the safeguarding of the public health. The fact that the boroughs of the Bronx, Queens, and Richmond are without any such provision requires immediate attention, and we welcome the action taken by Dr. Lederle, the president of the health department in asking the Board of Estimate and Apportionment for an adequate assignment for rehabilitating the existing hospitals and providing hospitals where none at present exist. The medical advisory board of the department is said to have endorsed Dr. Lederle's action, which, we doubt not, will be generally approved of.

COTTON WOOL SANDWICHES AS A PROTECTIVE AGAINST SHARP OBJECTS SWALLOWED.

At a recent meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, Mr. G. Jameson Johnston, according to the *British Medical Journal* for March 29th, related the extraordinary case of a man who, while swimming, swallowed his metallic plate of false teeth. A slapping on the back, with the view of dislodging the errant teeth, led to dyspnoea. On his arriving at the hospital, a probang was used and the denture passed on into the stomach, where it set up severe pains at the pyloric end, which continued for some days. Mr. Johnston then hit upon the expedient of feeding the patient with sandwiches, each containing a thin layer of cotton. A week after the man's admission, an aperient of licorice powder brought away the denture, encased in cotton. One gentleman feared that cotton so administered might induce obstruction. Well, so might the denture. But the cotton, as the events showed, might bring away the dangerous pointed plate in harmless form; and if it didn't, one laparotomy would do for both plate and cotton.

News Items.

Society Meetings for the Coming Week.

MONDAY, April 21st.—New York Academy of Medicine (Section in Ophthalmology and Otolaryngology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, April 22d.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, April 23d.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, April 24th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private) (annual); Pathological Society of Philadelphia (conversational); Church Hill Medical Society of Richmond, Virginia.

FRIDAY, April 25th.—New York Clinical Society (private) (annual); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, April 26th.—New York Medical and Surgical Society (private).

Bellevue Dispensary is to be closed, after many years of honorable service, on June 1st.

A Crusade against Smoke is being vigorously pushed in Orange, N. J., under the direction of Dr. Ohage, the health commissioner.

St. Peter's Hospital, Brooklyn.—The annual report, which has recently been issued, shows that 3,439 patients were treated during the year, of which number 264 remained over from 1900.

Professor Virchow, who has been ill for some time, has at last recovered sufficient strength to drive out, a fact which is chronicled with great joy in our German contemporaries.

The Kingston Avenue Hospital, Brooklyn.—An application has been made to the Board of Estimate for an allotment of \$125,000 for brick pavilions to replace the old wooden ones of this hospital.

Imprisoned for Breaking Quarantine.—The city board of health of New Rochelle has caused the commitment for four months to the penitentiary, of a person leaving a quarantined house without permission.

The International Association for Gynecology and Obstetrics will hold its fourth congress in Rome, from the 15th to the 21st of December of this year, under the patronage of the King of Italy, the ministers of education and of commerce acting as honorary presidents. The chief secretary of the committee of organization is Professor E. Pestalozza, 60 via Alfani, Florence, and the chairman is Professor E. Pasquali, 305 Corso Pittorio Emanuele, Rome.

The Semicentennial Celebration of the Chicago Medical Society took place on April 9th at the Auditorium. Dr. Alexander H. Ferguson, first vice-president, succeeded to the presidency vacant by the recent death of the lamented president, Dr. Christian Fenger.

The Egyptian Congress of Medicine will be held at Cairo from the 19th to the 23d of December of this year. The chairman of the German Section of the congress, Dr. von Bergmann, has issued a call requesting those interested to communicate with him, or with the secretary of the committee, Professor von Eulenberg, of Berlin.

The New York State Board of Health, on April 16th, changed the official title of the post at present occupied by Dr. Herman M. Biggs from that of Director of the Bacteriological Department to that of Medical Officer, the duties, however, remaining practically the same. The salary was at the same time raised from \$2,500 to \$5,000.

The Milwaukee County Medical Society.—At the recent meeting of this society the following officers were elected: President, Dr. Horace M. Brown; vice-president, Dr. William H. Washburn; secretary, Dr. F. E. Gray; treasurer, Dr. C. G. Wilson; censors, Dr. A. B. Farnham, Dr. Ernest Copeland, and Dr. L. W. Frank. The membership of the society was increased by about eighty.

The Smoke Nuisance at Boston.—On April 10th the committee on cities heard the arguments of the petitioners for a law prohibiting the smoke nuisance within a radius of ten miles of the State House. The petition will undoubtedly be successful. As there were no remonstrants, a sub-committee was appointed to draft a new bill. Many distinguished people attended the hearing.

The Louisville National Medical College (Colored) held its fourteenth annual commencement on April 8th. Mr. Augustus E. Willson delivered the address to the graduating class. Dr. Pickett, '98, delivered the alumni address. The degree of Doctor of Medicine and Surgery was conferred upon five male and two female students.

Hospital Buildings and Endowments.—Mrs. Mary A. Allison has bequeathed \$5,000 to the Methodist Episcopal Hospital, and \$2,500 to the Presbyterian Hospital, of Philadelphia. Owen Lamb, of Philadelphia, has bequeathed \$1,000 to St. Joseph's Hospital. The residuary estate of \$50,000 will be shared by St. Mary's Hospital with the Society of St. Joseph.

A Nurses' Alumnae Association.—The graduate nurses of the City and County Hospital Training School for Nurses, of San Francisco, have organized an alumnae association. The new society was launched under the most favorable auspices. The officers are as follows: President, Miss Amy Hart; vice-president, Miss Jennie Nickson; treasurer, Miss Belle Espeset; secretary, Miss Mary F. Strand. The establishment of a nurses' home is one of the dreams that it is hoped will materialize in the not too distant future.

The Small-pox Epidemic in Philadelphia.—That this epidemic is declining would appear to be the inference to be drawn from the fact that the authorities have ordered the discontinuance of the special police enrolled to guard the quarantined houses, which can now be watched by the regular police. Other advices, however, report thirty-five new cases of small-pox, being an increase of nine over the preceding week.

Birth, Death, and Marriage Rates in New York.—The registrar's report to Commissioner Lederle, of the board of health, for the first quarter of the present year, shows 18,364 deaths, as compared with 18,575 deaths for the first quarter of 1901, a rate of 20.22 per 1,000, as against 21.01 per 1,000 for last year. There were 21,767 births and 8,265 marriage reported for the quarter, as against 20,981 births and 7,913 marriages for the first quarter of 1901.

Dowieism and Vaccination.—A small-pox outbreak at the Zion College, 1254 Michigan Avenue, Chicago, has resulted in the announcement by Dr. Speicher that "Elijah II," while he advises against it, has given his gracious permission to all his followers who wish it, to be vaccinated. Not one follower of the religion consented to be vaccinated, and the quarantine will be continued at the college for two more weeks, and longer if more cases are discovered.

The Proposed New Hospital for the Borough of the Bronx came near being held up for a year by the loss of a registered letter. A bill had passed the legislature appropriating \$500,000 for a hospital in the Bronx. This bill came to New York for the public hearing before Mayor Low on March 28th, and was duly signed by the mayor and returned in a registered letter to Albany to receive the governor's signature making it a law. For some time the bill could not be found, but it was discovered in Albany on April 12th, doubled up with other legislative bills.

In Memory of Dr. Johnston.—A large audience gathered in the main hall of Columbia University on April 9th to do honor to the memory of the late Dr. William Waring Johnston. The speakers of the evening and their subjects were as follows: Biographical Sketch of Dr. Johnston, by Dr. A. F. A. King; His Personal Characteristics, by Dr. Henry D. Fry; Dr. Johnston as a Physician, by Dr. William Osler; As an Author, by Dr. Walter Reed; As a Teacher, by Dr. Sterling Ruffin; As a Member of the Hospital Staff, by Dr. W. P. Carr, and As a Citizen, by Dr. George M. Kober.

The Specific Micro-organism of Cancer.—At a meeting of the Research Committee on Cancer, held in Berlin on March 21st, Professor von Leyden exhibited numerous diagrams and microscopic preparations, and claimed the discovery of a specific cancer micro-organism. He concluded by the assertion that "cancer is an infectious disease, dependent on parasitic organisms (protozoa) identical with those discovered by him and exhibited to the meeting." An animated discussion followed, and von

Leyden's assertions were not left unchallenged. A publication on the subject may be expected within the next few weeks. Professor von Leyden's seventieth birthday will be celebrated on April 20th.

Action on the Medical Council Bill for Canada Delayed.—The bill before the Canadian House of Commons, to provide for the appointment of a medical council in Canada, was considered for some time in committee on April 9th. Sir Wilfrid Laurier suggested that further consideration of it be deferred. He admitted that he had been somewhat prejudiced against the measure in the first place. This feeling had since been removed, but there were still many, especially in the Province of Quebec, who were entitled to be heard, and whom it would require a little time to convince of the advantages of the measure. After some further discussion the course suggested by the Premier was agreed to.

The Mills Training School for Male Nurses.—Five pupils have left this school and a paper has been in circulation among the eighty male students, and has been signed by about seventy of them, as a protest against the introduction of female head nurses in the male wards at Bellevue. The male students complain that the under nurses' work is all mere drudgery, and that, if they are deprived of the chance of acting as head nurses, they will lose the most valuable training of the curriculum. While the sentiment is general, however, the older students, who are nearing the completion of their studies, are reluctant to imperil their chances, and so have refrained from signing the undertaking to leave in a body should the new method be persisted in.

A Tuberculosis Sanatorium for Havana.—Major W. C. Gorgas, U. S. Army, chief medical officer at Havana, has reported to the war department concerning the public sanitarium for tuberculosis patients, which is to be divided into two parts, located at different places—one for incurables and the other for curable patients. The section for incurable patients is to be situated in Havana, and Major Gorgas reports that the buildings are now being equipped. That for curable cases will be placed about five miles outside of Havana, and negotiations are now in progress for the purchase of about 100 acres of land on which to erect the buildings. According to Major Gorgas, the negro is less suited to the climatic conditions of Havana than the white man. The black race, he thinks, would entirely disappear in a few years were it not for immigration.

Medical Curricula in Wisconsin.—The State Board of Medical Examiners, of Wisconsin, has appointed a committee to examine into the curriculum and work of the Milwaukee Medical College, and the Wisconsin College of Physicians and Surgeons. The committee consists of Dr. H. M. Brown, Dr. Gilbert Leaman, and Dr. J. J. McGovern. This investigation has been instituted at the request of the colleges themselves, in consequence of allegations made by the Milwaukee Medical Society that these colleges themselves, in consequence of allegations medical study. It is said that under the law as it now stands students are required to attend four courses of lectures, each running through a period

of six months, no two courses to be given within a single year. After January 1st the courses are to be lengthened to seven months each. It is stated in the report of the committee on medical education of the Milwaukee Medical Society, that one of the Milwaukee colleges is giving three courses of fourteen weeks each, any two of which are equivalent to a full year's work, and that a student by this means is enabled to accomplish in two years the work that should occupy three years, thus lowering the graduating standard.

Ignorance, Carelessness, and the Spread of Small-pox.—An instance is reported from Lansing, Mich., of the means by which small-pox maintains its hold. The State Board of Health reports a case of a small settlement in Michigan, where the proprietor of the only store lives over the store. Small-pox has existed in the family for some time. The store, being also the post office, is the meeting place for all the inhabitants, and mail is sent from it throughout the neighborhood. The physician had pronounced the ailment "some kind of skin rash," and did not report it to the health officers, who learned of it through accident. The people are French, and difficult to manage, and refuse to be vaccinated or have their houses fumigated. No wonder that small-pox is reported from 157 towns of the State.

The Late Dr. Paul F. Mundé.—At a recent meeting of the Medical Board of Mount Sinai Hospital, the undersigned having been appointed a committee to draft resolutions on the death of Dr. Paul F. Mundé, report as follows:

Whereas, Dr. Paul Fortunatus Mundé, after a faithful service at Mount Sinai Hospital of nineteen years, has been removed by an untimely death; and

Whereas, his colleagues of the medical board had special opportunity during all these years to recognize in him the skilful physician, and to esteem him as a devoted friend; therefore be it

Resolved, that the Medical Board of Mount Sinai Hospital place upon its minutes this record to show its appreciation of the great loss which the hospital has sustained; that it extend its sympathy to his family in their great sorrow, and that a copy of these resolutions be sent to them and be published in the medical press of the city.

(Signed) ALFRED MEYER, M. D.

HENRY KOPLIK, M. D.,

HOWARD LILIENTHAL, M. D.

The Brooklyn Water Supply.—An application has been made to the Board of Estimate for \$200,000 for the establishment of a sand filter, for the water supply of Brooklyn. The application is endorsed by the medical societies of Kings county. In the argument prepared by the committee on public health, the great improvement in the death rate of Hamburg since the establishment, in 1895, of sand filtration for its water supply, is cited, and the impossibility of keeping the water supply pure in its course is insisted upon. The argument states: "If we cannot keep undesirable elements out of the water, the only alternative is to remove them before the water reaches the consumer . . . Sand filtration as a means of water purification is no

longer an experiment. As practised both here and in Europe it removes promptly and certainly a very large proportion of the bacteria, probably under all proper conditions over 99 per cent. The places using filtered water have the general extremely low death rates from water-borne diseases. As a concluding argument we think we are safe in the statement that sand filtration gives the maximum of efficiency with the minimum of cost."

The Adirondack Cottage Sanitarium, Saranac Lake, has recently issued its annual report for 1901, which shows that of 173 patients, 45, or 26 per cent., were discharged as cured. In 79, or 45 per cent., the disease was arrested and 39, or 22 per cent., were discharged as improved. Five patients were unimproved, 4 were doubtful, and 1 died. Out of 141 cases, 49 incipient cases, with a residence there of from three to seventeen months, 33 patients were discharged cured; in 6 the disease was arrested, and 1 was improved. Of 84 advanced cases, 12 were cured; in 55 the disease was arrested, 14 were improved and 3 were not improved. In 17 far-advanced cases, the disease was arrested in 6; 10 were improved, and 1 not improved. Of these 141 patients, 133 gained in weight an average of fourteen pounds, 5 lost weight, and 3 remained stationary.

Foreign Obituary Notes.—News of the following deaths are culled from our various foreign exchanges: Dr. Crouzat, professor of clinical obstetrics in the medical faculty at Toulouse.—Dr. B. Mercoli, professor of clinical medicine in the medical faculty of Camerino.—Dr. Fleurot, professor in the Medical School of Dijon.—Dr. Adolf Jarisch, professor of dermatology in the University of Gratz, died on March 20th, at the age of fifty-two. Dr. Jarisch, who was a native of Vienna, where he graduated in medicine, served from 1876 to 1881 as assistant to Professor Hebra. In 1888 he assumed the chair of dermatology at Innsbruck, and took the same chair at Gratz in 1892. He made many valuable contributions to the literature of his specialty, in which field his loss will be severely felt.—Dr. Edward Long Fox, consulting physician to the Bristol Royal Infirmary, died in that city on March 28th, at the age of seventy. He was a member of various learned societies, and served as president of the British Medical Association in 1895. He published many original papers and wrote several of the articles in *Quain's Dictionary of Medicine* and in the *Dictionary of Psychological Medicine*. He also published independent works on the *Influence of the Sympathetic in Disease* and *The Pathological Anatomy of the Nervous Centres*. Dr. Fox was always active in association work.

St. Vincent's Hospital.—There has recently been opened a new five story wing to St. Vincent's Hospital, New York, which is to be devoted exclusively to the surgical diseases of women. It contains sixty beds, of which twenty are to be free, and forty in private pay rooms, distributed as follows: On the first floor are the offices and reception room and four wards, three of which contain four beds each, the larger one eight beds. These rooms are finished in white and blue, each with brass bedsteads of elaborate design. Spacious bath rooms

and closets with the kitchens and closets are on this floor. On this floor also is the operating room, of thoroughly modern construction and appointments.

The second floor contains twenty-six private rooms, furnished in different colors with hard wood. The furniture is of the most modern make and of beautiful woods. Each room is equipped with a brass bedstead, centre and invalid tables, couch and pictures, china and linen.

The third floor contains fourteen private rooms, eight of which are still unfurnished. The fourth floor is of the dormitory for the nurses. A novel feature is the substitution of red light signals in places of bells, the credit of which is due to Dr. Humiston. The cost of the building was \$40,000, and the entire sum has been raised through the efforts of Dr. W. H. Humiston, one of his most liberal contributors being Mr. H. M. Manna. The hospital has no endowment fund and no paid staff. The services of the manager, physicians and nurses are all free, the only paid people around the institution being the engineer, fireman and scrub woman. There is a very fine training school for nurses in connection with the institution. The free dispensary in the basement will be adequate for the treatment of 10,000 patients a year.

Medical L — A conference of the Legislative Committee of the American Medical Association was held at Washington on April 10th. There were in attendance on the conference the chairmen of the legislative committees of the medical associations of New Hampshire, North Carolina, District of Columbia, Arkansas, New Jersey, New York, Massachusetts, Alabama, South Carolina, Minnesota, Michigan, Indiana, Pennsylvania, West Virginia, Maryland, Connecticut, Wisconsin, and several other Western States. There also was present a representative from the army, the navy, the Marine-Hospital Service, and the bureau of animal industry of the Agricultural Department.

The conference adopted committee reports which have for their object the securing of uniform legislation by the States and Territories which will permit a physician to practice in any State or Territory, and the organization of State medical organizations to secure enactment of legislation of importance to the profession. Surgeon-General George M. Sternberg, of the army, made a report on the pending army reorganization bill, and also made reference to the work being done by the medical corps in the Philippines.

Dr. L. E. Johnson, chairman of the legislative committee of the American Medical Association, submitted the annual report of the committee on national legislation, showing what had been accomplished in Congress and in the States and Territories.

The conference declared itself favorable, with some modifications, to the Perkins-Hepburn bills pending in Congress, to increase the efficiency of the Marine-Hospital Service and changing its name to the United States Public Health Service. These bills also received the endorsement of the conference of State health officers, which met in Washington last month. Strong resolutions against the Gallinger anti-vivisection bill for the District of Columbia were adopted, and favorable action was taken on

the Nelson bill, to establish a department of commerce and labor, and on the Proctor bill for the payment of medical expenses of sick officers and enlisted men while absent from duty without leave or furlough.

Hospital Staff Appointments.—At St. Catharine's Hospital, Brooklyn, Dr. Robert L. Carswell retires from the house-surgery on June 1st, and is succeeded by Dr. Edward J. McEntee. Dr. S. S. Gale is to be assistant house surgeon; Dr. E. F. McGovern, house physician; Dr. George Hart, ambulance surgeon; and Dr. Jennings, externe physician and surgeon. Dr. Stewart Lewis, Dr. E. Pender Porter and Dr. William S. Hubbard have been appointed to the newly created positions of assistants to the medical staff of St. John's Hospital, Brooklyn. Dr. George H. McFarland, Jr., and Dr. Charles Cartright, both from the College of Physicians and Surgeons, were the successful candidates at the recent examination for the post of internes. The following is the newly-appointed staff of the Charity Hospital, of New Orleans, for the ensuing year: Visiting Physicians: Dr. W. W. Butterworth, Dr. O. Lerch, Dr. G. K. Logan, Dr. J. Barnett, Dr. J. M. Elliot, Dr. J. Laurans, Dr. W. H. Seemann, Dr. P. E. Archinard, Dr. E. M. Dupaquier, Dr. E. J. Hunner, Dr. L. G. LeBeuf, Dr. A. Nelken, Dr. A. Weber, Dr. J. M. Soniat, Dr. N. Thiberge, Dr. G. S. Bel, Dr. J. A. Storck, Dr. L. L. Cazenavette, Dr. T. S. Kennedy, Dr. Joseph De Grange. Visiting Surgeons: Dr. Ham, P. Jones, Dr. Marion Souchon, Dr. J. B. Elliott, Jr., Dr. L. Perrilliat, Dr. S. P. Delaup, Dr. H. B. Gessner, Dr. S. W. Stafford, Dr. J. L. Burthe, Dr. E. H. Walet, Dr. Charles Chassaig-nac, Dr. H. S. Cocran, Dr. S. M. D. Clark, Dr. A. S. Yenni, Dr. P. Gelpi, Dr. F. W. Parham, Dr. C. Jeff Miller, Dr. I. I. Lemann, Dr. John B. Oechsner, Dr. C. N. Chavigny, Dr. J. A. Danna, Dr. C. L. Horton, Dr. M. H. McGuire, Dr. J. Hazard, Dr. J. B. Guthrie, Dr. E. D. Martin, Dr. Wm. M. Perkins, Dr. Charles A. Borey, Dr. P. Michinard, Dr. E. Moss, Dr. F. A. Larue. Visiting Aurists, Rhinologists and Laryngologists: Dr. E. W. Jones, Dr. O. Joachim, Dr. J. P. O'Kelley. Visiting Oculists: Dr. E. W. Jones, Dr. E. Jowers, Dr. P. Reiss. Visiting Dermatologists: Dr. I. Dyer, Dr. R. Hopkins. Visiting Dentists: Dr. A. G. Friedrichs, Dr. L. D. Archinard, Dr. C. V. Vignes.

The Third Annual Meeting of the American Therapeutic Society will be held at the New York Academy of Medicine, on May 13, 14, and 15, 1902. The programme is as follows:

Morning Session, First Day.—Business meeting; Review of the Progress of Therapeutics of the Preceding Twelve Months, presidential address, by Dr. Reynold Webb Wilcox, New York.

Afternoon Session, First Day.—Symposium: Valvular Diseases of the Heart. *Ætiology and Symptomatology*, by Dr. Thomas E. Satterthwaite, of New York; *Treatment*, by Dr. George B. Fowler, of New York; *Prognosis*, by Dr. Leonard Weber, of New York. *The Capillary Area*, by Dr. Eli H. Long, of Buffalo, N. Y. *The Proper Introduction of Therapeutic Agents to Science and Commerce*, by Dr. F. E. Stewart, of East Orange, N. J. *Therapeutics of Chromium Sulphate (Green Chromic*

Sulphate), by Dr. Louis Kolipinski, of Washington, D. C.

Morning Session, Second Day.—Symposium: Treatment of Pulmonary Tuberculosis. Climatic, by Dr. Josiah N. Hall, of Denver, Col., and Dr. George Edward Tyler, of Denver, Col.; Medical, by Dr. Jesse Shoup, of Washington, D. C.; Dietetic, by Dr. William Henry Porter, of New York, and Dr. D. Olin Leech, of Washington, D. C.; Physical, by Dr. J. W. Chappell, of Washington, D. C., and Dr. Egbert LeFevre, of New York. A Contribution to the Therapeutics of Iron and Silver, by Dr. Albert C. Barnes, of Philadelphia, Pa. The Causes, Prevention and Treatment of Puerperal Eclampsia, by Dr. Robert Reyburn, of Washington, D. C.

Afternoon Session, Second Day.—Recent Advance in Special Therapeutics. Ophthalmology, by Dr. D. B. St. John Roosa, of New York; Gynæcology, by Dr. Matthew D. Mann, of Buffalo, N. Y.; Surgery, by Dr. William H. Carmalt, of New Haven, Conn.; Obstetrics, by Dr. Charles Jewett, of Brooklyn, N. Y.; Laryngology, by Dr. Charles H. Knight, of New York; Orthopædics, by Dr. Newton M. Shaffer, of New York; Genito-urinary, by Dr. Eugene Fuller, of New York; Electro-therapeutics, by Dr. William J. Morton, of New York; Pædiatrics, by Dr. Charles G. Kerley, of New York; Dermatology, by Dr. Charles W. Allen, of New York; Neurology, by Dr. Edward D. Fisher, of New York.

Morning Session, Third Day.—Changes Occurring in Chemical Substances in the Organism, by Dr. J. W. Wainwright, of New York. The Therapeutic Use of the Organic Extracts, by Dr. Oliver T. Osborne, of New Haven, Conn. The Treatment of Gonorrhœal Arthritis, by Dr. DeForest Willard, of Philadelphia, Pa. The Treatment of Opium Addiction, by Dr. Smith Ely Jelliffe, of New York. Some Points on Röntgen Therapy, by Dr. Carl Beck, of New York.

A Banquet to Dr. Clint W. Kelly was given on April 10th at the Pendennis Club, Louisville, Ky., by a number of Louisville physicians, among those present being Dr. Ap Morgan Vance, Dr. William Cheatham, Dr. Louis McMurtry, Dr. J. M. Mathews, Dr. A. M. Cartledge, Dr. William Bailey, Dr. J. M. Bodine, Dr. W. O. Roberts, Dr. John C. Cecil, Dr. Louis Frank, Dr. J. M. Ray, Dr. J. G. Sherrill, Dr. H. H. Grant, Dr. John A. Ouchterlony, Dr. Turner Anderson, of Louisville, and Dr. Turck, of Chicago. Dr. Kelly has just returned to his home after undergoing treatment at the hands of Dr. Herman Knapp, of New York city.

The Fourteenth International Medical Congress will be opened in Madrid, Spain, on April 23, 1903, and close on the 30th of the same month. Dr. Abraham Jacobi, having been requested by the officers of the congress to form the American committee, has arranged that the plan devised by Dr. William Osler, which worked so well in preparation for the thirteenth congress, shall be followed also for the fourteenth. Invitations to accept places on the committee have therefore been sent to the president of the American Congress of Physicians and Surgeons; the president of the American Medical Association, the presidents of the fourteen constituent societies and associa-

tions of the American Congress, the surgeons-general of the army, navy and Marine-Hospital Service, the president of the Canadian Medical Association, and the president of the National Dental Association. Acceptances have been received from nearly all of those invited. Dr. Howard A. Kelly, of Johns Hopkins University, will deliver an address at one of the general meetings of the congress, and has chosen for his subject The Passing of a Specialty. Dr. Ramon Guitéras has been appointed delegate to the congress by the New York Academy of Medicine.

The committee, so far as it has been appointed, consists of Dr. W. W. Keen, of Philadelphia, president of the American Congress of Physicians and Surgeons; Dr. John A. Wyeth, of New York, president of the American Medical Association; Dr. R. H. Chittenden, of New Haven, president of the American Physiological Society; Dr. Walter S. Christopher, of Chicago, president of the American Pædiatric Society; Dr. Joseph Collins, of New York, president of the American Neurological Association; Dr. John W. Farlow, of Boston, president of the American Laryngological Association; Dr. Samuel A. Fisk, of Denver, president of the American Climatological Association; Dr. S. C. Gordon, of Portland, Me., president of the American Gynæcological Society; Dr. George T. Jackson, of New York, president of the American Dermatological Association; Dr. Horace G. Miller, of Providence, R. I., president of the American Otological Society; Dr. Presley M. Rixey, of Washington, surgeon-general of the navy; Dr. F. J. Sheperd, of Montreal, president of the Canadian Medical Association; Dr. George M. Sternberg, of Washington, surgeon-general of the army; Dr. O. F. Wadsworth, of Boston, president of the American Ophthalmological Society; Dr. DeForest Willard, of Philadelphia, president of the American Surgical Association; Dr. H. Augustus Wilson, of Philadelphia, president of the American Orthopædic Association; Dr. James C. Wilson, of Philadelphia, president of the Association of American Physicians; Dr. Walter Wyman, of Washington, surgeon-general of the Marine-Hospital Service; Dr. Abraham Jacobi, of New York, chairman, and Dr. John H. Huddleston, secretary.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 12, 1902:

DISEASES	Week end'g Apr. 5		Weekend'g Apr. 12	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.	10	2	27	10
Scarlet fever.	380	28	385	29
Cerebro-spinal meningitis.	0	2	0	4
Measles.	614	22	630	20
Diphtheria and Croup.	387	52	301	35
Small-pox.	75	20	60	12
Tuberculosis.	262	15	316	105

Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine Hospital Service for the seven days ending April 10, 1902.

AUSTIN, H. W., Surgeon, to proceed to the Delaware Breakwater and Reedy Island Quarantine Stations as inspector of unserviceable property.

GLENNAN, A. H., Surgeon, to report at Washington for special temporary duty.

HODGSON, S. H., Acting Assistant Surgeon, granted extension of leave of absence for ten days, from March 30, 1902.

JACKSON, J. M., Acting Assistant Surgeon, granted leave of absence for three days, from April 9, 1902.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending April 11, 1902.

<i>Smallpox—United States.</i>			
California....	San Francisco....	Mar. 22-29....	7 cases.
Colorado....	Denver....	Mar. 22-29....	4 cases.
Illinois....	Chicago....	Mar. 29-Apr. 5....	9 cases.
"	Danville....	Mar. 29-Apr. 5....	3 cases.
"	Peoria....	Mar. 1-31....	17 cases.
Indiana....	Evansville....	Mar. 29-Apr. 5....	4 cases.
"	Indianapolis....	Mar. 29-Apr. 5....	18 cases.
"	Terre Haute....	Mar. 22-Apr. 5....	1 case.
Iowa....	Ottumwa....	Mar. 1-20....	32 cases.
Kentucky....	Covington....	Mar. 30-Apr. 6....	18 cases.
Louisiana....	Shreveport....	Mar. 29-Apr. 5....	14 cases.
Maryland....	Baltimore....	Mar. 29-Apr. 5....	2 cases. 1 death.
Massachusetts....	Boston....	Mar. 29-Apr. 5....	23 cases.
"	Brockton....	Mar. 29-Apr. 5....	2 cases.
"	Cambridge....	Mar. 29-Apr. 5....	3 cases. 1 death.
"	Everett....	Mar. 29-Apr. 5....	5 cases.
"	Holyoke....	Mar. 15-Apr. 5....	11 cases.
"	Melrose....	Mar. 5-Apr. 5....	2 cases. 1 death.
"	New Bedford....	Mar. 29-Apr. 5....	1 case.
"	Newton....	Mar. 29-Apr. 5....	3 cases.
"	Quincy....	Mar. 29-Apr. 5....	3 cases.
"	Somerville....	Mar. 29-Apr. 5....	1 case.
Michigan....	Detroit....	Mar. 29-Apr. 5....	15 cases.
"	Ludington....	Mar. 29-Apr. 5....	9 cases.
Nebraska....	Omaha....	Mar. 29-Apr. 5....	24 cases.
New Jersey....	Camden....	Mar. 29-Apr. 5....	4 cases.
"	Elizabeth....	Mar. 22-29....	1 case.
"	Newark....	Mar. 29-Apr. 5....	20 cases. 3 deaths.
New York....	New York....	Mar. 29-Apr. 5....	75 cases. 20 deaths.
N. Carolina....	Charlotte....	Mar. 1-31....	30 cases. 1 death.
Ohio....	Cincinnati....	Mar. 28-Apr. 4....	13 cases. 1 death.
Pennsylvania....	Altoona....	Mar. 29-Apr. 5....	1 case.
"	Johnstown....	Mar. 29-Apr. 5....	1 case.
"	Philadelphia....	Mar. 29-Apr. 5....	26 cases. 6 deaths.
Rhode Island....	Providence....	Mar. 29-Apr. 5....	2 cases.
South Dakota....	Sioux Falls....	Mar. 29-Apr. 5....	1 case.
Tennessee....	Memphis....	Mar. 29-Apr. 5....	15 cases.
"	Nashville....	Mar. 29-Apr. 5....	1 case.
Utah....	Salt Lake City....	Mar. 29-Apr. 5....	1 case.
Virginia....	Roanoke....	Mar. 1-31....	32 cases. 1 death.
Washington....	Tacoma....	Mar. 23-30....	5 cases.
West Virginia....	Wheeling....	Mar. 29-Apr. 5....	1 case.
Wisconsin....	Green Bay....	Mar. 28-Apr. 6....	2 cases.

<i>Smallpox—Foreign.</i>			
Belgium....	Antwerp....	Mar. 15-22....	11 cases. 6 deaths.
Brazil....	Rio de Janeiro....	Feb. 16-Mar. 16....	21 deaths.
Canada....	Winnipeg....	Mar. 22-29....	1 case.
China....	Hongkong....	Feb. 16-Mar. 1....	8 cases.
Columbia....	Cartagena....	Feb. 15-22....	1 death.
France....	Paris....	Mar. 15-22....	2 deaths.
Great Britain....	Glasgow....	Feb. 22-28....	10 cases. 6 deaths.
"	London....	Mar. 15-22....	449 cases. 53 deaths.
"	North Shields....	To Mar. 15....	21 cases. 2 deaths.
"	South Shields....	Mar. 15....	8 cases.
Italy....	Palermo....	Mar. 8-15....	9 cases. 2 deaths.
Mexico....	Mexico....	Mar. 16-23....	3 cases. 2 deaths.
"	Vera Cruz....	Mar. 15-29....	2 cases.
Russia....	Moscow....	Mar. 8-15....	2 cases. 2 deaths.
"	Odessa....	Mar. 15-22....	3 cases. 2 deaths.
Uruguay....	Montevideo....	Feb. 22-28....	71 cases. 5 deaths.

<i>Smallpox—Insular.</i>			
Porto Rico....	Ponce....	Mar. 15-22....	6 cases. 3 deaths.

<i>Yellow Fever.</i>			
Brazil....	Rio de Janeiro....	Feb. 16-Mar. 16....	128 deaths.
French Guiana....	Cayenne....	Mar. 27....	Present.
Mexico....	Vera Cruz....	Mar. 15-29....	6 cases. 3 deaths.

<i>Cholera.</i>			
China....	Shanghai....	Mar. 31....	Sporadic.
"	Lung Kun....	Mar. 31....	Sporadic.

<i>Plague.</i>			
Straits Settlements....	Singapore....	Feb. 15-22....	2 deaths.

<i>Plague.</i>			
Brazil....	Pernambuco....	Apr. 4....	Declared infected.
"	Rio de Janeiro....	Feb. 16-Mar. 16....	1 death.
China....	Hongkong....	Feb. 15-Mar. 1....	1 case. 1 death.
"	Tsang Shing....	Mar. 31....	20 deaths.
Japan....	Nagasaki....	Mar. 1....	1 case on S S Taiho Maru, from Formosa.

Army Intelligence.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending April 5, 1902:

GIBSON, EDWARD T., Captain and Assistant Surgeon, will report in person to the commanding general, Department of California, for temporary duty and for assignment on a transport when a vacancy shall occur.

HORNE, WILLIS S., Contract Surgeon, will proceed to San Francisco for temporary duty.

KIMBALL, JAMES P., Colonel and Assistant Surgeon General, having been found incapacitated for active service on account of disability incident thereto, was retired April 7, 1902.

LIME, ARTHUR M., Lieutenant and Assistant Surgeon, will proceed to Fort Riley, Kansas, for duty.

MEAD, JAMES E., Captain and Assistant Surgeon, will report at San Francisco for transportation to the Philippine Islands, for duty.

RICHARDSON, GEORGE H., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board at Fort Grant, Arizona Territory.

STEWART, WILLIAM J. S., will proceed to San Francisco for temporary duty and assignment to duty on a Government transport when a vacancy shall occur.

THORP, CHARLES W., Contract Surgeon. The extension of leave of absence granted him is further extended one month.

WAHL, HUGO A., Contract Surgeon, is granted leave of absence for two months, with permission to go beyond sea.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 12, 1902.

BERRYHILL, T. A., Surgeon. Granted leave of absence for six months on account of sickness.

KERSHNER, E., Medical Inspector, retired. Commissioned medical inspector on the retired list from April 2, 1902.

Births, Marriages, and Deaths.

Born.

HUNT.—In Lowville, N. Y., on Wednesday, April 10th, to Dr. and Mrs. James Z. Hunt, a son.

Married.

CONLAN—BENNETT.—In San Rafael, California, on Wednesday, April 2d, Dr. W. E. Conlan, of San Francisco, and Mrs. Annie Bennett.

McGOWAN—WINTERS.—In Washington, on Wednesday, April 2d, Mr. Chester Elwood McGowan and Miss Elizabeth Winters, daughter of Dr. John T. Winters.

MOORE—WATSON.—In Washington, on Wednesday, April 2d, Dr. Dickson Leonard Moore, of Columbus, Ohio, and Miss Marie Margaret Watson.

TRASK—WELLS.—In St. Joseph, Michigan, on Thursday, April 10th, Dr. Harrison Joseph Trask, of Buffalo, and Miss Clara Angela Wells.

VOORHEES—BROWN.—In New York, on Wednesday, April 2d, Dr. James D. Voorhees and Miss Louise Brown.

Died.

AHL.—In York, Pennsylvania, on Friday, April 4th, Dr. John Ahl, in the seventy-third year of his age.

CLOCK.—In Chicago, on Monday, April 7th, Dr. F. G. Clock.

NOUËL.—In New York, on Wednesday, April 10th, Dr. A. A. Nouël, in the fifty-sixth year of his age.

Pith of Current Literature.

Medical Record, April 12, 1902.

The Traumatisms of Pregnancy. By Dr. Denslow Lewis.—The author considers the subject from the general standpoint. Some interesting and curious cases of traumatism are recorded. It is wise in every abortion to consider the possibility of its having been induced. It is important to understand that serious traumatism may have been ignorantly inflicted, and that the foreign body, probably not aseptic, may still be in the uterus or may have passed through it. A realization of this possibility and a knowledge of the dire results that have followed different injuries, must modify our treatment in some important details. The traumatisms of pregnancy due to direct or indirect violence, apart from attempts at the induction of abortion, are, as would be expected, most varied. It should be remembered that an amount of violence sufficient to cause a fatal peritonitis or to produce the most serious results, may not separate the connection between mother and child. At other times a slight injury suffices to interrupt pregnancy; it may be weeks after it has been inflicted. Serious and, at times, fatal injuries occur as the result of severe or apparently trivial violence applied, as a rule, directly to the abdominal parietes. Such injuries are recorded as the result of falls, beating, lifting, pumping, crushing, kicks, and other forms of direct violence.

A Clinical Report Relating to (a) Hæmorrhage Persisting, Notwithstanding Curettage; and (b) Secondary Hæmorrhage following Abdominal Section. By Dr. Egbert H. Grandin.—The author's cases raise the point as to whether the statement is true that the symptomatology of internal hæmorrhage occurring within twenty-four hours after abdominal section is sufficiently exact to warrant us in reopening the abdominal cavity. The author contends that vaginal section will always enable us to settle this question, which is of vital moment to the patient and to our reputation. At the outset, however, it is essential that we should free our minds of the thought of that bugbear, shock, remembering that the symptomatology is essentially different, and that the free use of morphine ought to make the diagnosis for us.

General Treatment of Measles. By Dr. Louis Fischer.—The author asserts that tincture of acornite, in one-drop doses, will be found serviceable in addition to spirit of Mindererus. Vomiting is best relieved by giving the stomach rest. Rectal alimentation and rectal medication should be resorted to during these intervals of rest. When the nose and the pharynx discharge freely and irritate the child, irrigation with some bland antiseptic, such as a one-per-cent. boric-acid solution, will be useful. When the expectoration is swallowed an emetic is useful in removing the accumulated viscid secretion, if it is very annoying. Steam, impregnated with eucalyptus or oil of thyme, will be found useful when the cough is distressing. Malt extract for the relief of cough is a very favorable preparation. One of the most frequent causes of death, next to pulmonic complications, is intestinal catarrh, and, consequently, great care must be exercised in the use of purgatives.

Rhinoliths and Foreign Bodies in the Nose. By Dr. J. M. Ingersoll.

Journal of the American Medical Association, April 12, 1902.

Report of Cases Treated with Röntgen Rays. By Dr. William Allen Pusey.—One important fact, the author believes, may be considered established, not only from the author's cases, but from the work of others; that is, that the x rays have a destructive effect upon tissues of low vitality, and this effect can be utilized under suitable conditions to cause the destruction of such tissues without destroying the involved healthy tissue. The author's sections show that x rays cause a degeneration of some sorts of carcinomatous tissue and a disappearance of this degenerative substance, presumably by absorption. This disappearance of carcinomatous tissue is followed by the formation of firm, healthy scar tissue. A similar process presumably occurs in the disappearance of the diseased tissue in tuberculosis, sarcoma, and pseudoleucæmia. As general propositions, the author maintains that: 1. In all cases of malignant disease which have been operated on, there is reason to urge the subsequent use of x rays as a prophylactic measure. 2. In all inoperable cases of malignant disease the x rays should be tried. 3. In all such cases there is a probability of relieving pain and a possibility of inhibiting the progress of the disease.

A Brief Review of Finsen's Phototherapy. By P. C. Clemensen.

The Use and Abuse of Morphine after Abdominal Section. By Dr. L. H. Dunning.—The author condemns the routine use of morphine and other preparations of opium. For the relief of severe pain and marked restlessness, morphine is much superior to codeine, though more prone to be followed by unpleasant symptoms, such as nausea, vomiting, diminished secretions, and constipation of the bowels. The serious after-effects of morphine may be largely overcome by the drinking of liberal quantities of water before the operation, and by the rectal injection of a pint or a quart of the normal salt solution immediately after the operation, the systematic use of the colon tube, and the early action of the bowels. In persistent vomiting not due to sepsis or peritonitis, small doses of morphine hypodermically not infrequently afford relief. In secondary shock due to fright or over-anxiety morphine in small doses is often a potent remedy.

Some Points in the Differential Diagnosis of Abdominal and Pelvic Tumors. By Dr. Rufus B. Hall.—According to the author, one of the best rules to adopt in making a diagnosis is to give an anæsthetic in every doubtful case before expressing an opinion. Under anæsthesia we have the patient and the tumor just as they are. Relaxation of the muscles gives us a much better idea of the condition present than we could possibly get otherwise. The anæsthetic often dispels all doubt at once, and converts the hitherto obscure and difficult case into one that is perfectly easy and plain.

The Bacillus Coli Communis in Human Infections. By Dr. August Jerome Lartigau.—The *Bacillus coli communis* may, under what seem to be

normal conditions, be carried during life from the intestine to healthy viscera. This invasion takes place from the intestine into the abdominal viscera, more especially the liver and kidneys, through the portal circulation. It is possible that similar invasions may take place from other parts, especially the mouth, pharynx, etc. Further, it is probable that, under conditions similar to those in which these invasions occur, bacteria may sometimes reach the systemic circulation. Agonal and post-mortem invasion of the tissues is common. The virulence of the *Bacillus coli communis* is influenced by at least two factors: (1) Changes in the physiological activities of the intestine; (2) growth in new host environments. It is as a secondary invader of tissue previously occupied by micro-organisms or of tissue already injured from other causes that the colon bacillus claims our attention. It may induce inflammatory lesions, mainly suppurative, in the body tissues generally. Its rôle in acute inflammatory lesions of the intestine, more particularly of the appendix, peritonæum, and urinary passages, has been generally overestimated. While it may be the primary inciting factor, other organisms usually take this part, the *Bacillus coli communis* more commonly acting as an accessory factor.

Medical Aspects of Cholelithiasis. By Dr. Robert B. Preble.

Philadelphia Medical Journal, April 12, 1902.

Rubella and the "Fourth Disease." By Dr. J. F. Crozer Griffith.—So far as the author's experience goes, he can see no possible reason for, and every reason against, the assumption of a "fourth disease." He points out that every infectious disease is liable to variations in its type, both in the individual and in the epidemic, and that aberrant cases and forms, and even aberrant epidemics, arise. We cannot give a new name to each of these. The history of rubella shows that it is peculiarly liable to vary. We still lack the most important evidence of all that any "fourth disease" exists; namely, we have yet to see the occurrence of rubella scarlatini-formis, as generally understood, fail to protect from an attack of rubella morbilliformis, or *vice versa*.

A Case of Intermittent Claudication, Terminating in Gangrene. By Dr. I. Harris Levy.

Ophthalmia Neonatorum. By Dr. Reynolds Wilson.—According to the author, the demands in the matter of treatment are met by the following method of procedure: 1. The ante-partum care of the birth canal. 2. The scrupulous cleansing of the lids following expulsion of the head, and constantly thereafter in suspicious cases. 3. The non-invasion of the palpebral sac by separation of the lids before the appearance of typical discharge. 4. Prompt and absolute isolation upon the appearance of conclusive signs of specific inflammation. 5. Thorough and systematic irrigation. 6. Astringent application of silver nitrate in cases of prolonged suppuration. As an important adjunct to local treatment, attention should be given to the general condition of the child in cases of debility and malnutrition. The measures directed toward the care of the infant are comprised in cod-liver oil inunctions, small doses of whiskey internally, and breast feeding. At the same time, the mother should receive some form of tonic treatment.

Adenoid Vegetations and their Influence on the Palatal Arch. By Dr. Frederick H. Millener.—While there are still surgeons living who object to removing adenoids, as there are still some who deprecate the removal of the faucial tonsils, on the ground that children will grow out of them, it ought to be remembered that, even if tonsillar hypertrophies do become reduced with advanced age, the subjects have in the meantime *grown into their symptoms*, and these are found every day in cases of deafness.

Vaccination. By Dr. T. F. Campbell.

The Relation of the Tubercle Bacillus to Pseudoleucæmia (Sternberg's Disease). By Dr. Joseph Sailer.—The author's conclusion is that the time has not yet come for any dogmatic statement upon this question. None of the evidence hitherto presented can be regarded as decisive, and yet the gradual accumulation of positive evidence, and the absence of entirely satisfactory negative evidence, rather tends to confirm the supposition that the majority, if not all, of the cases of pseudoleucæmia will ultimately be recognized as tuberculous in nature.

Medical News, April 12, 1902.

On Amœbic Abscess of the Liver. By Dr. William Osler.—A point of very considerable interest is the question of leucocytosis in amœbic abscess of the liver. From the history of the author's five cases, and of others, some of the statements on this point need revision. In Case I, on admission, the leucocytes were only six thousand per cubic millimetre and only once rose to eleven thousand. In Case II the leucocytes were only between eight thousand and ten thousand per cubic millimetre; in Case III, nine thousand. In Cases IV and V there was a leucocytosis of twenty-two thousand and fifteen thousand respectively. Three of the cases, therefore, had practically no leucocytosis, and the strong statements as to the invariable presence of leucocytosis in abscess of the liver require to be modified. Neither is amœbic abscess of the liver always associated with existing ulceration in the intestines, as one of these cases illustrates.

Spa Treatment of Gout. By Dr. Charles C. Ransom.—In ordering the spa treatment for our gouty patients, the author insists on our bearing in mind the fact that it is a complex treatment, made up of many factors, each of which has a decided bearing upon the successful issue of the whole. These factors he considers separately. He points out, however, that a special advantage of the spa treatment lies in the fact that we have the patient under much better control than at home. He goes to the springs for the express purpose of the cure, his time and his energies are given over to that alone, and if he is properly directed he will be so occupied by his treatment that he will have but little time for retrospection and worry. He is away from business and petty annoyances, and with the rest and out-of-door life the change in itself has a powerful influence for good.

On the Early Diagnosis of Pleuritic Effusions. By Dr. James K. Crook.—The author points out that a supposed pneumonia unattended by rusty or brick-dust sputum is suspicious; the entire absence of such

sputum gives a strong inference of pleuritic and not pulmonic trouble. A marked increase in the semi-circumference of the affected side is absolute evidence of the accumulation of fluid, as is also displacement of the viscera, especially of the heart. If, after a careful examination, we are still in doubt as to the nature of the disease we should not hesitate to employ the exploring needle.

Report of a Case of Removal of the Gasserian Ganglion. By Dr. John F. Erdmann.

The Ætiological Classification of Varicose Veins of the Legs. By Dr. William S. Terriberry.—The author makes a broad distinction between those cases which occur with predisposing cause and those cases in which there is no acquired or congenital defect in the vascular apparatus. Further, with or without predisposing cause, all cases of varicose veins may be placed in three groups: 1. Those cases due to regurgitation following stenosis above the saphenous valves. 2. Those cases due to regurgitation with stenosis inferior to the saphenous valves. 3. Those cases due to stenosis without regurgitation.

A Peculiarity of Vision, with Illustrative Cases. By Dr. Frederick C. Riley.

Boston Medical and Surgical Journal, April 10, 1902.

The School in its Effect upon the Health of Girls. By Dr. E. G. Brackett.—According to the author, the school is responsible for much of the conditions found among our women, inasmuch as its demands interfere with the usual and necessary amount of sleep and out-of-door play. It is responsible in that by a competitive, or ranking, system, it increases, during the periods of accelerated growth, its demands on the mental powers, and trains the mind at the expense of the body. This system fails to recognize individual variations in the child, and especially those between the boy and the girl, and thus fails to adapt the training to the individual need, for the modern method is not adapted neither to girls as individuals, nor to girls as a whole.

The Health of School Girls. By Dr. Robert W. Lovett.—The author concludes that the health of school girls about puberty seems to be far from what it should be, which is the result of the addition of school work to outside demands. The school part should be corrective and not an added burden. The development of proper gymnasiums and a sufficient importance given to physical training seems one important part of the remedy.

Statistics Regarding the Health of School Girls. By Dr. Edward Mussey Hartwell.—If any class of public schools needs to be investigated, with a view to determining the effects of school life upon the health of girls or boys, that class is the high schools. The author asserts that the medical profession is fully as responsible as the educational authorities for the present neglect of school hygiene and the undeveloped state of vital statistics relating to the school population. At the same time, the physicians are somewhat more fully alive than the teachers to the needs of the situation.

The Effect of Public School Education upon the Health of the College Girl. By Dr. Jane

Kelly Sabine.—Observation of two thousand students in finishing schools and colleges gave the following results: Thirty per cent. were either wearing glasses or had been ordered to have their eyes examined by a specialist; six per cent. showed defective hearing; four per cent. had flat foot; five per cent. had weak lungs; four per cent. had heart trouble; two per cent. had kidney lesions. Seventy-five per cent. were found with menstrual irregularities dating from puberty. The reconstruction in the education of the girl must be made in the preparatory schools.

Atelectasis of the Right Lung, Due to a Foreign Body in the Right Primary Bronchus. By Dr. H. F. Vickery.

Possible Gastric Cancer. By Dr. H. F. Vickery.

Pernicious Anæmia with Albumose. By Dr. H. F. Vickery.

The Babinski and Scapula Reflexes. By Dr. G. L. Walton.

Myokymia. By Dr. G. L. Walton.

Giant-celled Sarcoma of Lower Jaw. By Dr. H. H. A. Beach.

Renal Calculus. By Dr. H. H. A. Beach.

Pistol-shot Wound in Stomach, Intestines, and Mesentery in Boy Suffering from Tabes Mesenterica; Operation; Complete Recovery, Complicated by Pneumonia, Empyema, and a Severe Burn. By Dr. C. A. Porter.

Removal of Coins from Bronchi. By Dr. J. C. Warren.

Excision of the Rectum for Cancer. By Dr. J. C. Warren.

American Medicine, April 12, 1902.

What can we Diagnosticate in Acute Appendicitis? By Dr. Willy Meyer.—The author gives expression to his belief that our attempts at improving our ability to diagnosticate the location and the exact pathological lesion of an acutely inflamed appendix may, perhaps, in some instances, be of benefit to the operating surgeon, but certainly not to the general practitioner. For him the question is a mere academic one. If the general practitioner will adhere to the practice of ascertaining—best with the help of a surgeon—whether a given case needs immediate operation or not, he will have acted wisely. And in this respect the question, "What can we diagnosticate in acute appendicitis?" will, for the present at least, practically resolve itself into the pre-eminent and all-important one, "When shall we operate for acute appendicitis?"

Rheumatic Appendicitis. A Study of the Relation of Rheumatism to Appendicitis. By Dr. William A. Edwards.—The author concludes that the present state of our knowledge does not warrant the use of the term rheumatic appendicitis. There seem to be but two conditions in which rheumatism can at all be considered in ætiological relation with appendicular inflammation, and these are when a rheumatic endarteritis of the single appendicular artery exists, and the blood supply is greatly dimin-

ished thereby. Fæcal matter itself does not necessarily give rise to appendicular inflammation, micro-organisms conveyed to the interior of the organ by the fæcal matter being most probably concerned. Even if rheumatism is an infectious disease, and the infection is due to staphylococci, whose seat is in the gastro-intestinal tract, it may be probable that the fæces in these cases are unusually toxic; but this again is far from proved.

Indications for the Mastoid Operation. By Dr. Philip Hammond.—Mastoiditis is always subsequent to purulent inflammation of the middle ear. Tenderness of the bone is an important symptom, when present, as is also bulging of the canal wall. The absence of temperature is no guide whatever. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear. The operation is safe; delay may be dangerous.

The Epidural Method and its Complications. By Dr. Dudley Tait.—The author compares the epidural with the subarachnoid route, and asserts that the epidural is less difficult, absolutely harmless, can be repeated *ad libitum*, and is free from the numerous alarming complications attending the use of the subarachnoid route.

Acute Lymphatic Pseudoleucæmia, with Report of a Case and Autopsy. By Dr. John L. Heffron.—In this case repeated examinations of the sputum were made during life, and in the examination of the fluids after death particular care was exercised to discover tuberculosis, if present. In no examination was any evidence of a tuberculous lesion found. On the other hand, the microscopic examination of the lymph-nodes showed the characteristics peculiar to lymphosarcoma.

Gastrotomy for Removal of Foreign Bodies. By Dr. George F. Inch.

Palmar and Plantar Syphilides. By Dr. William F. Bernart.—The author's observations seem to indicate that these lesions are found in a larger percentage of cases than is ordinarily supposed.

Spontaneous Rupture of the Heart. By Dr. Don D. Grout.

Lancet, April 5, 1902.

The Comprehensive Study of Thoracic Phthisis. By Dr. F. T. Roberts.—In the second of the Lumleian lectures the author considers the morbid anatomy of, and pathological changes in, thoracic phthisis. In most cases the disease is definitely pulmonary at its commencement, and, as a rule, it begins in one lung, the vicinity of the apex being the chosen site. In certain cases the trouble begins in the main air passage, especially the larynx, and the lungs are secondarily involved. Thoracic phthisis may also originate in the pleura and in the mediastinal glands.

The following is a summary of the actual morbid processes and changes which in various combinations constitute the pathological manifestations of thoracic phthisis:

A.—Lungs—Pulmonary Phthisis.

1. Tubercle formation, in the form of miliary tubercles, either limited to a small area, or diffused or disseminated in one or both lungs. Or the tubercle may take the form of an infiltration.

2. Pneumonic changes, usually of a bronchopneumonic or catarrhal type, are usually associated with the tuberculous process, and often extend far beyond areas which are the seat of demonstrable tubercle. It may be lobar, but is more frequently lobular.

3. Congestion and œdema in the vicinity of the tuberculous or pneumonic changes, due to retention of air in the air vessels or to pulmonary collapse.

4. Sclerosed or obsolescent tubercles; fibroid nodules, thickening or scars; or fibrotic capsules.

5. Caseation of the consolidated portions of the lung, involving their disintegration and ultimate destruction.

6. Cavitation, the result of the destructive process just indicated.

7. Fibrosis or sclerosis; this is always present in chronic phthisis and offers a resistance or barrier to the advance and activity of the tubercle bacilli. It is usually associated with pleuritic adhesions from which the change has penetrated into the lung. Extensive fibrosis is a prominent feature in many cases of mechanical phthisis.

8. Morbid changes in the bronchi, with definite tuberculosis and ulceration in many cases, and resulting in bronchiectasis.

9. Vascular changes, such as occlusion by embolism or thrombosis, or the formation of aneurysms in the walls of a cavity.

10. Blood or its remains in the lung; infiltration of both lungs with blood may cause death from suffocation.

11. Compensatory pulmonary distention of one lung, where the other is rendered useless by disease.

12. Chronic bronchitis with emphysema, which has preceded the tuberculous infection. Here the phthisical lesions are at first of a subordinate character.

13. Infiltration of the lungs with various solid particles which have been inhaled, as in "carbonaceous phthisis." Abnormal pigmentation of the lungs is quite common, but is, in itself, of little practical significance.

B.—Main Air Passages.

The definite morbid conditions of the trachea and main bronchi to be noted are:

1. Infiltration of the tissues, or the formation of distinct tubercle.

2. Tuberculous ulceration with consequent supuration.

3. Cicatrization of ulcers or chronic thickening of the walls.

4. Perforation of an ulcer, with emphysema.

5. Deeper and more extensive destructive changes, involving the perichondrium and cartilages.

C.—Pleura and Pleural Cavity.

1. Definite formation of tubercle.

2. Dry pleurisy.

3. Pleural effusion, usually of a sero-fibrinous nature. It may be the first evidence of definite tuberculosis.

4. Suppurative and ulcerative pleurisy; empyema.

5. Pleural adhesions; these are constantly present in cases of chronic phthisis, and may be of much consequence. While a source of embarrassment to the lung, pleural adhesion is also a protection against perforation and consequent pneumothorax.

6. Pneumothorax and its consequences. Fluid

may be present along with the air; pus (pyo-pneumothorax) or serous (hydro-pneumothorax).

7. Combined conditions.

D.—Pericardium—Heart Vessels.

1. Cardiac embarrassment due to "the exposed, elevated, and externally adherent heart."

2. Definite tuberculous changes in the pericardium.

3. Heart; (a) valvular disease; (b) cardiac atrophy; (c) cardiac hypertrophy due to pulmonary obstruction; (d) hypertrophy due to other causes (nephritis, etc.); and (e) congenital heart disease.

4. Degenerative changes in the aorta and its main branches. Obstruction of veins is exceptional.

E.—Mediastinal Structures.

Changes in the absorbent glands, in the œsophagus, and the occurrence of mediastinal emphysema.

F.—Thoracic Walls and Diaphragm.

1. Wasting of superficial muscles and tissues.

2. Abnormal rigidity of the framework of the chest.

3. Changes in the shape and capacity of the chest produced by intrathoracic morbid processes.

4. Preceding deformities of the chest.

5. Tuberculous lesions of the walls of the chest themselves.

6. Subcutaneous emphysema.

7. Morbid changes affecting the diaphragm.

Pathological Effects of Phthisical and Associated Changes.

1. Interference with the action and functions of the respiratory organs or heart.

2. Absolute destruction of pulmonary tissue.

3. Formation of morbid products, of a wasting nature.

4. Formation and absorption of toxins.

5. Physical embarrassments.

6. Occurrence of accidental lesions (hæmorrhage, etc.).

The Ætiology of Typhoid Fever and its Prevention. By Dr. W. H. Corfield.—In the second of the Milroy lectures upon this subject, the author considers a large number of instances in which outbreaks of typhoid fever have been connected with filthy and unsanitary conditions.

Results of the Vaccination of 1,060 Adults. By Dr. H. Linigar.—Out of 1,060 vaccinations at the Metropolitan Asylum, Leavesden, 997 (94 per cent.) were successful; 51 (4.8 per cent.) were doubtful; and 12 (1.2 per cent.) were failures.

Papules from irritation of the dressings occurred in 24 cases. Acne or pustules beyond the vaccinated area occurred in 6 cases.

Boils were late sequelæ and were noted in 21 cases. Erythematous rashes occurred in 23 cases; in only 1 case was there severe constitutional disturbance.

In 5 cases there was self-inoculation, and generalized vaccinia in 1.

A staphylococcus was grown from the lymph used, but a majority of the arms showed only the inflammatory reaction of vaccinia.

The Surgery of Non-malignant Gastric Ulcer and Perforation. By C. B. Keetley, F. R. C. S.

The Supposed Infectivity of Desquamation in Scarlet Fever. By Dr. C. K. Millard.—The author sums up the principal arguments against the

supposition that desquamation in scarlet fever is infectious, as follows:

1. The absence of evidence supporting it.

2. The fact that infectivity begins prior to the onset of desquamation and frequently continues long after desquamation has ceased.

3. The fact that scarlet fever wards, although abounding in desquamating epithelium, are not a danger to surrounding houses.

4. The fact that the number of return cases does not appear to be increased among patients sent out from hospital still desquamating.

The Topical Application of Mucin in Certain Affections of the Nose, Throat, and Ear. By W.

Stuart-Low, F. R. C. S.—When applied locally to the interior of the nose and pharynx, mucin has a soothing and emollient action; it moistens the surface and softens incrustations, readily facilitates their removal, and prevents their re-formation; it thus also obviates fœtor. Mucin also restores the nasal function of smell by its hygroscopic action, and the filtration and warming functions are also resumed, because in a dry condition the mucous membrane is functionless.

British Medical Journal, April 5, 1902.

The Causation of Death during the Administration of Chloroform. By Dr. E. H. Embley (*continued article*).—The author's conclusions regarding the effects of chloroform on the heart isolated from the central nervous system, are as follows:

1. Chloroform has an immediate and progressively paralytic effect upon the heart muscle. There is no preliminary period of stimulation. There is no abrupt change in the rate or efficiency of the heart.

2. Heart muscle is very sensitive to the poisonous effect of chloroform—a tension of chloroform in blood corresponding to 0.8 per cent. of chloroform vapor in the air inhaled kills the isolated mammalian heart in sixteen minutes.

3. In the administration of chloroform by inhalation to the intact animal, the vapor tension of chloroform in the blood only slowly reaches that of the inspired air.

A Contribution to the Study of the Presence and Formation of Agglutinins in the Blood. By Dr. M. A. Ruffer and Dr. M. Creudiropoulo.—The conclusions reached by the authors are as follows:

1. The cultures of a microbe freed from that microbe by filtration, dialysis, or centrifugalization, have a distinct, though feeble, agglutinating effect on that particular microbe. The age of the culture and the constitution of the medium are important factors in determining the quantity of agglutinins present in such cultures.

2. The red blood corpuscles of non-immunized and immunized animals contain no trace of agglutinins.

3. On the other hand, multinuclear leucocytes of non-immunized animals always possess an agglutinating power greater than, or more rarely equal to, that of the serum. They may therefore be rightly considered as the producers, or at any rate the carriers, of the agglutinins.

4. In immunized animals the specific agglutinins appear in the multinuclear leucocytes and are therefore probably formed in them. The quantity of ag-

glutinins begins to increase from thirty to forty-eight hours after the injection, and goes on increasing up to the tenth day or thereabout. They then pass into the serum, the agglutinating power of which increases correspondingly.

5. The formation of specific agglutinins in multi-nuclear leucocytes and in the serum is preceded, and accompanied during the first three or four days after the inoculation of a given microbe, by an increase of the agglutinins for other microbes. This latter increase is of short duration and stops suddenly, whereas the increase of specific agglutinins persists for a much longer time.

Progress Report upon the Biological Test for Blood as Applied to over 500 Bloods from Various Sources. By Dr. G. H. F. Nuttall.

The Diagnostic Value of the Variations in the Leucocytes and other Blood Changes in Typhoid and Malarial Remittent Fevers Respectively. By Dr. L. Rogers.—The author's conclusions are as follows:

1. The percentage of the different forms of leucocytes counted in the stained blood film is of great diagnostic value in diagnosing typhoid and malarial remittent fevers, and is easily ascertained.

2. An increase of the lymphocytes to forty per cent. or over, without any increase in the large uninuclears, points to typhoid as against malarial fever.

3. An increase in the large uninuclears to about twelve per cent. and upward, especially during the remissions of the temperature, strongly indicates malaria as against typhoid fever. This change is of great value when parasites are absent from the blood.

4. The presence of myelocytes in any number, such as from one to five per cent., points to malaria as against typhoid fever.

5. A high degree of anæmia, such as a reduction of the red corpuscles below three million per cubic millimetre, is much more frequently met with in malaria than in typhoid fever.

6. A very great reduction in the total leucocyte count, such as to below two thousand per cubic millimetre, is much more frequently met with in malarial than in typhoid fever, while the proportion of white to red corpuscles in malaria is not infrequently less than one to two thousand, which is rare in typhoid fever.

7. Leucocytosis can be detected by the presence of a great excess of white corpuscles, upward of eighty per cent. of which are multinuclears, in a stained blood film, and is often of service in excluding malaria in intermittent fever due to liver abscess or other local inflammation.

The Condition of the Blood in Filariasis. By Dr. G. L. Gulland.—The author reports a case of filariasis occurring in a Eurasian, in which examination of the blood showed that the eosinophilic leucocytes were markedly increased. The normal percentage of the eosinophiles is 1.4; in the case here reported they ranged for three months between 9.5 per cent. and 3 per cent. These observations bring filariasis into line with several other parasitic diseases. *Ascaris*, *oxyuris*, *ankylostomum*, and *tænia* all produce eosinophilia. The eosinophiles are concerned in protecting the body from the toxins,

whether these are absorbed from the intestines or are actually elaborated in the blood.

Observations on the State of the Vascular System after Death by Asphyxia and by Cardiac Failure. By Dr. J. A. Macwilliam.

Gazzetta degli Ospedali e delle Cliniche, Venezia, 16, 1902.

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foetid faeces followed, and the patient died in the presence of rapidly progressive collapse, three quarters of an hour after the beginning of the attack. He had been suffering from very large varicose veins of the lower limbs, and, it seems, also from cardiac and pulmonary disturbances. At the autopsy, on opening the chest, the pericardium appeared enormously distended, and contained 700 cubic centimetres of thick, dark, liquid blood. The heart was enlarged, and the right superior pulmonary vein showed an irregular longitudinal fissure about a centimetre in length. There was a chronic endocarditis at the aortic valve. It is difficult to say what caused rupture of the pulmonary vein in this particular case. The symptoms, in such instances, did not differ from those of hæmopericardium, particularly in rupture of the heart.

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Riforma medica, February 1, 1902.

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February 14, 1902.

The Data of Ergometry in Normal and Epileptic Subjects. By Dr. Cesare Collucci.—The author's researches were directed toward determining the daily differences in ergometric data in both healthy and epileptic subjects. A number of experiments and observations with the apparatus for determining the muscular power showed that ergographic disturbances were more frequent at or about the time of epileptic seizures, and especially just before the seizures. The ergometer, therefore, measures the increase in muscular tension which may be said to be preparatory to the manifestations of epilepsy. The augmentation of tension which precedes an epileptic seizure is preceded by a stage of depression.

glutinins begins to increase from thirty to forty-eight hours after the injection, and goes on increasing up to the tenth day or thereabout. They then pass into the serum, the agglutinating power of which increases correspondingly.

5. The formation of specific agglutinins in multinuclear leucocytes and in the serum is preceded, and accompanied during the first three or four days after the inoculation of a given microbe, by an increase of the agglutinins for other microbes. This latter increase is of short duration and stops suddenly, whereas the increase of specific agglutinins persists for a much longer time.

Progress Report upon the Biological Test for Blood as Applied to over 500 Bloods from Various Sources. By Dr. G. H. F. Nuttall.

The Diagnostic Value of the Variations in the Leucocytes and other Blood Changes in Typhoid and Malarial Remittent Fevers Respectively. By Dr. L. Rogers.—The author's conclusions are as follows:

1. The percentage of the different forms of leucocytes counted in the stained blood film is of great diagnostic value in diagnosing typhoid and malarial remittent fevers, and is easily ascertained.

2. An increase of the lymphocytes to forty per cent. or over, without any increase in the large uninuclears, points to typhoid as against malarial fever.

3. An increase in the large uninuclears to about twelve per cent. and upward, especially during the remissions of the temperature, strongly indicates malaria as against typhoid fever. This change is of great value when parasites are absent from the blood.

4. The presence of myelocytes in any number, such as from one to five per cent., points to malaria as against typhoid fever.

5. A high degree of anæmia, such as a reduction of the red corpuscles below three million per cubic millimetre, is much more frequently met with in malaria than in typhoid fever.

6. A very great reduction in the total leucocyte count, such as to below two thousand per cubic millimetre, is much more frequently met with in malarial than in typhoid fever, while the proportion of white to red corpuscles in malaria is not infrequently less than one to two thousand, which is rare in typhoid fever.

7. Leucocytosis can be detected by the presence of a great excess of white corpuscles, upward of eighty per cent. of which are multinuclears, in a stained blood film, and is often of service in excluding malaria in intermittent fever due to liver abscess or other local inflammation.

The Condition of the Blood in Filariasis. By Dr. G. L. Gulland.—The author reports a case of filariasis occurring in a Eurasian, in which examination of the blood showed that the eosinophilic leucocytes were markedly increased. The normal percentage of the eosinophiles is 1.4; in the case here reported they ranged for three months between 9.5 per cent. and 3 per cent. These observations bring filariasis into line with several other parasitic diseases. *Ascaris*, *oxyuris*, *ankylostomum*, and *tænia* all produce eosinophilia. The eosinophiles are concerned in protecting the body from the toxins,

whether these are absorbed from the intestines or are actually elaborated in the blood.

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on the genesis of urea and uric acid, which are iconoclastic in regard to many articles of medical belief hitherto held. The subject of clothing is dealt with in a common-sense manner, while dust, bathing, exercise, and parasitic skin diseases receive due mention. Health in the House goes into the questions of site, atmospheric conditions, the measurement of air space, the allowance of air for artificial lights, and the examination of air. Ventilation is well and exhaustively treated, as is also the subject of artificial heating. The author does not seem to have the exalted opinion of the superiority of heating by open fire grates that is commonly entertained on the other side of the Atlantic, for he says: "Still the open fire is no less imperfect as a means of ventilation than wasteful as a source of heat, for it leaves the hot stratum of foul air near the ceiling undisturbed, while carrying off much of the fresh air as fast as it enters the room. House drainage also receives a very comprehensive review.

As regards the health of the city, the problems of water supply and sewerage are dealt with in a far-reaching manner, so much practical mechanics and hydraulics as is necessary for a comprehension of the subject being incorporated. Among other subjects dealt with are preventable disease, with a special, and in our opinion commendable, classification by the author of the specific infectious diseases. The subjects of antitoxines, immunity, etc., are dealt with concisely, yet sufficiently, while the sections on malarial disease, filariasis, and yellow fever are in accordance with the latest researches of modern science. School hygiene, including buildings, lighting, desks, mental work, and punishments, receives full consideration, on the whole in a very satisfactory manner, though in some matters there is room for a difference of opinion.

One excellent feature of the work is the summary at the end of each chapter. This is followed by a series of questions, which may be of service to those using the work in preparation for an examination. While the author shows considerable familiarity with American methods and principles, there are some points in which the work inculcates views diametrically opposed to those that obtain in this country, but are in accord with those practically employed, and even legally imposed, in Great Britain. There are in the work tables of much utility, but the index is, as we regret to say, as is not uncommon in English works, far from ample. We venture to say that had this concise yet exhaustive manual, much of it set solid in small type, been the work of an American author, the index would have occupied three or four times the space here allotted to it.

The work itself, however, is so essentially meritorious as to promise future editions, in which, it may be hoped, this deficiency will be corrected, and a less cramped book with larger and more loaded text be adopted, to the greater benefit of the readers, a class that we think will embrace very many of those for whom it is designed, according to the following words from the preface: "I have endeavored throughout so to combine scientific accuracy with the popular treatment of the subject as to render the work a clear and comprehensive manual of the principles and practice of public health, equally adapted to the purposes of the medical man, the student, the teacher, and the general reader."

AMERICAN MEDICAL ASSOCIATION.

Plans for the Saratoga Meeting.—*Social Entertainments to be Provided on a Lavish Scale.*—*Ample Hotel Accommodation at Varying Prices.*—*List of Hotels, Boarding Houses, etc.*—*Many Exhibitors have Taken Space.*—*Excellent Work of the Committee.*

Saratoga Springs is an ideal convention town, and the next annual meeting of the American Medical Association, held there between June 10th and 13th, promises to be the most largely attended and interesting meeting yet held by the association. The reorganization plan of the association, which has gone into effect this year, invests the meeting with special interest, while the past year has been particularly rich in scientific advances, many of which bear upon medicine and will undoubtedly be brought forward at this meeting. Moreover, the place of meeting is one which is so widely and favorably known as a health resort that many will be tempted to attend largely on account of the fame of Saratoga Springs.

The town is accessible by three great railroad systems, all of which have frequent trains and luxurious coaches. In it is a convention hall, which has splendid acoustic properties and is provided with seats for 5,000 people. This convention hall also has committee rooms and special telegraph wires running into its offices. In this hall will be held the general meetings of the association. It is located in the heart of the village adjoining the beautiful Congress Spring Park, and within five minutes' walk of the hotels and boarding houses, where the members of the association, their friends, and guests will find pleasant accommodation at reasonable rates.

HOTELS AND BOARDING HOUSES

The following is a list of the leading hotels and boarding houses in Saratoga Springs, together with the rates that they charge and the number of guests which each can accommodate. In all save two cases the maximum as well as the minimum rate is given, a fact which is of considerable importance to those desiring to secure accommodations. Besides the boarding houses listed below, there are several smaller houses, where accommodation can be secured at even a lower rate than those named. The chairman of the committee on hotels, Dr. J. R. Swanick, will secure accommodation for all who apply to him, though, with this list before them, delegates may choose for themselves and correspond direct with the hotel.

Hotels	Accommodations	Single rooms		Single rooms, with bath	Double rooms	Double rooms, with bath
United States	1200	\$1.00	\$3.00	\$6—\$7	\$8	\$10—\$12
Congress Hall	1000	1.00		5—6	8.00	10
Kensington	500	3.00	4.00	4—5	6	8
Columbian	250	3.00		..	5.00	
Walden	250	3.00		..	6.00	
Everett House	50	2.50			4.00	
Hughes House	50	2.00			4	5
Lincoln Hall	50	1.35			2.00	
Sunwood	50	2.50			4.00	
Commercial	125	2.50		3.00	4.00	5.00
The Carlshad	100	2.00		2 50	3.00	4.50
Broadway House	50	2.50		..	4.00	
Summer Rest	35	2.00—2.50			4.00	
Woodbridge Hall	100	2.00		..	3.00	
The Washburne	50	2.00		..	3.00	
The Moravia	50			..	6.00	Suite
The Ashton	60	2.50		..	4.00	
The Waring	75	2.00		..	3.00	

Continental	150	2.00	3.00
Vermont House.....	125	2.50	5.00
Franklin House.....	150	1.50 2.00	3.00
Spencer House.....	75	2.00	3.00
Washington Hall....	35	2.00	4.00
Pleasant Home.....	40	2.50	4.00
Park House.....	25	2.00	4.00
Dr. Strang's.....	250	2.50	4.00
Windsor.....	350	5.00	9.00

PROGRAMME OF ENTERTAINMENT.

The headquarters of the convention will be at the United States Hotel, where the officers of the association will be located. The general sessions will be held in Convention Hall, which is illustrated herewith, and various sections will meet in the hotel parlors, and in rooms in close proximity to Convention Hall.



Dr. George F. Comstock, chairman of the committee of arrangements, announces the following programme of general entertainments:

- Tuesday Evening, June 10.—Concert on the Piazza, United States Hotel.
 Wednesday Morning, June 11.—Concert at Congress Spring Park.
 Wednesday Afternoon, June 11.—Excursion, for ladies only, to Saratoga Lake and the Saratoga Battlefields.
 Wednesday Evening, June 11.—Reception and Ball, United States Hotel.
 Thursday Morning, June 12.—Excursion, for ladies only, to Lake George.
 Thursday Evening, June 12.—President's Reception, United States Hotel.

A large number of exhibitors have already taken space, and the commercial exhibit promises to be quite the most attractive and complete ever shown in connection with the meetings of the association. The pathological exhibit has also attracted a great deal of attention and promises to be even more interesting than was the exhibit shown at the St. Paul meeting.

The committee on arrangements and entertainment consists of Dr. George F. Comstock, Dr. George T. Church, Dr. A. S. Downs, Dr. E. D. Ferguson, Dr. A. Hewitt, Dr. F. J. Sherman, and Dr. J. F. Humphrey. Following are the names of the chairmen of the various sub-committees, all of whom are putting forth unusual efforts to make the meeting a success: Finance, Dr. E. D. Ferguson;

new membership, Dr. F. Holme Wiggin; transportation, Dr. W. E. Swan; entertainment, Dr. Adelbert Hewitt; halls for meeting places, Dr. D. C. Moriarta; badges, Dr. W. H. Sanford; banquets, Dr. F. J. Reseguie; general exhibits, Dr. J. F. Humphrey; bureau of information, Dr. M. E. Varney; programmes and printing, Dr. George T. Church; registration, Dr. J. B. Ledlie; post-office, Dr. A. W. Thompson; hotels, Dr. James R. Swanick.

ATTRACTIONS OF THE VICINITY.

Being located in the foothills of the Adirondack Mountains, Saratoga Springs is not only picturesque but of great historical interest. An hour's drive to the eastward brings one to the Burgoyne battlefields, the prin-



The United States Hotel. Headquarters of the Association.

cial points of interest in which have been marked with suitable tablets. The Saratoga Battle Monument, overlooking the field where Burgoyne's soldiers laid down their arms, is within half an hour's ride by steam or trolley.

At Mount McGregor, an hour's drive to the north, is the cottage where General Grant died, preserved intact, under the care of the Grand Army of the Republic, as it was when the great captain breathed his last. From this summit can be seen the Green Mountains, the Catskills, and the Adirondacks. On the western side of Mount McGregor is the great dam across the Hudson River, which is rapidly nearing completion. Here are to be located electric plants that will furnish light and power to cities and villages within a radius of some fifty miles.

An hour by steam or trolley road will take one to the shores of Lake George, famous not only for the beauty of its scenery, but for the stirring and important events of the Revolution and the French and Indian wars. A sail through the lake and a short drive or ride by rail will enable the visitor to reach the sites of the fortifications at Ticonderoga

and Crown Point, which were so prominent in the early history of the country, now mere grass covered, picturesque ruins. A drive of half an hour or a trolley ride of fifteen minutes takes one to the shores of Saratoga Lake, the scene of the great regattas of the Intercollegiate Rowing Association and of many other famous aquatic contests. The lake is a pretty and picturesque sheet of water, some five miles long and nearly three miles in width, well supplied with excursion steamers and launches, as well as row-boats. There is excellent fishing in the lake, and a large number of hotels, some of them known all over the country for their fish and game dinners. There will be an excursion to Saratoga Lake or the Saratoga battlefields—possibly an excursion to each—and also one to Lake George during the meeting of the convention.

The village of Saratoga Springs itself abounds in attractions for every intelligent man and woman. A excursion to each—and also one to Lake George during the meeting of the convention.

The village of Saratoga Springs itself abounds in attractions for every intelligent man and woman. First of all, there are the forty or more mineral springs, the water of each one being different in its mineral constituents from that of every other one. These waters have great therapeutic value, and a personal acquaintance with their characteristics and their remedial effects cannot but prove of interest to the practitioner.

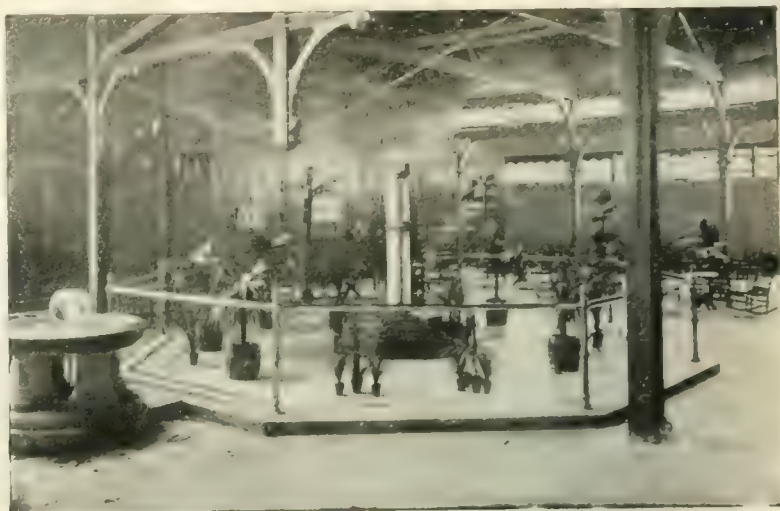
Saratoga has two hospitals, the Saratoga, which is a public institution, and the Comstock, which is under private ownership and management. Both are modern, both in construction and equipment. There is also a large sanitarium—Dr. Strong's—complete in its resources for the treatment of obscure and chronic affections. This sanitarium is provided with all kinds of baths. There is also a bath house, erected by Mr. H. M. Livingston, Jr., at a cost of \$100,000, which is said to be the most extensive establishment of the kind in the world.

In the line of public entertainments Saratoga Springs is in the summer what New York is in the winter, the centre where all that is best may be enjoyed.

Diabetes and Potatoes.—Dr. Morsé (*Presse médicale belge*, February 23, 1902) stated at a recent meeting of the Paris Academy of Medicine that in diabetes the potato was a not only permissible, but even useful, article of diet and might advantageously be substituted for bread in a proportion of from $2\frac{1}{2}$ to 3 parts of potato for 1 of bread. This substitution is well borne in nineteen cases out of twenty, and when the case is one of arthritic or of pancreatic diabetes, it is followed by an almost immediate, and sometimes considerable, diminution of the thirst and glycosuria, and by an amelioration of the general condition.

Miscellany.

The Late Dr. Ervin Alden Tucker.—At a stated meeting, held on April 8th, the New York



Lobby of the Hathorn Springs Building, where the Exhibit will be Displayed

Obstetrical Society passed the following resolutions:

Whereas, an inscrutable Providence has removed from our fellowship an honored member, Ervin Alden Tucker, A. M., M. D., suddenly, in his prime, with only the first half sheaf of life's harvest garnered; and

Whereas, the fellows of the New York Obstetrical Society, from long association, have grown into a knowledge of his rare qualities and exceptional equipment for the high sphere of usefulness he had made for himself in his profession; and

Whereas, as members of his own guild and calling, thereby entering into a juster appraisal of his skill and capacity, the fellows of the New York Obstetrical Society especially esteem their departed brother for his unusually long, painfully laborious, and self-contained preparation in the hospital wards; his tireless fidelity as observer and statistician; his methodical evolution of a technique in obstetrics; his soundness and directness as a teacher, carrying his formative influence through medical graduates of the last decade to bedsides far beyond his personal ken; his kindly, active, almost paternal interest in each individual of the large family of medical men he himself selected from the city hospitals and trained as obstetricians; his cohesive power in holding the hospital alumni in fraternal bond; his quiet, self-poised yea and nay which inspired in patients a merited confidence, marvellously rooted; his clean life; his high conception of the responsibility and dignity of the holy office of ministrant at the threshold of life; therefore be it

Resolved, that the fellows of the New York Obstetrical Society spread upon their records their pride in the fame of their honored fellow, their appreciation, not only of his individual work, but also of the spiritual power of his completed and crystallized life lesson which will ever be a stimulus to younger men in the profession; be it further

Resolved, that a copy of these resolutions be con-

veyed to the bereaved family as a token of sympathy, appreciation, and consolation in that our brother, "though dead, yet speaketh."

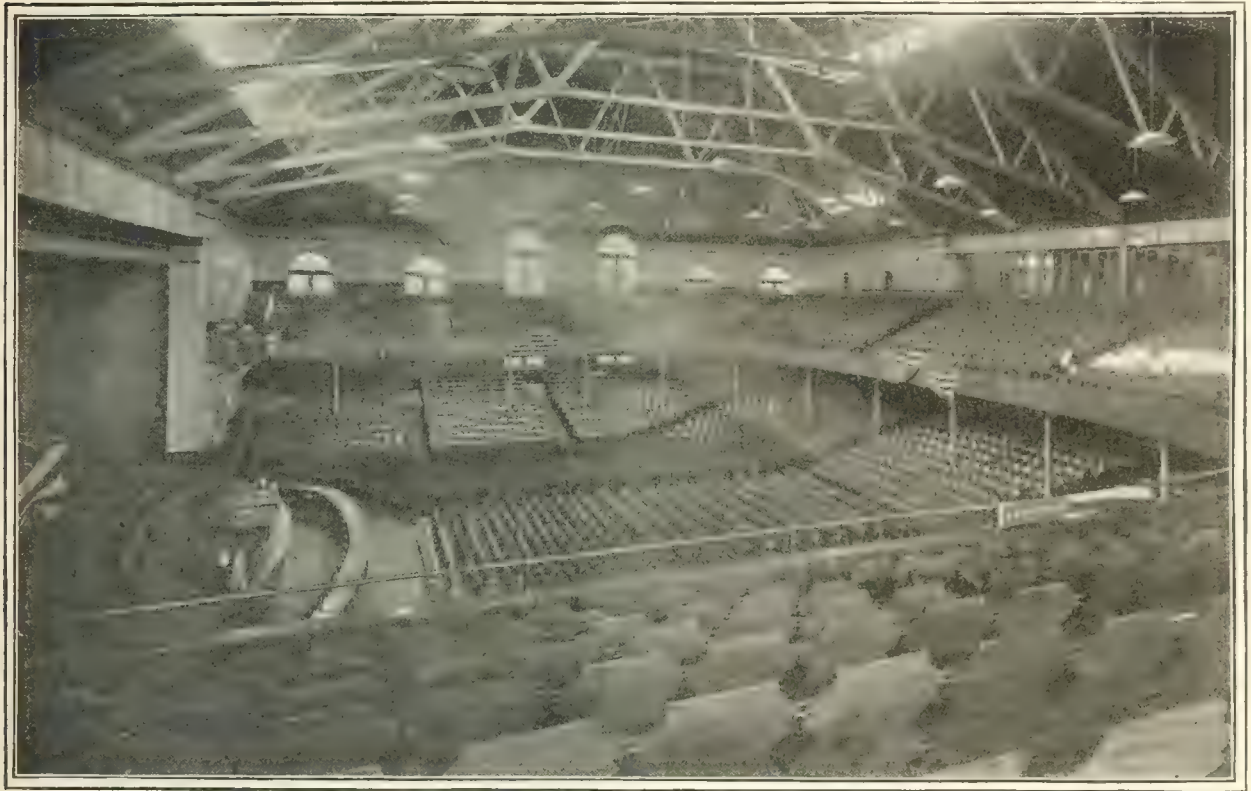
(Signed) E. C. SAVIDGE, M. D.,
J. C. EDGAR, M. D.,
G. L. BRODHEAD, M. D.

A Bill to Establish a Commission of Public Health and Fix the Salaries of the Commissioned Officers of the Marine-Hospital Service.— The following bill has been introduced into Congress:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that there shall be established in the — Department a commission of public health, which shall consist of one commissioner of public health and an advisory board, namely, composed of the surgeon-general of the army, the chief of the

dence as held by him in the Marine-Hospital Service at the date of his appointment as commissioner of public health.

Sec. 3. That the Marine-Hospital Corps shall consist of one hundred and eight officers; one commissioner of public health, who shall receive an annual salary of four thousand dollars and shall supervise the office and discharge all the duties as now performed by the supervising surgeon-general of the Marine-Hospital Service under existing laws and those prescribed and contemplated within the meaning of this act; and thirty-five surgeons, who shall receive a salary of two thousand five hundred dollars per annum; and seventy-two passed assistant and assistant surgeons, who shall receive an annual salary of two thousand dollars and one thousand six hundred dollars for their respective grades; and these shall be appointed by the Secretary of the —



Convention Hall, where the General Sessions will be held.

bureau of medicine and surgery of the navy, a representative of the Department of Justice versed in international law, and the chief of the bureau of animal industry; and the members of the advisory board to serve as such without additional compensation or emoluments.

Sec. 2. That the commissioner of public health shall hereafter be appointed by the President, by and with the advice and consent of the Senate, immediately after the passage of this act, and shall be selected from the commissioned medical officers of the Marine-Hospital Service above the grade of passed assistant surgeon, who shall serve as such for a term of four years from the date of his appointment thereto, and shall at the expiration of his term of office resume his grade, rank, and prece-

Department, under such regulations as may be prescribed and approved by the President, and such subordinate officers and employees as the needs of the service may from time to time require.

Sec. 4. That there shall be allowed and paid to each of the Marine-Hospital Service commissioned officers ten per centum of their current yearly pay for each term of five years' service, and the total amount of such increase for length of service shall in no case exceed forty per centum on the yearly pay of their respective grades.

Sec. 5. That when any commissioned officer of the Marine-Hospital Service shall hereafter die of an infectious or contagious disease contracted in the line of duty, leaving a widow, a child or children under sixteen years of age, such widow and child or

children shall be entitled to receive, under such regulations as the Secretary of the — Department may prescribe, a sum equal to two years' salary and allowances of said officer as prescribed for his grade.

Sec. 6. That commissioned officers of the Marine-Hospital Service, when absent on account of sickness or lawfully absent from duty on waiting orders, shall receive full pay. Quarters, fuel, and light shall be furnished to commissioned officers on duty at marine hospitals and quarantine stations. Where there are no quarters provided officers shall receive commutation in lieu thereof, under such regulations as the Secretary of — may prescribe.

Sec. 7. That the commissioner of public health shall, with the approval of the Secretary of the — Department, promulgate all needful rules and regulations for the guidance and discipline of the officers and employees of the Marine-Hospital Service, and shall, in conference with the advisory board and with the approval of the President, make all needful rules and regulations for their enforcement relating to national sanitation in all its foreign and interstate relations; for the hygienic laboratory, and for the several departments in the enforcement of the provisions of this act and existing laws.

Sec. 8. That the Secretary of the — is hereby authorized, in the absence of the commissioner of public health, to designate the senior medical officer on duty in his office to act as commissioner for the time being.

Sec. 9. That the commissioner of public health is authorized to detail commissioned medical officers of the Marine-Hospital Service above the rank of passed assistant surgeon for duty in his office and to be in charge, under his direction, of the several divisions thereof, namely, of marine hospitals and relief; domestic, insular, and foreign quarantine; of personnel and accounts; of sanitary reports and statistics; and officers and assistants so detailed shall receive no additional compensation in the performance of such duties.

Sec. 10. That the duties of the commissioner of public health shall be to collect and diffuse, through his office or otherwise, information upon all matters affecting the public health; to advise the several departments of the government, the executives of the several States and Territories, and health authorities on all questions of public health whenever, in the opinion of the commissioner, such advice may tend to the preservation and improvement of the public health; to secure the best sanitary condition of vessels, their cargoes, passengers, and crews, from domestic or foreign ports; to prevent the introduction of contagious and infectious diseases into the United States and their spread from one State or Territory and the District of Columbia; to cooperate with and aid the State and municipal health authorities in the execution and enforcement of such needful rules and regulations as are deemed necessary to suppress contagious and infectious diseases; and, in general, the commissioner of public health and the Marine-Hospital Service to be the medium through which the general government shall adopt such measures and take such action as will most effectually protect and promote the health of the people of the United States and its dependencies.

Sec. 11. That the commissioner of public health shall invite annually the several State and Terri-

torial boards of health to delegate one of their members to meet in Washington for the purpose of conferring on matters pertaining to the public health; or when, in his opinion, the interest of public health would be promoted by a conference with said boards of health of any one or more States and Territories, or upon the request of five or more States and Territories, he is authorized to call such conference. The expenses of delegates in attendance are not to be borne by the United States.

Sec. 12. That the commissioner of public health service may, in conference with the advisory board and with the approval of the Secretary of the —, cause investigations both in the United States, its Territories, and dependencies, and, if necessary, in foreign countries, into the nature, origin, and prevention of contagious, epidemic, and other diseases, as well as the causes and conditions of particular outbreaks of disease in the United States, and, in general, may make investigations concerning matters relating to public health, and may employ such experts and for such time and in such manner as the exigencies may require; and shall detail a commissioned medical officer of the Marine-Hospital Service as director of the hygienic laboratory, who shall be charged with the supervision of such scientific work as may be performed therein, under such regulations as may be prescribed; and the commissioner of public health, in conference with the advisory board and with the approval of the Secretary of the —, shall also be authorized to detail officers of the Marine-Hospital Service or appoint commissions of experts, not in the regular employ of the government, to inquire into such questions affecting the public health as may from time to time be deemed important and necessary. The expenses of officers so detailed and of commissions of experts to be paid from funds appropriated for the purpose.

Sec. 13. That the commissioner of public health shall take such action by correspondence or conference as will tend most effectually to secure the co-operation of State, Territorial, municipal, and local boards of health in establishing and maintaining an efficient and accurate system of notification of the existence and progress of contagious and infectious diseases in the United States, its Territories and dependencies, and to provide a uniform system of registration of vital statistics, and shall also, by co-operation with the proper health authorities of foreign governments and municipalities, endeavor to extend to the United States a reliable system of international notification of the existence and progress of cholera, yellow fever, typhus fever, small-pox, bubonic plague, or of other contagious diseases within their respective governments.

Sec. 14. That the President is hereby authorized, when requested by the commissioner of public health, and when the same can be done without prejudice to the public service, to detail officers from the several departments of the government for duty in the hygienic laboratory and to act under the direction of said commissioner to carry out the provisions of this act; and such officers while so detailed shall receive no additional compensation except for actual and necessary expenses incurred in the performance of such duties.

Sec. 15. That all acts or parts of acts inconsistent with the above act are hereby repealed.

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Original Communications.

ON BLOOD PRESSURE UNDER THE INFLUENCE OF ACUTE OVERSTRAINING OF THE HEART.

By PROFESSOR THEODOR SCHOTT, M. D.,

BAD NAUHEIM.

The notable investigations of Peacock on the work of the miners of Cornwall first made the medical world aware of the chronic cardiac affections which follow long-continued and severe bodily exertion. Since then our experience along these lines has broadened and our understanding of the subject has deepened. The numerous monographs upon this theme published by English, French, and German authors are a demonstration of the fact.

Originally I was led to doubt whether bodily exertion was sufficient to injure a heart in itself normal; and, with the view of testing it, I began a series of observations on absolutely healthy men and boys, the latter between the years of twelve and fourteen, in which the subjects studied were allowed to wrestle together until they showed dyspnoea. The results of this study, published several years ago,¹ were such that it was possible for me to recognize, as soon as a certain grade of dyspnoea was present, that the heart began to dilate, at first toward the right, but soon toward the left also; that the frequency of the pulse rose often as high as to 120, though before wrestling it had been normal; and that the pulse itself became small and very compressible and even at times dicrotic. Occasionally, also, the pulse was arrhythmic, which signified that the blood pressure within the heart was likewise raised. The rapidity with which the dilatation disappears and the pulse and respiration return to normal depends partly upon the strength and elasticity of the heart muscle and partly upon the behavior of the vascular system. In the case of young and powerful subjects, normal conditions have returned within a period of a few minutes. With older individuals the abnormal symptoms may last from a quarter to half an hour, or even as long as two hours; in certain cases slight variations from the normal could be detected on the following day.

The reactions in weak persons, or those with cardiac lesions, are not considered at this time.

As a general rule the dilatation disappears first in the right ventricle; the left ventricle has far more work to accomplish and takes much longer to regain the normal proportions. In the ordinary use of percussion a certain degree of caution must be observed, for it is easily possible in these cases for the lung, distended because of the dyspnoea, to encroach upon the boundaries of the heart, and so give the impression of a cardiac dulness which is smaller than normal. After a short time the heart dilates to such an extent that the lungs are pushed apart to either side, and it may then be recognized by simple palpation that the apex beat is displaced outward and downward and the diaphragm also depressed. A form of percussion being adopted which by lateral decrease in the dulness permits of defining the anatomical boundaries of the heart, all the relations described may be clearly demonstrated.

Since upward movement of the diaphragm and compression of the abdominal viscera have a three-fold influence upon the heart, namely, upon the amount of blood in its chambers, the intracardiac pressure, and the activity of the organ, I have employed the same persons to wrestle with the body encircled by a strong girdle. Here it was evident that simple tightening of the girdle caused shortness of breath and some enlargement of the heart; but when dyspnoea developed after wrestling, a powerful dilatation effect was produced; thus an increase of the heart dulness to 5 centimetres (2 inches) beyond the left mamillary line has been demonstrated. Of course I permitted such an experiment to last but a short time, at most up to three minutes. But it was evident how strong the influence of the overexertion was in the fact that the pulse often became quite weak and thready. This latter observation is probably the simplest explanation of why soldiers, wearing tight sword belts, and in hot weather when respiration is difficult, suffer on the march from overexertion of the heart and all its injurious consequences.

The picture of chronic cardiac overexertion is clearly composed of the results of accumulated single attacks of acute cardiac effects of the same nature. While in former times such chronic affections of the heart were observed principally in those who habitually made severe bodily exertions, as

¹Schott, *Zur akut. Ueberanstreng. d. Herz. u. deren Behandlung*, 3d ed., Wiesbaden, 1898.

among miners, farmers, and soldiers, during the last two decades such heart diseases are to be traced to excessive devotion to sport, such as foot-ball, lawn tennis, rowing and running contests, and, in especial degree, bicycle-riding. Nearly half of all the cases of cardiac overexertion which I have lately seen could be referred to extreme use of the bicycle.² In these circumstances it appeared to me to be of interest to study the influence of bicycling upon the heart. For the purpose I chose, as before, strong and absolutely healthy boys of from twelve to fourteen years. It was shown by experiment, as was to be expected beforehand, that a short, slow ride on a level surface had no significant influence upon the heart, beyond an increase in the rate of the pulse and the breathing, which soon disappeared completely.

Quite another result, however, was obtained when the bicycle was ridden fast, or when with a fast pace an ascending grade was travelled over, or when the ride lasted a long time on roads covered with stones or otherwise uneven, or, lastly, after riding against a strong wind. In these cases, exactly as after wrestling, the picture of acute cardiac dilatation, of from 2 to 3 centimetres in all directions, with acute insufficiency, was by no means unusual. Increase of the pulse rate to 120 or even 140 beats to the minute I have often observed directly after dismounting, and arrhythmic pulsation is common. The rate of respiration may be raised to double the normal or higher, and the feeling of positive air-hunger may coexist. It perhaps is unnecessary to add that copious sweating usually was also observed.

I was led very naturally to observe the action of bodily exercise upon the heart by means of the x rays directly, which is easy to do, as appears in my publications upon the subject. It is simply necessary to employ the nipples as fixed points, marking them for the purpose by little disks of lead, and to be sure that the person studied always assumes exactly the same position; this is not at all difficult, but I cannot enter more fully into the details here. By means of the radioscope one can observe after the wrestling experiment, often within from two to three minutes, that the heart has increased in size, more quickly and strongly toward the right and less toward the left, that it moves more violently to and fro, and pushes the diaphragm downward. Similarly, by the aid of skiagraphs, though for these a longer time is required, I have been able to demonstrate a dilatation of the left ventricle of from 1 to 1½ centimetre. This may be apparent by superficial inspection of the chest, for while the boundaries of the heart before wrestling lie all within the left mamillary line, after such exertion they pass be-

yond it. Together with the depression of the diaphragm, there is noticed an increase in the long diameter of the heart.

Quite the same picture was displayed by the Röntgen rays in some observations made upon a colleague known for his muscular development, after he had ridden a bicycle in the one case at a fairly rapid rate over a hilly stretch, and in the other case against a strong wind. There was an increase in the transverse cardiac diameter of 1½ centimetre and a depression of the diaphragm, shown on the skiagraph in agreement with percussion results. From all these investigations we may conclude beyond doubt that bodily exertions, as soon as they pass beyond a certain degree, may lead to acute dilatation of the heart.

It must now be of great interest to learn how the rest of the vascular system behaves in such cases of overexertion, and this all the more because, apart from the cardiac muscle and its innervation, we see in the conditions of the vascular apparatus an important regulative mechanism. As already mentioned, the pulse is notably altered. The heightened frequency is always connected with much smaller volume, and it is often easily compressible and of irregular rhythm. The sphygmographic tracing shows this throughout the curve, and the exhaustion of the vessels is evident from the almost constant diastolic pressure.

The use of the sphygmograph, valuable as are its results in many relations, is still liable to so many sources of error, and so incomplete, that with this alone we are not able to investigate vascular conditions satisfactorily unless the pressure within the vessels is also measured. With such pressure measurements it is possible to reach a better understanding of the regulative functions of the blood vessels.

Until recently the instruments used for such measurements, which may be termed sphygmanometry, were all patterned after the original form of Basch; like that one, Potain's, Oliver's, Riva Rocci's, and others all agree in employing the tactile sensitiveness of the finger. Since the year of its appearance I have employed the Basch apparatus. Like every one who has used it, in my experience I found that, besides other sources of error which I cannot discuss here, the results varied according to the delicacy of the several observers' touch, even in examinations upon the same subject and after careful selection of the same portion of the vessel; moreover, in the work of one investigator the results might vary from time to time. Hence conclusions as to the disappearance of the pulse under the finger, and its return, always contained an element of uncertainty. For this reason when the instrument of Gaertner was introduced into medical

²Schott, Ueber Behandlung chron. Herzkrank. im jug. Alter. *Verhandl. d. Congr. f. inn. Med.*, 1899.

practice, about two years ago, under the name of a "tonometer," it was heartily welcomed. During the last two years I have made numerous observations with the tonometer, and in an address last year before the Berlin Congress for Internal Medicine I discussed the advantages and disadvantages of the apparatus and the precautions which should be observed when employing it.³

The advantage of being able to determine by

ment. Between Gaertner's and Basch's there proved to be two remarkable differences. In the first place, the tonometer gave figures which resembled those of the pressure prevailing in the arteries, as sufficiently determined by animal experiments, while the Basch apparatus gave figures which were commonly much higher, so that differences of from 20 to 30 millimetres were by no means infrequent. In the second place, it was much easier to follow

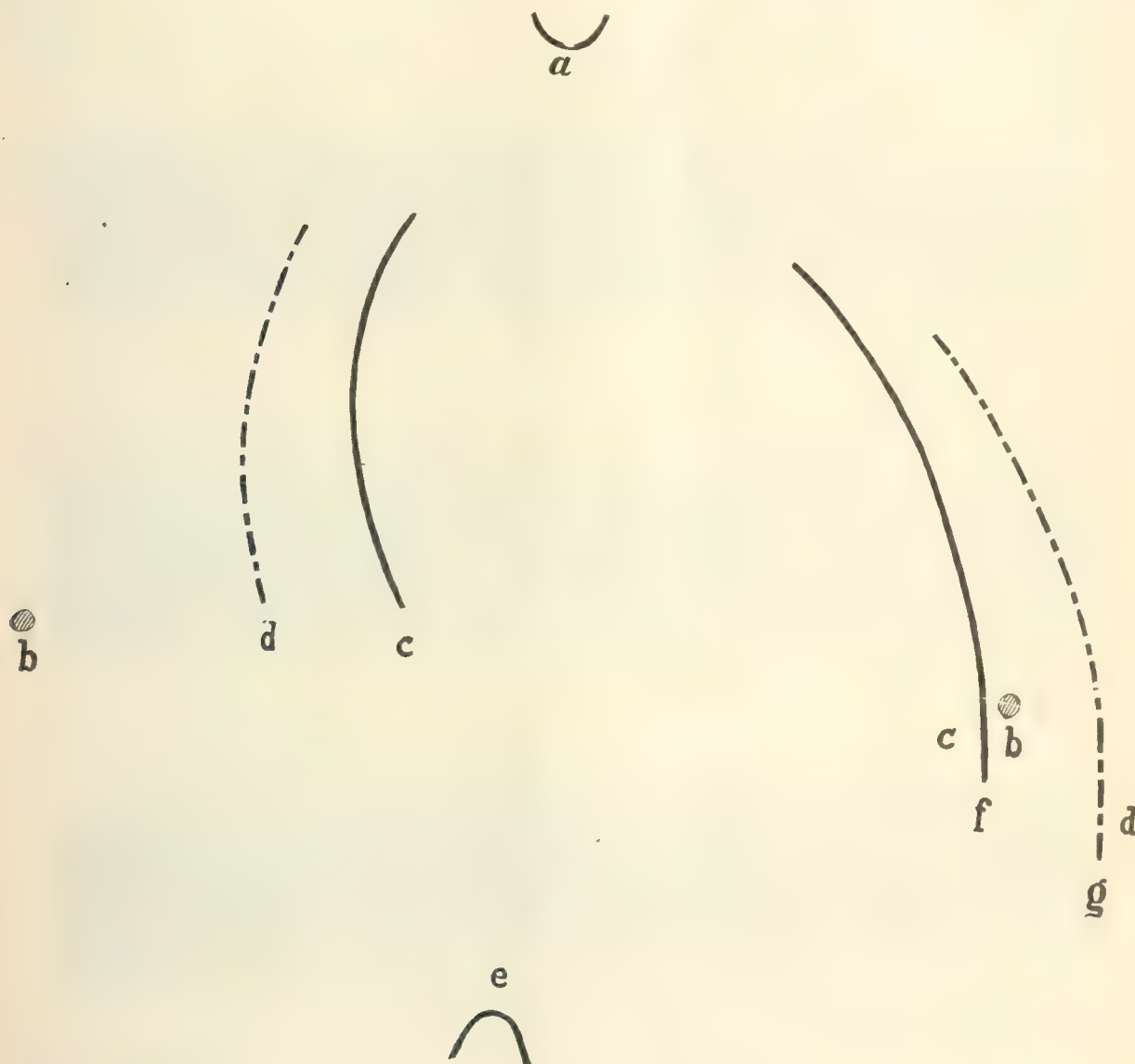


FIG. 1. *a*, jugular fossa; *b, b*, nipples. *c, c*, size of heart before wrestling; *d, d*, size of heart after ten minutes' wrestling; *e*, xiphoid process; *f, g*, apex beat

vision the exact moment when the blood gushes into the finger tip is so great that I decided to repeat the experiments in wrestling, reproduce the cardiac insufficiency, and then study the behavior of the tonometric pressure. For control purposes, I made also a series of parallel studies with the Basch instru-

with the tonometer the lowering of the blood pressure which occurs during the overexertion of the heart.

It was clearly demonstrated in these investigations that wrestling, when not pushed to the point of dyspnoea, resembled a simple strong muscular action, producing a rise in the blood pressure of from a few millimetres up to 10 or more. As soon, however, as a longer dyspnoea appeared, the blood pres-

³Schott, Ueber d. Verhalten d. Blutdruckes bei d. Behandl. chron. Herzkrankh. *Verhandl. d. Congr. f. inn. Med.*, 1899; *Deutsche medicinische Wochenschrift*, 1901, Nos. 22 and 23.

similarly the blood pressure may require hours before regaining the normal height. In other cases the normal blood pressure returns very quickly, even while the pulse and respiration rates are still high. The cardiac outlines, however, always become normal by that time.

The following fact is also worthy of note: When in a healthy man the experimenter has produced an acute insufficiency of the heart by muscular exertion, for instance by wrestling, if he repeats the experiment after not too long a period, far less effort and far shorter duration of exercise are sufficient to reproduce the cardiac insufficiency.

All these observations throw an explanatory light upon the origin of chronic cardiac overstraining. I shall take the opportunity at another time to view the subject from this standpoint.

A FURTHER CONTRIBUTION TO THE STUDY OF SUMMER DIARRHŒA.*

BY CHARLES GILMORE KERLEY, M. D.,

NEW YORK.

In June of last year the writer presented a paper before the American Pædiatric Society, at Niagara Falls, entitled *A Study of 555 Cases of Summer Diarrhœa among Out-patient Infants*. During the months of June, July, August, and September of the same year, 127 cases of the same nature and from the same class of patients were treated at the out-patient service of the Babies' Hospital. All were brought for treatment because of diarrhœa, and they showed all the degrees of severity that this particular class of patients might be expected to present during the summer months. With some, at the first visit, there was simply so-called dyspeptic diarrhœa, from six to ten passages daily with moderate fever and slight prostration; others had been ill for several days with high fever, prostration, emaciation marked, and were in a critical condition.

Five were under three months of age.

Seventeen between three and six months of age.

Forty-two between six and twelve months of age.

Forty-nine between one and two years of age.

Seven between two and three years of age.

Six between three and five years of age.

One over five years old.

Thirty-nine were in good condition as regards nutrition.

Forty-five were recorded as fair.

Fifteen were in bad condition, and twenty-four in wretched condition.

Ten were breast-fed entirely.

Twelve were fed on condensed milk.

Three on the proprietary foods.

Fifty-four on cows' milk alone.

Thirty-one on cows' milk and table food.

Twelve on breast milk, cows' milk, and table food.

Four on barley water and broths.

One on breast and cows' milk.

One on breast and proprietary foods.

In ninety-nine, cows' milk was the chief article of diet. In eighty-five, accurate nursing records were obtainable. Of these, twenty-one were never nursed, nine were completely nursed at the breast two weeks; two, one month; eleven, two months; eleven, three months; five, five months; five, sixteen months; fifteen, in periods ranging from seven to fourteen months; forty-one, or about one half, were nursed for a longer period than three months.

Five had been ill twelve hours or less when first seen.

Ten had been ill one day.

Eighteen, two days.

Eleven, three days.

Fifteen, four days.

Twenty-four, from five to seven days.

Twelve, from eight to fourteen days.

Five, three weeks.

Six, eight weeks, and,

Three, twelve weeks.

Vomiting was a complication in sixty-two cases.

Of the entire one hundred and twenty-seven cases, twenty-three patients failed to return and could not be traced. The latter cases were mild, but one or two visits were made; presumably the patients recovered.

Six were referred to different out-of-town country homes and hospitals and passed from under observation.

One patient was refused treatment because the mother would not follow instructions. This left us ninety-seven patients which were kept under observation to a conclusion of the illness.

Eleven patients died, a death rate from summer diarrhœa among the tenement poor of 12.6 per cent.; not as favorable results as previously reported, but the summer of 1901 was a particularly severe one in New York city as regards summer diarrhœa. The cases were more severe than in previous years, the recovery cases requiring a much longer time for complete recovery.

Two died with complicating pneumonia. In one of the fatal cases the patient had been ill for two days; in one, three days; in one, four days; and in two, for five days, when first seen. The remaining six patients had been ill from ten days to two months.

In one of the fatal cases the patient was in good condition and lived but four days, the others were

*Read by title before the Medical Society of the State of New York, at its ninety-sixth annual meeting, January 28-30, 1902.

wretched, poorly nourished children with little or no resisting power.

Our work among this class of patients, comprising 682 cases with 21 deaths, shows that the large infant mortality of summer diarrhœa is preventable. The illness may be prevented in a large degree by good milk, properly cared for, and properly given at definite intervals. A large mortality is to be prevented by discarding all forms of milk after the first symptom of gastro-intestinal derangement. This is based upon belief that in every case of summer diarrhœa, no matter how mild, we have an infected gut, or soon shall have it, and we wish to make the intestinal contents as poor a culture field as possible. To the great mass of physicians it will always be impossible to differentiate bacteriologically the nature of the infection. Clinically no one can distinguish with any degree of certainty the nature and extent of the lesion. This has been impressed upon me by considerable autopsy experience. Where we expected gross lesions we often found them slight. In other cases, which showed but little mucus during life, and no blood, there were extensive ulcerations of the colon extending to the peritoneal coat. In the very acute cases, in which death took place a few hours after the onset of the illness, there was a pale washed-out gut, with perhaps slight enlargement of the lymph follicles.

We have learned to look upon every case of summer diarrhœa as dangerous and to see that it must be treated vigorously whether the initial symptoms are mild or severe. A case of so-called dyspeptic diarrhœa, with milk-feeding continued, will soon become a virulent infection. I question if, in the great majority of cases, the streptococcus or colon bacillus plays a very important part at the commencement of the illness. The average case is of gradual onset. We meet with a few cases, however, in which the onset is sudden and severe. When the child becomes too ill to be brought to the dispensary, or when the visits there do not give sufficient opportunity to observe the case properly, the patient is visited at its home.

Diet.—Every detail of diet and medical treatment is carefully explained, which instructions are supplemented by written directions. If the milk is not discontinued further treatment is refused.

No milk is allowed until the stools approximate the normal, which may mean a non-milk diet for from forty-eight hours to several weeks.

The general management of this latter group of cases was practically the same as that referred to in the earlier paper on this subject, and was substantially as follows:

When milk is discontinued a substitute must be offered; the most suitable and safest substitute with us has been the use of cereal waters and gruels. In

nearly every case barley water was used. When this did not answer, rice water was given. Our directions were for Robinson's barley flour, two tablespoonfuls to a pint of water; this is boiled twenty minutes, and water added so that there is one pint when the cooking is completed. Rice water is prepared by boiling two tablespoonfuls of rice to one pint of water for three hours, water being added so that there will be one pint when the three hours' cooking is completed. Additions in the form of liquid non-milk nourishment were added to change the taste and give the child a variation in the diet. A favorite mixture with us is four or five ounces of barley water and one or two ounces of broth, beef, mutton, or chicken. One-half teaspoonful of beef juice added to a cereal water often makes a desirable change. The taste of the substitute must vary or the child will soon tire of it. Broths or beef juice must not be added in too large amount as in some a decidedly laxative effect will result. I usually order two or three substitute preparations and alternate them. Brandy and whiskey, so frequently added to substitutes, should not be given to a child with summer diarrhœa; the dangers of stomach involvement and nephritis are great without provoking them by the use of alcohol.

The white-of-egg mixture, a favorite substitute with many, I have used rather extensively, and have discarded for the reason that many children fail to digest it, and that passing unchanged into the intestine, it can form as good a putrefactive culture medium as milk. The children which were fed on egg water ran a higher temperature, showed greater prostration, and, if they recovered, required more time to bring it about than those fed on the carbohydrates. These clinical observations are well explained by Robert Hutchinson in his work on *Food and Principles of Dietetics*, under the heading, What Nutritive Constituents Should the Diet of Fever Chiefly Contain? Fever is always present in summer diarrhœa, often of a very high degree. Hutchinson says: "A study of the metabolic changes in fever may be expected to afford us some light here. Extensive investigations into these changes in recent years have shown us that the leading characteristic of the metabolism of fever is a great increase in the destruction of nitrogen-containing tissues, while the mainly carbonaceous components of the body, such as fat, are affected in a much smaller degree. The reason for the increased destruction of nitrogenous tissues by fever, appears to be twofold.

1. Simple inanition due to the fact that less fat is reaching the tissues than is required to meet their output of heat. The same also could be due to the fact that the toxins which produce fever exert a specially destructive influence on the proteid con-

stituents of the body. This being so, it seems natural to suppose that the chief indication in fever must be to supply a large proportion of proteid in the diet. A little observation, however, has shown that it is impossible to bring about a condition of nitrogenous equilibrium in acute fevers in the use of any feasible quantity of proteid. Practically, therefore, the administration of proteid in the diet fails to achieve the desired result. It tends to flood the circulation with the products of nitrogen, already too abundantly present, thus increasing the *strain thrown upon the kidneys*, at the same time, in all probability tending to bring about a condition of toxæmia to which some of the symptoms of fever are no doubt due."

As a result of the loss of fluid by the intestine in summer diarrhœa, the urine is rendered more concentrated, and consequently produces more toxic effects upon the kidney structure. Hutchinson says further: "We shall better attain our object of limited proteid destruction, otherwise loss in weight, by seeing that proteid spacers are abundantly represented in the diet, rather than by devoting too much attention to the proteids themselves. Now the proteid spacers, as we have seen, are in the order of their importance, gelatin, carbohydrates, and fats. The use of the first of these is restricted by the fact that the end products of its destruction are so similar to those of proteids that they may be expected to produce the same results as those of proteid in the circulation, the employment of the last is rendered impracticable by the insufferable repugnance which fever patients exhibit to fatty foods. We, therefore, arrive at the conclusion that the diet of fever should contain a liberal supply of carbohydrates." The by-products of carbohydrates are thrown off through the lungs as carbon dioxide; thus by their use we sustain the body and rest the kidneys. The by-products of the proteid metabolism, as previously mentioned, pass off in the urine. In the use of carbohydrates, further, the nature of the intestinal contents is changed from one of putrefaction to fermentation, which does not furnish as favorable a soil for the growth of dangerous pathogenic organisms.

Dextrinized gruels have a useful field in the diets for summer diarrhœa. It is impossible to give a stronger barley water than two even tablespoonfuls to a pint of water for any length of time; twice this amount may be taken if the cereal is dextrinized. Four even tablespoonfuls of barley to a pint of water give a food-strength of approximately .14 fat, .6 proteid, and .4 soluble carbohydrates. Dextrinizing is of value in that a more concentrated nourishment may be given to the patient.

The substitute diet is allowed to be given at two-hour intervals if the child will take and retain it in

such quantity as he was accustomed to take of milk in health. Boiled water is given at any time.

The mother is told to keep the patient in the largest room in the apartment. If there is fever she is instructed to give spongings with water at 80° F. for fifteen minutes several times a day.

How is the milk diet to be resumed? It must be given gradually at the onset. I begin by using from one to four drachms with each feeding of the barley water, making a slight increase every day or every other day is the condition of the stools allows. The cereal gruel used as a diluent does not permit of a larger amount of milk being given at the commencement of the milk feeding, neither does its use permit of a more rapid increase in the milk strength than if plain water is used. I have demonstrated this in a great many cases.

In twenty-eight cases a return to milk was followed by relapse. In nine there was repeated relapse, and milk could not be given in one case until one month had passed; in one, until six weeks; in two, until four months, and in three, until three months.

Calomel is preferred in a case in which there is vomiting or a tendency thereto, and, when the case is not particularly urgent, 1-20th to 1-10th of a grain is usually prescribed at hourly intervals.

Castor oil is given in the acute septic cases with infrequent stools and without stomach involvement, in which a prompt washing out of the small intestine is desired.

Bismuth subnitrate was given in all of the cases treated. It was never given in less than ten grains every one or two of the waking hours, regardless of the age of the patient. When given persistently in this large amount it is a remedy of immense value. In order to be of service, however, it must produce black stools. In other words, if some of it is not converted into the sulphide of bismuth in the intestine it is without value. If it passes through the bowel unchanged no influence whatever will be exerted upon the intestinal contents. This happens in a small percentage of cases, and is explained in the absence of sulphuretted hydrogen in the intestine, which condition is due, doubtless, to the absence of pancreatic digestion. In such cases the sulphur is supplied in the use of precipitated sulphur, a one-grain powder being given with each dose of the bismuth; the bismuth is continued in the large doses until the child is ready for milk, and then the dosage is diminished one half and continued until full feeding is possible.

Opium.—The indications for the use of opium are pain, tenesmus, and frequent stools. In a severe or even in an average case in which there is systemic poisoning, evidenced by fever and considerable prostration, four or five passages a day are desir-

able. I look upon this number of stools as maintaining drainage. When the case is one of intestinal infection with infrequent foul stools or no stools at all, active laxatives comprise the only medication. Many children are brought to an untimely end because of the idea that the number of the discharges, that is, the diarrhoea, must be stopped. The physician's efforts are directed to this end with little or no attention to the diet and the nature of the intestinal contents, the cause of all the trouble.

Irrigation of the Colon.—As is the case with all good measures, irrigation of the colon has been overdone. Because a baby has diarrhoea, it does not follow that he must be irrigated. A child who is having from ten to twenty loose, watery discharges in twenty-four hours is quite effectively washed out and does not require more. Time and again I have irrigated in these cases and removed nothing whatever. The cases which are benefited by the washing are those patients who have a moderate number of green mucous stools with or without blood; in short, the cases to be washed out are those in which there is something to be removed. I never wash the colon oftener than once in eight hours, rarely as often as this; once in twelve hours accomplishes considerable and does no harm. Too frequent irrigation causes straining, distention of the lower bowel, fissures of the rectum, and, if not very carefully done, injury to the mucous membrane of the descending colon. Various solutions have been used for the irrigation. One is as good as the other if water enough is used, for it is the cleansing of the bowel which benefits the patient. I usually employ a normal salt solution. In case there is blood, a one-per-cent. solution of tannic acid is used. I question, however, if it is of any more value than normal salt solution. The solution selected is used lukewarm. If there is high fever, I use it as cold as 60° or 70° F.; in the very weak, with subnormal temperature and marked prostration, the solution is used at 110° F. Irrigation is carried on as follows: A soft rubber catheter, No. 14 English, is attached to a fountain syringe, the bag of which should be held three or four feet above the patient's body. The child must lie on the back or left side, with legs well drawn up. The tip of the well-oiled catheter is passed into the rectum. When an introduction of two inches has been effected, allow the water to pass in slowly. The water will distend the parts and facilitate the further introduction of the tube. Press the folds of the buttocks together until the colon is filled. This in a child eighteen months of age, will require from twenty-four to thirty ounces of water. When this, or a lesser amount, at least one pint, has passed in, allow the solution to run in and out at the same time.

The medical management of these cases of sum-

mer diarrhoea among the tenement poor is important; but what is equally important, and a matter to which in a great measure our success is due, rests in the education of the mother. What these mothers chiefly fail in is cleanliness, and they are careless in caring for the food. They have no sense of appreciation of careful detail. It is manifestly desirable that the best milk within their means be given the child, and they are told where to obtain it; but an absolutely pure milk, if kept uncooked, exposed in an open vessel in a very indifferent and dirty ice-box, at a temperature of 60° F. or over, would become contaminated at once.

In order to prevent diarrhoeal disease in summer the child should be fed properly all the year round. The death rate from this cause in June and early July is almost as large as in August; this is because the susceptible, the badly fed, those with chronic digestive disorders, fall easy victims at the commencement of the heated term. The poor mothers are very much interested in the children, and when they make mistakes they are errors of ignorance, not of intent. If cows' milk is used they are told to boil it as soon as received, to dilute it with a cereal water, and keep it on fire.

They are also instructed in the care of the bottle and the nipple. In case a special article of diet is to be given, they are told how to prepare it; written directions are given covering these points. Nothing is left to the memory. The mother is told, further, that she must wash her hands with soap and hot water before touching the baby's food for any purpose, and that there must be a vessel half full of water into which the soiled napkins are placed until washed. With the first sign of intestinal derangement, whether in winter or summer, they are taught to stop milk at once, to give a cereal water, and a dose of castor oil, and they do it.

At the out-patient service we have many evidences of the benefits of teaching the mother. Many of them have been coming to us for years with the babies as they appear. Not infrequently the mother brings the child with a story of a sharp attack of diarrhoea, a dose of castor oil, milk discontinued, barley water given, and the child on the road to recovery. Observing the good results of the suggestions, she goes about doing missionary work and tells her neighbors.

Our work, while covering a comparatively small field, shows that the large mortality of summer diarrhoea in our large cities is preventable. The prevention rests with the people, the municipal government. These infants cannot be moved to the country except in a ridiculously small number. Hospitals cannot care for them, and but little advantage could be gained if this were possible. In summer diarrhoea there must be isolation, not aggrega-

tion. I can treat with infinitely better success one hundred cases of summer diarrhœa in the average tenement with the average well-meaning tenement mother than in the best equipped hospital with expert nursing and feeding. In the home the dangers of reinfection are slight. In the hospital, with the nurse going from patient to patient, she carries the infection from the virulent case to the susceptible, mild case, and reinfects the convalescent.

The large summer mortality from intestinal disorders is not due to the tenement or directly to the hot weather, but to the absence of a little knowledge and the complete inadequacy of facilities which exist there during the hot months. In short, there is a total inability to meet the changed conditions brought about by the hot weather.

The municipalities should establish milk laboratories and stations, one for a certain number of the poor population, where sterilized milk and cereal gruels and animal broths could be furnished free every month of the year to those who could not pay, and at a small cost to others. There should be at least one salaried physician and visiting nurse who could advise and teach mothers in the infant's care and feeding and furnish literature bearing upon the matter in the native language of the mother. An ice station should be connected with every laboratory and ice supplied free or at a small cost. If good food were provided for the well, and the mothers instructed what to do when the first sign of gastro-intestinal disorders appear, the deaths from summer diarrhœa would be reduced to a comparatively small number."

113 WEST EIGHTY-THIRD STREET.

ACUTE JOINT DISEASES OF INFANCY.*

By T. HALSTED MYERS, M. D.,

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It would not be possible in a short paper of this kind to describe in any detail all the acute joint diseases of infancy, and I have attempted merely to call attention to some points in their ætiology, diagnosis, and treatment.

These diseases may be classified according to the location of the lesion and also from an ætiological standpoint. For instance, we have osteomyelitis, periostitis, osteochondritis, epiphysitis, and synovitis, or any combination of these lesions. In making this classification we must remember that the periosteum and medulla really form one continuous structure, so that it is impossible to draw a hard and fast line anatomically between acute periostitis and acute osteomyelitis, though there are clinical differences.

Considered from an ætiological standpoint, we have lesions due to the tubercle or typhoid bacillus, those due to staphylococci or streptococci, or the germs of influenza or pneumonia or gonorrhœa, or mixed infections. We have also other acute diseases whose ætiology is still in doubt, though the clinical symptoms are well known, as, for instance, scurvy, syphilis, rheumatism, hæmophilia, and sarcoma.

In considering any of the acute joint lesions of infancy we must keep in mind the stage of development reached by the bony system. This will at once explain in part the different course of the disease, and the different clinical symptoms presented by the same inflammation in adults and in children. An epiphysitis, for instance, in an infant is less likely to become an osteomyelitis of the shaft on account of the intervening cartilage, and for the same reason an osteomyelitis is less apt to spread to the epiphysis and involve the adjacent joint. Then, again, the compact tissue of a long bone is so much less compact and also so much thinner in a young child than in an adult that the osteomyelitic abscess can much more readily find an exit, with the resulting relief of tension and of the acutest symptoms. On the other hand, as Wright says, transitional forms of tissue during constructive processes have notoriously feeble powers of resistance to interference. For this reason the line of junction of diaphysis and epiphysis is frequently the part attacked first. The extent of the spread of the disease, aside from the constant tendency to spread in the direction of the least resistance, will depend upon the existence of an area of tissue whose natural power of resistance to disease has been impaired by injury or some other cause interfering with its blood supply.

But the exact reason why certain joints or bones are affected by certain diseases is not, I think, at present known. For instance, why does dactylitis affect the proximal phalanx so much more often than any other phalanx? Why does gonorrhœal synovitis usually affect the knees or ankles?

Ætiology.—If we have an acute osteomyelitis, this is usually produced by staphylococci or streptococci, though the tubercle bacillus can also cause it. There is also described an acute miliary tuberculosis of the medulla in cases of general tuberculosis in which the sufferers die before symptoms due to the bone lesion develop.

If an epiphysis is involved, the same pus germs are usually responsible, but here we often find an acute syphilitic osteochondritis or scurvy. The tuberculous infection is more rare in infancy, but is the usual lesion after the second year.

If a joint is affected primarily, it is usually by the staphylococci or streptococci. Very rarely there are gonococci found. And still more rarely is there

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any other germ. Traumatism is a frequent cause of synovitis, and hæmophilia is occasionally met with. Acute articular rheumatism is a possibility, but is rare under five years.

The acute periosteal lesions are usually due to the pus germs, though here we have to make a diagnosis from scurvy, syphilis, periostitis from injury, and occasionally a rapidly growing sarcoma. I have never seen a typhoid periostitis in a young infant, though, of course, it might occur.

Diagnosis.—The clothing should be entirely removed in examining a young child. The positions it assumes can then be clearly seen and studied and are often diagnostic. Atrophies and swelling are evident at once. And the motions of the joints can be tested without trouble or loss of time. A frightened or rebellious child can, in spite of all efforts, sometimes make a complete examination of a joint impossible or inadvisable from the danger of inflicting additional injury ourselves. Reflex muscular spasm, the orthopædic surgeon's main standby, for instance, and telescoping at the hip joint, can be entirely masked at such an examination.

A careful examination will show the region affected. In the acute cases this is easier than in the chronic, where the knee and hip or the hip and spine are sometimes confounded. The next thing to decide is as to whether the disease is in the joint or has not as yet involved it. This can usually be done in joints that can be palpated, and can often be decided even at the hip, principally by the amount and character of the limitation of motion. The x ray is a great help here also.

In making a diagnosis the age of the child is sometimes of assistance. For instance, congenital syphilitic lesions of the cartilages are seen very early, often soon after birth, and usually before the end of the second year, while the periosteal lesions belong to the later forms and are seen in older children. Acute articular rheumatism, though it has been seen in an isolated case of a child six months old by Holt, is rare in infancy or indeed under five years of age. Scurvy is generally seen between the ages of eight and twenty months. Hæmophilia usually develops about the end of the first year, and Weigel has recently reported a case of sarcoma in a child only a year and a half old. On the other hand, tuberculosis and pyæmia may occur at any age. The acute epiphysitis of infants, though, in the great majority of cases occurs in the first year.

I think *examinations of the blood* will also prove to be of considerable assistance to us in diagnosis and also in determining the advisability or not of operating. If reliable conclusions are to be drawn from the blood count, it should be made by a thoroughly competent man, as the sources of error are so numerous, and the error resulting from any small

mistake is so large that it might be greater than the effect produced by marked disease. The marked differences between the blood in infancy and adult life must also always be kept in mind.

For the last year or so I have had a good many examinations of the blood made in my cases of bone disease in children. Where abscess formation accompanied the disease of the bone there was quite uniformly a leucocytosis, but, unfortunately, I have not had in all of these cases the contents of the abscesses examined, so that I am in doubt as to whether a mixed infection was present in all those that showed leucocytosis.

This question was raised a year or so ago, *i. e.*, whether any leucocytosis valuable for diagnostic purposes occurred when tuberculous abscesses were forming, or whether this was so only when these abscesses were infected with pus germs.

It has been thought by many of the orthopædic surgeons who believe in treating tuberculous abscesses conservatively that if these abscesses become infected they may properly be opened, though there are, clinically, grades of infection so slight as not to require incision. In most instances where I had suspected abscess, I have found leucocytosis; therefore, am I to conclude the abscesses were infected, and if so, should all be opened? This I believe is the practice of most general surgeons. Clinical experience is, however, after all the final test, and should guide us until the laboratory evidence is most conclusive.

I have asked Dr. F. C. Wood his opinion on this point, and he believes that, while there might be a leucocytosis of two or three thousand without infection, that amount of increase could not be considered of diagnostic value. If there was a well-marked leucocytosis, the abscesses were infected with staphylococci or streptococci. This view was also held by Dr. Richard Cabot and Dr. Lovett and Dr. Brown in the discussion referred to.

The results of the blood examination I had made in my cases seemed to be variable, because some of the abscesses *clinically* did not appear to be infected, yet gave the leucocytosis. The following case showed the leucocytosis of a mixed infection, but also changes which I did not understand.

In a boy, two years and a half old, with undoubted tuberculous osteitis of the hip, which began acutely, and in which abscess appeared after **twelve** months, following an attack of diphtheria, the abscess was pointing and had been a little painful for three days. The blood count was puzzling in that, **while** the leucocytes were 93,000, the differential count showed that eighty-five per cent. were lymphocytes. Lymphatic leucæmia was thought of, but there **were** no other symptoms of that disease. There was no syphilis. This high proportion continued for four

weeks, then gradually fell. The child is doing extremely well now and has no symptoms of disease other than that in the hip. The lymphocytes now are forty-four per cent., and the total leucocytes 13,000.

Secondary Infections.—Under this heading I would say that at the New York Foundling Hospital epidemics of measles and scarlatina are frequent, yet the number of joints affected secondarily is extremely small. When they go on to suppuration, cultures show staphylococci or streptococci.

I have here the histories of four cases of secondary arthritis which Dr. Hughes, house physician at the Foundling Hospital, has collected for me, and they are the only cases seen there in two years:

CASE I.—Child, eight months old. Pleuropneumonia, cerebrospinal meningitis, followed in twelve days by suppuration in both sternoclavicular joints; death; staphylococci in pure culture found.

CASE II.—Two and a half years old. Multiple arthritis; wrists, right elbow, left sternoclavicular joint affected; followed measles, diphtheria, antitoxine inoculation. All swelling disappeared without operation, with subsidence of other pyæmic symptoms.

CASE III.—Two years and nine months old. Suppurative arthritis of wrist, secondary to rheumatic arthritis of knee, rheumatic purpura, amygdalitis, conjunctivitis. Incised; pus evacuated; cure. No culture made, unfortunately, of the pus. Aspirated contents of knee, serum only, and culture negative.

CASE IV.—Eight months old. Purulent arthritis of knee and shoulder following bronchopneumonia and enterocolitis; death. Cultures showed staphylococci and streptococci.

At the Foundling Hospital and at St. Luke's Hospital I have seen a considerable number of infected joints occurring in children who had vulvovaginitis. Examination of the discharge showed gonococci, but examination of the joint contents, with one exception, showed only staphylococci or streptococci.

The following very instructive case of Pott's disease, with psoas abscess and sinus of long duration, was recently in my service at St. Luke's. The abscess cavity became infected two days after a dressing, and symptoms of pyæmia became pronounced, with the hip, wrist, and elbow joints affected. The patient was brought to the hospital, and died within a week. At the autopsy the findings were as follows: Suppurative arthritis of the right wrist and right hip and subcutaneous abscess near the left elbow. There were also infarcts in the spleen and kidneys, with localized peritonitis between the liver and stomach. Smears from the joint showed streptococci and staphylococci. No tubercle bacilli were found.

Treatment.—These facts would seem to indicate that the staphylococci and streptococci are present

in practically all the secondary joint affections. The important question is, then: Shall all these collections of pus be opened? I can cite cases where these secondary deposits have quickly subsided without operation, also where an incision evacuated a large acute periosteal abscess and the secondary osteomyelitis subsided in a few months. Nature has great reparative powers, and while in most cases an immediate operation is desirable, in others it is not.

The clinical diagnosis between an acute epiphysitis of tuberculous origin and one due to staphylococci or streptococci can only be positively made in the laboratory. If an epiphysitis occurs within the first year, however, the probabilities are that it is due to the pus germs. These cases are also often accompanied by very little pain. The swelling is frequently one of the first symptoms noted. The limb is held semi-flexed. The child is restless and depressed, has a chill or is nauseated, does not move the limb voluntarily, perhaps cries but little, only if it is moved by the attendant. The temperature is high, however, and the baby is evidently very ill. Generally there are soon considerable induration, redness, and heat of the more superficial tissues, and the abscess points in a week or so. After being evacuated it often heals up promptly. Crepitus is sometimes detected as the epiphysis becomes loose, but this is not always the case. Secondary abscesses are apt to occur, though sometimes there is no extension of the pyæmia. The mortality is, however, about forty-five per cent. The acute tuberculous process more often seen in older children is more painful, accompanied by more intense spasm, the whole process is less rapid and less depressing, and the separation of the epiphysis is not so certain to occur. When the abscess opens, moreover, it is not apt to close in the same prompt manner.

Syphilitic osteochondritis is seen also within the first year generally, and is sometimes quite acute, but there is usually a sharply defined hypertrophy at the epiphysial line before the stage of softening and separation. Almost always in these cases other specific lesions are or have been seen.

The subperiosteal hæmorrhage of scurvy and its enlarged and tender epiphyses are met with in children of about this age. We have here the pseudo-paralysis and flexed limb, but suppuration does not occur, though I have seen the epiphyses in a number of instances loose, and crepitus results from any manipulation. While the condition is a general one, the lesions are not usually symmetrical. An inquiry as to the food will generally clear up the diagnosis if the presence of other hæmorrhages and the absence of fever and of great prostration have not made it self-evident. Rotch says there are no alterations in

the blood peculiar to scurvy, but suggests examination of the urine in suspected cases for the hæmaturia which is sometimes seen.

It has seemed to me that when the shafts of the long bones were infected by the tuberculous or pus germs, the constitutional symptoms—fever, nausea or chills, depression, pain, etc.—which accompanied the epiphysial lesions were intensified. Traumatism is more frequently followed by periostitis in children than in adults, and also resolve more quickly unless infected. Rapidly growing sarcomata sometimes follow such traumatism in young children and generally affect the shaft in the neighborhood of the epiphysis. Their growth is accompanied with but little pain at first, and they must be distinguished from syphilitic periostitis, which is not uncommon in children over two years of age. The latter condition is more painful than that found with scurvy. The x ray is of considerable assistance here in defining the extent of the disease and its relations to the neighboring joints.

When we have an acute synovial effusion other than one caused by a traumatism, it is in the great majority of cases due to staphylococci or streptococci, as I have said before when speaking of secondary joint affections. The hæmorrhagic effusions in hæmophilia usually follow some slight injury. They are accompanied in the cases I have seen with very little pain and subside under pressure and rest rather quickly, but are apt to recur again and again. The effusion feels of greater consistence than serum, and the joint may be left with or without adhesions. It occurs almost always (eleven to one) in boys, and the history of other hæmorrhages makes the diagnosis easy.

The joint symptoms of acute articular rheumatism are sometimes very poorly marked, and are probably therefore often overlooked. A mere feeling of discomfort with slight redness and swelling and disinclination to move, with a temperature of 100° or 101° F., may be all that is noticed. In this disease especially, however, the joint changes are only a part of the lesion, and the younger the child the less important are they relatively. There is no other disease which can move from one joint to another so rapidly, perhaps leaving the first entirely after only two or three days. The same joint is liable to be attacked again, however. In a suspected case, a history of chorea, amygdalitis, endocarditis, connective tissue nodes, or other rheumatic symptoms will be brought out.

Before leaving the subject of diagnosis, I should like to refer for a moment to the diagnostic value of tuberculin. I have tried it in a considerable number of cases, and do not remember a failure to get a reaction in a well-marked case of tuberculous joint disease. I have failed to get a typical reaction in

any case of chronic or acute rheumatism. I have failed to get a reaction in an hysterical joint case in which for a time the diagnosis had been in doubt. I have failed to get a reaction in a well-marked case of syphilitic joint disease, but in one case of double subacute synovitis of the knees, in a girl eight years of age, when the diagnosis was between syphilitic and tuberculous disease, a typical reaction occurred, yet injections of the fluid from the knees into a guinea-pig proved absolutely negative. This reaction may, of course, have been from a tuberculous lymph node and not from the joint.

I conclude, therefore, that if a typical reaction is obtained the disease is either tuberculous or syphilitic. The employment of specific treatment could then clear up the diagnosis. I have had absolutely no bad results from this limited use of the Trudeau serum, and have used it only for diagnostic purposes.

Treatment.—The mechanical treatment of the acute joint diseases of infants is the same as that we should employ in older children—that is, rest of the joint, combined with traction where possible. The application of splints to babies is quite difficult on account of the shortness of the limbs, the amount of fat about the bones, the tenderness of the skin, the constant motion, and the marked effect on the general system of any irritation. For instance, a posterior splint reaching from the ankle to the upper part of the thigh would immobilize a man's knee very well, but would be practically useless for a baby. Thus the best protection for a knee or hip in such young children is afforded by a plaster-of-Paris spica reaching from the foot to the pelvis or axilla respectively; under this, traction may be applied. If the elbow is affected, it is better to immobilize the shoulder joint as well as the wrist.

The medical treatment is of great importance in these depressing diseases of infancy, and is directed chiefly to the regulation of the food supply. A change to fresh milk and orange juice, as is well known, will quickly cure scurvy, but no time should be lost in putting the child on this diet. I remember some years ago, at the New York Orthopædic Hospital, there were an unusual number of cases of epiphysitis due to nutritive disorders, we thought, in the absence of other causes, occurring in children fed on artificial foods. These subsided at once on a regulation of the diet. In one case the lower epiphysis of the tibia had separated, but reunited quickly and perfectly within four weeks from the time the food was changed.

The importance of good diet and hygienic surroundings for those depressed by tuberculosis and pyæmia is self-evident. If syphilis is suspected, the mercury is more valuable in the early lesions of the cartilage than the iodides, and may conveniently be

applied in the form of the official ointment spread on a piece of flannel cut to the shape of the abdomen and applied after a soap-and-water bath every day or every other day. Toleration is exceeded when a diarrhoea appears.

In the periosteal lesions of syphilis seen in older children, the iodides must be added to the mercury, and at times effects are only seen after several weeks' treatment.

I know of no efficient medical treatment for hæmophilia.

When we are dealing with a rheumatic case, I think Rotch's advice is excellent: Put the child to bed at once and on a milk diet, to avoid if possible endocarditis, which develops in nearly eighty per cent. of these cases. Sodium salicylate is well borne in these cases and is effective.

The surgical treatment has been referred to before, but in the case of acute suppurative epiphysitis I think there is no difference of opinion, and the rule is to open and drain the abscess as early as possible. If this is done, the joint and head of the bone are sometimes saved and the danger of pyæmia is lessened. I believe the method of Dr. Phelps, of washing the cavity with pure carbolic acid and afterward with pure alcohol, leaves a very healthy granulating surface after a few days. The high mortality, forty-five per cent., is an indication of the need for prompt action.

A tuberculous osteomyelitis usually if not always infects the periosteum also, and when acute symptoms are present it is proper to incise the periosteum freely over the seat of disease, evacuating the superficial abscess or relieving the tension, and then waiting to see if further operation is needed at once or can be deferred until the child is in a less depressed condition.

If a sarcoma is suspected, R. T. Taylor has advised that permission should be obtained before exploration to amputate the affected limb at once if the tumor appeared to be sarcoma, as even the time necessary to examine a portion of the growth microscopically would greatly increase the chance of metastasis.

The treatment of the acute joint diseases of infancy must be directed not only for the immediate relief of the symptoms, but also with regard to the ultimate result. For instance, by early incision only can we hope to save the head of the femur in acute epiphysitis. If this is not saved, the ultimate condition closely simulates a congenital dislocation, but is a worse condition, for a reposition cannot be made permanent; at least that is my experience in four cases. Sometimes, however, dislocation does not occur, and in these cases a very useful limb results, with good motion and but little shortening.

We should therefore endeavor to prevent dislocation.

If the medullary cavity of a long bone is to be cleaned out, care should be taken not to destroy the living shell, or to fracture it, which may easily be done. The diaphysis should not be removed entire in cases of acute necrosis, rather than leave it as a splint until some new bone forms to preserve the shape of the limb. In the same way the shape of a finger may often be saved by not operating too quickly and completely in a dactylitis.

Osteomyelitis about the knee joint is very apt to be followed by partial subluxation of the joint or atrophy of one condyle. The resulting deformities can be prevented or greatly modified by the careful application of splints.

54 WEST FIFTIETH STREET.

A PECULIAR SYMPTOM IN TYPHOID FEVER.

By W. C. DOANE, M. D.,

ELMIRA, N. Y.

Now that typhoid fever is reported to be common in various sections of the country, I feel it to be a duty to solicit a small space in the columns of your excellent journal to call the attention of the profession to a peculiar symptom that I have watched with particular care and interest for many years, and which I have found to indicate great danger, and, as a rule, to presage death. The diagnosis of this disease is not difficult, while the prognosis is exceedingly uncertain, particularly in cases that appear to be mild. More than a quarter of a century ago I noticed that Professor Trousseau, of Paris, in one of his lectures on the subject of typhoid, called the attention of his class to the significance of deafness in one ear, and said as follows: "When the deafness is only on one side the prognosis ought to be guarded; when the deafness occurs on both sides, I generally look on the prognosis as favorable. I have almost never seen persons die from typhoid fever who have been deaf on both sides during the course of the disease. Without being able to explain this clinical fact, I state it to you and ask you to verify it in your practice." The suggestion seemed strange and unmeaning to me, but coming from such a source I resolved to give it particular attention, and, ample opportunity for observation presenting, I soon learned that it was indeed an alarming symptom, and that when it existed a fatal termination was to be expected; and I have further found that the learned teacher was correct concerning deafness on both sides of the head; for, in the most extreme cases, where to all appearances death seemed inevitable, the patients have recovered, and I cannot call to

mind a case of recovery when deafness occurred only on one side, or a death when it occurred on both sides. I cannot see any reason why this state of things should exist; to me it is a profound mystery, and I trust some one will be able to connect this alarming symptom with a condition of the system that can be understood; wherefore I say to the profession, as the great teacher said to his class, "verify it in your practice."

Trusting that my reference to typhoid fever may be of some service to the profession, and that what appears to indicate serious trouble and the connection between the grave symptom and the unfortunate results in such cases may be better understood, I desire to offer some more extended remarks relative to the matter. I have observed in my early practice, which I began in 1847, that what were apparently mild cases of typhoid fever astonished me by their unexpected termination, and I could not discover any symptom that would lead me to a correct prognosis until I had tested that mentioned by the great teacher; and having very recently had a case, which followed substantially the course of many others that I have noticed in past years, I will briefly relate some particulars concerning it, which may be of interest to your readers.

CASE.—I was called to attend a young gentleman on March 6th, who presented all the indications of the fever which I am satisfied had been silently at work for at least a week previously. The patient was a gentleman of excellent habits and of more than ordinary physical strength, an athlete. In addition to the peculiar diarrhoea and the gurgling in the right hypochondriac region, the rose spots appeared on the 7th, and, aside from the fact that the pulse and the temperature did not harmonize, no cause for anxiety presented itself to me; but on the 8th I found my patient deaf on one side, and stating to the patient's father my reason for alarm, I considered it my duty to the patient and relatives, as well as to myself, to demand a consultation; and a prominent physician of culture and experience was summoned, to whom I made mention of the one-sided deafness, which I have no doubt he regarded as a whim, although as a gentleman and a friend he did not offer any criticism in regard to it. I am quite certain that at that time I should have looked for recovery except for the grave symptom I had watched so long. We were in perfect harmony in regard to the disease and the treatment; but on the 13th the temperature went down to 97° F. and the pulse went up to 110, and on the 14th the temperature went down to 96.5° F. and the pulse up to 130; perforation must have occurred; tenderness and distention of the abdomen followed; and on the 15th the patient expired and added another to the list of fatalities that I have observed, and another evidence of the value of one-sided deafness in making a prognosis in typhoid fever.

Issues and Events of the Day.

THE MISSION OF SOCIETIES FOR THE PREVENTION OF CONSUMPTION IN THE ANTITUBERCULOSIS CRUSADE.*

By S. A. KNOPF, M. D.,

NEW YORK.

Mr. President, Your Excellency, My Lords, Sirs, Members of the Canadian Association for the Prevention of Tuberculosis, Ladies and Gentlemen:

The honor which you have conferred upon me by the invitation to address you to-night, while personally appreciated to the fullest extent, I must above all consider a compliment to the United States and to the medical profession of the country to which I have the honor to belong.

Between your country and the United States, between the Canadian and American medical profession, the most cordial relations have existed for years. This act of courtesy extended to an American physician, the privilege to speak at so distinguished a gathering as this, presided over by your highest official in the person of His Excellency, the Governor-General, the Earl of Minto, will bring still closer together the medical professions of these two great nations, which speak one language and have the same aspirations, viz., the progress of humanity, the combat of disease, and the increase of human happiness.

We have gathered here to-night in the interest of a work which is now attracting the attention of the whole civilized world. Throughout Europe a most active antituberculosis movement is going on. Societies for the prevention of tuberculosis or for the erection of sanatoria exist now in nearly all European countries, and these societies are sanctioned, helped, and patronized by governments, kings, and princes. England has its National Association for the Prevention of Consumption and other Forms of Tuberculosis, with His Majesty, King Edward VII, as patron, and His Royal Highness, the Prince of Wales, as president. There are thirty-four vice-presidents, among whom we find the names of the Duke of Bedford, the Marquess of Londonderry, the Marquess of Ripon, the Marquess of Salisbury, the Marquess of Zetland, the Earl of Derby, the Earl of Spencer, Lord Lister, the presidents of the Royal Colleges of Physicians and Surgeons of England, Ireland, London, and Edinburgh; the director-generals of the Medical Service of the Army and Navy; the presidents of the Royal Agriculture and

*An address delivered by invitation before the Canadian Association for the Prevention of Tuberculosis, at its annual meeting, April 1, 1902, at Ottawa, at which His Excellency, the Governor-General, the Earl of Minto, presided.

Veterinary Societies; Sir Herman Weber, and many other equally illustrious names. The members of the council are presided over by Sir William Broadbent and the Right Hon. Sir Herbert Maxwell. Alfred de Rothschild and Malcolm Morris are the treasurers and Alfred Hillier is secretary. This British National Association for the Prevention of Consumption, counted already at the end of last year thirteen branches, namely, the Bournemouth branch, the Bradford branch, the Cumberland branch, the Devon and Cornwall branch, the Dublin branch, the Society for the Prevention and Cure of Consumption in the County of Durham, the Glasgow and District branch, the Gloucestershire, Somerset, and Wilts branch, the Leicester and Leicestershire branch, the Liverpool and District branch, the Newcastle-upon-Tyne and Northumberland branch, the Northampton Town and County branch, the Nottinghamshire Association for the Prevention of Consumption and other Forms of Tuberculosis, the Southampton branch, the South Wales and Monmouthshire branch, the Ulster branch, the Winchester and District branch, the Wrexham and District branch, and the York branch.

In Germany the work of societies for the prevention of tuberculosis and sanatorium associations started under the patronage of Her Majesty the Empress Augusta Victoria, who likewise became patroness of the congress held in Berlin in 1899, under that appropriate name, "Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit" (Congress for the Combat of Tuberculosis as a Disease of the Masses). "The General Central Committee for the Erection of Sanatoria for Consumptives," which has done such good work during the past few years, remains under the patronage of Her Majesty the Empress, and has for its honorary president His Highness the Prince Hohenlohe-Schillingsfurst, and for its president Dr. Count von Posadowsky-Wehner, Secretary of the Interior, and among its vice-presidents such men as Count Lerchenfeld, von dem Knesebeck, von Mendelssohn-Bartholdy, the Duke of Ratibor, von Ballhausen, Professors Fränkel, Gerhardt, and von Leyden. The council is likewise composed of forty-eight men belonging to the best class of society, the aristocracy of science, birth, and finance. Dr. Goothold Pannwitz, chief staff surgeon of the army, is the able secretary of this committee, with offices in one of the government buildings on the Wilhelmplatz in Berlin.

Nearly every German city of importance has its sanatorium association. They, in common with the "invalidity insurance companies," have accomplished a vast amount of good in procuring sanatorium facilities for thousands of consumptive poor of the German Empire.

In France, where the government has taken a most active part in the antituberculosis work, private enterprise has created a journal called *La Lutte antituberculeuse*. As patrons of this periodical figure the names of Brouardel, Letulle, Arloing, Landouzy, Monot, Calomet, and others of equal prominence. This journal is the official organ of twenty-five distinct antituberculosis movements, under a variety of names, such as Popular Sanatorium Work, French League against Tuberculosis, Agricultural Colony for Poor Convalescent Consumptives, Maritime Sanatorium Association, Maritime Sanatorium for Scrofulous Children, Society for the Prevention of Tuberculosis and the Gratuitous Lodgment of Poor Consumptives in Sanatoria, Work for Tuberculous Children, etc. Five of these associations are located in Paris, two in Bordeaux, and two in Lille, the rest throughout the departments of France.

The very latest news which came to us from France this week speaks of a federation of seventy-six various antituberculosis institutions in that country, which sent delegates to an assembly convoked at Paris, March 16th, for the purpose of uniting them all into a national federation. The success of that plan surpassed all expectations, and the result of the deliberation was the formation of a central bureau and council for mutual aid. It was furthermore proposed to establish a permanent exposition for everything needful for the campaign against tuberculosis.

Japan, Russia, Austria, Italy, Portugal, Spain, Holland, Denmark, Sweden, and Norway have done similar work, though not on such an extensive scale. In some of the Latin American republics, too, there has been an awakening, and to judge from the *Revista de la Tuberculosis, Organo de la Liga Argentina contra la Tuberculosis*, they are doing excellent work in the Argentine Republic, Chile, Brazil, Uruguay, Paraguay, Bolivia, Ecuador, Peru, Mexico, etc. In January, 1901, in Santiago de Chile, there was formed a permanent national commission for the prevention of tuberculosis in Latin America (Commission Internacional Permanente por la Profilaxia de la Tuberculosis en la America Latina).

In Cuba antituberculosis work is most active. It is carried on partly by the United States military chief sanitary officer and partly by the Tuberculosis Society of Cuba, under the presidency of Dr. Emilio Martinez.

The latest international development in the combat of tuberculosis has been the formation of an International Central Bureau for the Prevention of Tuberculosis, with its seat in Berlin. Its objects are: (1) To collect all news relating to the combat of tuberculosis in various countries; (2) to collect the literature on the subject; (3) to reply to ques-

tions relating to the antituberculosis movement; (4) to petition the proper authorities to further the cause; (5) to receive and make suggestions relative to the international combat of tuberculosis, especially as regards investigations, the publication of popular essays, and arranging lectures and meetings; (6) to publish a periodical to be sent free of charge to all members, containing the reports of the work done by the International Central Commission, and discussing other subjects of interest to the cause.

Every country is represented by at least two members, and countries with more than two million inhabitants are entitled to one more representative for every five million people; but the total number of members for a single country must not exceed five.

Here in North America we have perhaps not done quite as good work as our brethren in Europe. In Canada, however, though your country has a smaller population than the United States, greater strides in the antituberculosis work have been made than in the latter country. You have already a Canadian Association for the Prevention of Tuberculosis, while we have but a few small local societies striving to do the same work you are doing. They are the Pennsylvania, the Colorado, the Ohio, the Maine, the Minnesota, and the Illinois Societies for the Prevention of Tuberculosis. Besides these State associations, there exist in Baltimore a Laennec Society for the Study and Prevention of Tuberculosis, a similar one in St. Louis composed of the alumni of the City Hospital, a Cleveland City, a Buffalo City, and Erie County (N. Y.), and in New Hampshire the Suncook Association for the Prevention of Tuberculosis. There exists as yet no American, or United States, society for the prevention of tuberculosis. It grieves me to make this statement and I do it not without a sense of humiliation. But I am full of hope, and I trust that the example which you, our good neighbors, are setting us to-day will not be without fruits. I devoutly hope that some day in the near future we may even enjoy a union meeting of the present Canadian and the future United States societies for the prevention of tuberculosis. I look forward to the time when by a combined effort we may be able to combat tuberculosis as a disease of the masses throughout this continent.

In this thought let us find our inspiration to discuss now as intelligently as we may be able to do the subject we have chosen. With your permission, I desire to speak on The Mission of Societies for the Prevention of Consumption in the Antituberculous Crusade.

At no epoch in phthisiology, or for that matter in the history of medicine in general, has this singular disease, called consumption, or pulmonary tuberculosis, been so much written and talked about as at the present time. I have endeavored to give you a

bird's-eye view of the various antituberculosis movements in foreign countries and of those of our own continent. You know of, and have yourselves experienced, the widespread interest which is now taken by medical men and laymen all over the civilized world in this tuberculosis problem. If I should, however, be asked what is the cause of this strong awakening to the importance of a disease, the contagiousness of which was known to Isocrates, a contemporary of Hippocrates (460-377 B. C.), and the curability of which was demonstrated and described by the Arabian physicians as early as the tenth and eleventh centuries, I should be at a loss to answer in one sentence. There have been mighty forces in operation to bring about this awakening, which came almost simultaneously with the increase of our knowledge concerning the ætiology of tuberculosis. Our greatest gratitude for the increase of knowledge in this respect we doubtless owe to that trinity of master-minds, Pasteur, Koch, and Lister, those three stars in the firmament of bacteriological science who represent at the same time the three foremost nations of the world. The first, the immortal Pasteur, has taught us that an infectious disease cannot arise without the presence of an infectious germ, Koch has shown us the infectious germ of the disease in which we are particularly interested, and Lister has demonstrated to us the value of cleanliness and antiseptics in the combat of infectious diseases.

It would take me too far to enumerate here the many illustrious pupils and co-workers of these three men. Wherever medicine is taught you find the pupils of these men as teachers. They have helped you and me to understand the true nature of tuberculosis.

For the modern methods of curing tuberculosis through outdoor life, proper hygiene, and good food we are primarily indebted to the English people. It may not be generally known that even the earliest efforts in sanatorium treatment were inaugurated by an Englishman in the person of Dr. George Bodington, of Sutton Goldfield, Warwickshire, England; and as a veritable pioneer in aerotherapy we must not forget that princess among nurses who helped to cure the English physician, Bennett, of consumption, the great and good Florence Nightingale. Brehmer and Dettweiler, of Germany, were the pioneers of the sanatorium treatment of consumption as it is now almost universally practised, and as American pioneers of modern phthisiotherapy we must not fail to mention our distinguished colleagues, Dr. E. L. Trudeau, of the Adirondack Cottage Sanatorium, and Dr. Vincent Y. Bowditch, of Boston.

To summarize our present knowledge and to state the basis on which our societies for the prevention of

tuberculosis should work, we might say we now know that tuberculosis, especially in its pulmonary form, is an infectious, communicable, preventable, and in many instances absolutely curable disease; furthermore, that it can be cured in nearly all climates where the extremes of temperature are not too pronounced and where the air is relatively pure and fresh. In other words, it is not always necessary for a consumptive patient to travel long distances and seek special climatic conditions, but in most instances he has a chance of getting well even in his home climate.

Before I proceed may I be allowed to digress just for one moment to make it clear why I call tuberculosis, and especially pulmonary tuberculosis, a communicable and not a contagious disease, still less a dangerous contagious disease? There is enough difference in the meaning of the words to justify an explanation. It is my firm conviction, based on the experiences and the experiments of our greatest European and American scientists, such as Koch, Straus, Grancher, Prudden, Biggs, and others, and on a somewhat extensive experience of my own, that tuberculosis is not a dangerous contagious disease, but only a communicable one. To be in contact with a tuberculous individual who takes care of his expectoration or other secretions which may contain the bacilli is not dangerous. In sanatoria for consumptives, where the precautions concerning the sputum are most strictly adhered to, one is perhaps safer from contracting tuberculosis than anywhere else. The great danger from infection lies in the indiscriminate deposit of sputum containing the bacilli, which, when dry and pulverized, may be inhaled by susceptible individuals and then cause the disease to be developed. The communication of the germ of the disease is, however, less obscure to us in its process and far more easily guarded against than the contagion arising from such maladies as diphtheria, scarlet fever, or small-pox. What has just been said concerning the absolute security from infection in a well-kept sanatorium cannot very well be said of a small-pox hospital, no matter how well directed the hygienic precautions. Against the danger from contracting small-pox we have thus far no other means than preventive vaccination, and in case of an outbreak of the disease the most rigid isolation. It is entirely different with tuberculosis. The simple contact of a small-pox patient may suffice to convey the disease. This is never possible with a consumptive, with whom, even should he be careless or unclean, a prolonged contact is necessary to transmit the disease. Herein lies the difference between communicable and contagious.

It seems to me essential that those of us who labor not only with tuberculous patients, but also with their friends and relatives, and a large portion of

the community, whose sympathy we desire to enlist in our cause, should know the true status of a consumptive. Whether we work under the name of a society for the prevention of tuberculosis, or sanatorium association, or an antituberculosis movement of any kind, we must never, never be considered as an anticonsumptives' society. The consumptive must know that every member of an antituberculosis society is his friend, that we labor for him and not against him; that we try to lessen his burdens, and that we are the last to make him feel as if he were an outcast from society. To do the work in this spirit will be the first and most essential duty in the mission which a society for the prevention of tuberculosis should fulfill.

Infused then with this spirit of deepest sympathy for our fellow creature who may be afflicted with consumption, what can we do for him to protect him from reinfection? What can we do for him that he may not transmit the disease to others? What can we do for the community at large to protect it against the invasion of the tubercle bacillus and the subsequent inroads of the "great white plague"? What can we do to better the condition of the consumptive poor and those of moderate means?

The first question, What can such societies as yours do to protect the consumptive from reinfecting himself or infecting others? must be answered by the single word "education." The Pennsylvania Society for the Prevention of Tuberculosis, of which I have had the honor to be vice-president for a number of years, has issued a series of very interesting and instructive pamphlets with this end in view. Permit me to give here the titles of a few of them: *How Persons Suffering from Tuberculosis can Avoid Giving the Disease to Others. How to Avoid Contracting Consumption. How Hotel-keepers can Aid in Preventing the Spread of Tuberculosis. Predisposing Causes of Tuberculosis; How to Avoid or Overcome them.* To complete the education of the public, this series of pamphlets might be increased, and I would suggest the following themes: How can children be protected from scrofula and other forms of tuberculous disease? What can the farmer and dairyman do to diminish the frequency of tuberculosis among animals, and thus indirectly stop the propagation of the disease among men?

I do not intend to suggest to you any means of combating tuberculosis in cattle or measures to prevent the sale of tuberculous products, such as milk and meat. This is the province of the boards of health, with whose duties we should not interfere. Societies for the prevention of tuberculosis should, on the contrary, work in greatest harmony with the officials of the health departments. By the combined workings of these two bodies a great deal of good can be accomplished. You should not only

seek to give your pamphlets the largest possible circulation, particularly in the densely crowded tenement districts, but they should be gratuitously placed in the hands of all health officers, so that they may distribute them to families wherever they think they are most needed. You should also place these pamphlets gratuitously at the disposal of physicians.

But the educational work of societies for the prevention of tuberculosis should not be limited to the mere distribution of pamphlets. There should be frequent popular lectures and reunions where verbal lessons are taught and discussed. These lectures and practical talks should be reported to the daily press. I do not believe there is a single newspaper in your country or in mine, or for that matter in any part of the civilized world, which would not always be glad to print the report of a meeting of an anti-tuberculosis society. The daily press has already done much good in spreading the knowledge which consumptives and those living with them should possess. Unfortunately, the public press serves also at times for the advertising of many "absolutely sure consumption cures," which are from time to time put on the market by unscrupulous quacks. I am, nevertheless, sanguine enough to hope that in time the better class of newspapers will, in the interest of the community at large, no longer extend the hospitality of their columns to such dangerous advertising matter, especially when it is protested against by such societies as yours. How many a poor consumptive has lost his last little reserve fund by giving everything he had for a dozen bottles of that "sure and quick cure," only those who come much in contact with them know. How unscrupulous some of these charlatans are in their method of procuring certificates of cure is something which can hardly be believed. Let me tell you only of one instance: A poor woman in the last stages of consumption came to me seeking advice. When asked for the name of her former medical attendant, she confessed that she had been treated for a number of weeks by a quack concern, and now, her means being exhausted, she was made to understand that they would not continue to treat her unless she would give them a certified testimonial that she had been thoroughly cured of her disease, which had been pronounced by prominent physicians an advanced case of consumption. This poor sufferer had not derived any benefit whatsoever from the treatment, and as a result her conscience would not permit her to become a partner to such a fraudulent procedure.

To break the nefarious trade of the man who deals in sure and infallible consumption remedies, to stop the practice of the men and women who profess to be able to diagnosticate and treat consumption by letter; the Christian Scientists and Faith-curists,

who ridicule preventive measures and the laws of cleanliness and hygiene, which are the laws of God, but who, as a token of faith, demand their fees in advance, we have but one weapon, and that again is education. I would suggest that every pamphlet which may be issued by a society for the prevention of tuberculosis, every lecture which may be printed for the cause, every newspaper report which is sent forth, should include a declaration which should read about as follows:

Consumption is a preventable and curable disease. The sooner the patient puts himself under the care of a competent physician the greater are his chances of recovery. The well-trained physician is the most competent person to guide the patient in the means to prevent reinfection of himself or the infection of his fellow men. Consumption, or pulmonary tuberculosis, is not cured, and never has been cured, by quacks, patent medicines, or any other secret remedies. The most modern and most successful methods of treating consumption consist solely and exclusively in the scientific and judicious use of fresh air, sunshine, water, abundant and good food, and the help of certain medicinal substances when the just-mentioned hygienic and dietetic means do not suffice in themselves to combat the disease.

The thorough and constant supervision of the pulmonary invalid, the immediate intervention when new symptoms manifest themselves or old ones become aggravated or do not disappear rapidly enough, the prescription of proper food and drink, can only be had at the hands of the thoroughly trained physician.

With educating our consumptive friend, those living with him, and the public at large as to the methods of prevention and means of cure the mission of a society for the prevention of tuberculosis by no means ceases. Our work has only commenced. We must now solve the question which I have asked above: What can we do to better the condition of the consumptive poor and those of moderate means?

The well-to-do patient can easily be advised to better his unhygienic environments; with the poor it will be far more difficult. When our work brings us into the presence of a consumptive wage-earner, living in a tenement house in a few badly ventilated and badly lighted rooms, with the earnings of better days gone, with scanty food and scanty raiment, we wish we could do, not one thing, but many things. First of all, we should wish we could take this poor sufferer to a sanatorium where he would have the best chance of cure and where the possibility of his reinfecting himself and infecting his wife and children would be removed. We should then wish to examine all the members of the family, to find out if there were any who had already contracted the disease, and, if so, take them, too, in the earliest possible stage to a sanatorium for complete recovery.

The next thing we should wish to do would be to advise a thorough disinfection of the rooms, bedding, and garments of all the members of the family. Lastly, we should wish to be able to provide for the family in want, deprived of their wage-earner, good food and, if possible, a more healthful apartment, so that all the predisposing factors of tuberculosis, which are bad ventilation, poverty, want, and malnutrition, as well as the existing foci of infection, should be eliminated for once and all.

What a vast amount of work there is to do! What a grand mission a society for the prevention of consumption has to fulfill! Where shall we find shelter for the consumptive poor, who not infrequently, owing to an unjustified and cruel phthisiophobia (exaggerated fear of the presence of consumptives), are little welcome anywhere? The sanatorium must be to the poor consumptive not only a place of cure, but also a haven of rest. There are not enough sanatorium and hospital facilities for the consumptive poor, either in your country or in mine. Thousands of consumptives are allowed to die annually, not because their disease could not be cured, but for the simple reason that there is no place in which to cure them. One of the greatest missions of a society for the prevention of tuberculosis is, therefore, the propaganda for the erection of sanatoria for the consumptive poor, and not only for the absolutely poor, but also for those of moderate means; not only for consumptive adults, but also for tuberculous and scrofulous children. If any community would have the courage, conviction, and means to erect a number of sanatoria and special hospitals for all the tuberculous invalids who, owing to want of means, cannot be properly treated at home, there would not only be a great sanitary, a great moral, but even a great financial gain at the end of a very few years. Those of my hearers who have visited any of the European, American, or one of your beautiful Canadian, sanatoria will bear me out when I say that there is no better school of hygiene than the well-conducted sanatorium for consumptives.

The inmate of such an institution after a few weeks' sojourn has been trained in hygiene and cleanliness and regularity of life. The beneficent influence of sanatorium education is so true that it has been even demonstrated that in the villages of Goerbersdorf and Falkenstein, where five of the most important and flourishing German sanatoria are situated, the mortality from tuberculosis among the villagers has actually been decreased by one third from what it was before the establishment of these institutions. The villagers voluntarily followed the hygienic regulations, which are obligatory for sanatorium inmates. This shows how wrong our phthisiophobic friends are when they object to

the establishment of a well-conducted sanatorium for fear of contagion to the neighborhood.

If a community will erect a sanatorium for its indigent consumptives, this institution will prove to be a hygienic educator to all the inhabitants. The patient returning home, whether cured or only improved, will have become a practising expert in the prevention of tuberculosis. Should he have been fond of intoxicating liquors, the enforced abstinence in the sanatorium, the good food, the regular life, and other ennobling influences which the sanatorium offers will most probably have made a better man of him, morally as well as physically.

Let me, lastly, demonstrate to you that the communities which you will seek to interest in the establishment of sanatoria will gain financially by placing their consumptive poor in time in such an institution. I have advanced this argument before. I am not very familiar with the condition of your own large cities in this respect, so if you will permit me I will take as an example my own State, New York, which has the largest population of any in the United States, and quote in part what I have said on this subject in my article on Tuberculosis in the *Twentieth Century Practice of Medicine*, Vol. xx, 1900. It is estimated that there are in New York State about 50,000 tuberculous invalids. Of these, probably one fifth belong to that class of patients which sooner or later become a burden to the community. These 10,000 consumptives, absolutely poor, will sooner or later have to be taken care of by the public general hospitals. While they may not stay in one hospital for twelve months continually, they will certainly occupy a bed in one of the public institutions for that length of time before they die. According to the last annual announcement of the public charity hospitals of New York, the average cost per patient per day in the general hospitals was \$1.16. Thus the cost to the commonwealth will be \$4,234,000 per year for caring for the 10,000 consumptives.

What would be the expense if they were taken care of in a sanatorium? Experience in this country and abroad has demonstrated that the maintenance of incipient cases in well-conducted sanatoria can well be carried out for one dollar per day. If these 10,000 were to be sent to a sanatorium in time, at least 6,000 of them would be lastingly cured after a maximum sojourn of 250 days, at an average expense of \$250 per capita. Thus, for \$1,500,000, 6,000 individuals would be made again bread winners and useful citizens. If the remaining 4,000 invalids were kept in the sanatorium one year before they died, it would cost \$1,460,000. Thus, taking away from the tenement districts 10,000 consumptives, curing more than half of them and caring for the other half, and destroying 10,000 foci of infec-

tion will cost \$2,960,000. If we do not take care of them in the earlier stages of their disease, they will probably all die, since this 10,000 represents the absolutely poor who now live under the most unhygienic conditions; but before dying they will have cost the community \$4,234,000.

Another important factor in the combat of tuberculosis, particularly among the poor of a large city, it seems to me, is the establishment of special tuberculosis dispensaries. All pulmonary invalids who for one reason or another cannot find sanatorium accommodation, former sanatorium patients who are convalescent but still need medical guidance, or all people afflicted but slightly with tuberculosis and able or obliged to pursue light outdoor occupations could find in such a tuberculosis dispensary an admirable temporary substitute for the sanatorium. In France and Germany such special dispensaries, aided by diet kitchens, which are essential in order to carry on the dietetic treatment with the unfortunate consumptive poor, have done already a vast amount of good. In most of the cities there are as yet, and will be for some time to come, insufficient sanatorium facilities, and therefore such special dispensaries seem to me an urgent necessity.

In our care for the consumptive adult, however, let us not forget the tuberculous child. He will be the man of to-morrow, and the more healthy and strong men and women we can make of these little sufferers the fewer consumptive adults we shall have to take care of. The results which are obtained in seaside sanatoria for the treatment of tuberculous and scrofulous children in some of the European countries are simply marvelous. If tuberculosis is curable in the adult, it is still more so in the child. Some French institutions report as many as 75 per cent. of absolute cures of these little ones. It is strange to say that we on this continent have so few institutions of this kind. France alone has, according to *La tuberculose infantile* of December, 1901, along its sea coasts no fewer than twenty-four sanatoria for tuberculous and scrofulous children, offering accommodation to 3,923 patients. All these sanatoria are provided with educational facilities, so that the children's intellectual development does not suffer. To make propaganda for such school sanatoria for tuberculous and scrofulous children is another of the duties of a society for the prevention of tuberculosis.

Before concluding, let me beseech you not to rest here with your labors. After you have removed multiple centres of infection from tuberculosis, after having erected sanatoria for tuberculous adults and children, there will still remain, if not the most important, at least equally important, factors of predisposition to tuberculosis which we shall find in the badly housed, in the badly clothed, in the underfed,

and in the overworked individual. A society for the prevention of consumption must make it one of its duties to work for the better housing of the poor. Let it be known to employer and employee, to every landlord and tenant, to rich and poor, but particularly let it be known to the dwellers in the crowded tenement districts, that it is as dangerous to breathe foul, vitiated air as it is to drink foul and infected water. Sweatshop work and unsanitary factories and workshops should not be tolerated in this enlightened century. The eight-hour law and the prohibition of child labor should be enforced everywhere if the underlying factors of the propagation of tuberculosis are to be removed.

All children at school should have more outdoor instruction and more physical culture than they have now. It is wrong, nay, it is even a crime, to push the intellectual culture of children to the detriment of their physical growth and development. Children in our public schools should be taught the value of sensible dress and be equipped with the knowledge of elementary hygiene. Housekeeping and good, plain cooking should be compulsory in the curriculum of all girls' schools. The young woman will then, whoever she may marry, know how to make even a small and modest home a happy and cheerful place, and the husband, returning from his day's labor, will not seek the club or the saloon. It is so often the dark, dreary, and untidy tenement and the poor food, badly cooked by the wife who does not know how to do better, which drive the husband to the saloon. Give to the laboring man a clean, cheerful home, be it ever so modest, and an intelligent housewife who can prepare good and appetizing meals, and the rum-shop will have less temptation for him.

Alcoholism is a strong predisposing factor to tuberculosis, and while the moderate use of feeble alcoholic drinks, such as light beers, may be considered as harmless to adults when taken with their meals, alcohol should never be given to children even in the smallest quantities. In families in which there is a fear of hereditary transmission of the desire for strong drink, even the mildest alcoholic drinks should be absolutely avoided. It would also be best if all people so predisposed, or who may have acquired only the occasional desire for drink, should never smoke, for experience has taught that attacks of dipsomania (periodical sprees) are often caused by an excessive use of tobacco. The young man starting out in life should take with him the moral training which will enable him to be a gentleman, and be considered a polite gentleman, though he absolutely refuses ever to enter a liquor saloon in order to treat or to be treated to drink. It is this treating habit—alas! so prevalent in our American society—which has ruined many a young man and made him

a moral and physical wreck. The creation of tea and coffee houses, where warm, non-alcoholic drinks, including bouillon, are sold in winter and cool ones in summer, is to be encouraged. It would be of additional advantage if some of these houses could also offer healthful amusements for old and young.

All such knowledge you should disseminate whenever and wherever you can. Yet, important as this dissemination of knowledge and the propaganda of sanatoria are, there still remains some work which you are called upon to do if you want to fulfill the whole mission of a society for the prevention of consumption in the antituberculosis crusade. You will have to appeal to the great philanthropists of your country for material help. Without their aid, the municipalities and the health boards will be handicapped in your fight against this common foe, for no community has public funds enough to cope alone with the tuberculosis problem. Plead with those noble souls who have given and are giving so much for educational institutions to examine the work you are doing. We all are profoundly grateful for what has been done in recent years by philanthropists in the line of creating and endowing educational institutions. Yet it seems to me that there is now at least in this northern part of America a plethora of colleges, universities, and libraries, and I know that there is in nearly all of our large Canadian and American cities a penury of good model tenement houses, where the average wage earner could enjoy a cheery, pleasant home without paying an exorbitant rent. There is a penury of public baths which, for a moderate price, should be at the disposal of the people every day, winter and summer, and for some hours in the evening. There is a penury of decently kept places of amusement, open all the year, where the laborer and his family may spend a pleasant Sunday afternoon and partake of non-alcoholic drinks. There is a penury of children's playgrounds and small parks. There is a penury of hospital and sanatorium facilities for thousands of poor consumptives who could be cured if only taken care of in time. Call the attention of your statesmen and philanthropists to this condition of affairs, and I am sure they will gladly cooperate with you in your endeavor to solve this tuberculosis problem, the most interesting, important medical and social problem of our times.

The help of your statesmen and philanthropists is needed also in another direction. You will recall that I spoke a few moments ago of the many things we should like to do for the family in the tenement home, of which several members were afflicted with tuberculosis. There is one more thing we should wish to do, of which I have not yet spoken, and that is to induce that family to leave the crowded city and

move to a smaller town or village, if it is at all possible for them to do so. There they could find larger and more commodious quarters for less money. Urge them to take up agricultural pursuits or to seek at least such occupation as will demand outdoor life. I know all this will not be easy, but I see in connection with this problem a large field for true statesmanship and practical philanthropy. By making farming more profitable the statesman will stop the ever-growing tendency of emigration from village to city. By erecting and endowing institutions for healthful amusements in country districts and thus making life more attractive, the philanthropist will confer a lasting benefit upon old and young and indirectly increase the wealth, health, and happiness of a large portion of the population.

Every member of a society for the prevention of consumption must consider himself a worker and a missionary in a field as important as ever lay before any one who went out to preach the Gospel to the heathen. The field of work which lies open individually as well as collectively to members of societies for the prevention of tuberculosis is large. It is important, I may say it is inspiring; for there is no work more gratifying than to help in the prevention of a disease which is preventable, to help to cure a disease which is curable, and to add indirectly through such work to the prosperity, health, and happiness of our fellow-citizens and increase the well-being of humanity at large.

Correspondence.

LETTER FROM TORONTO.

An Honorary Degree for Dr. Drummond, of Montreal.—Defects in the Care of the Insane in Ontario.—An Improvement in the Curriculum of Toronto University.—A Decrease of Small-pox.—The Unseemly Multiplicity of Coroners.—The Proposed Dominion Medical Council.

TORONTO, April 12, 1902.

Toronto University is to honor Dr. W. H. Drummond, the "habitant" poet of Montreal, at the June convocation of the university. On that occasion Dr. Drummond will be the recipient of the honorary degree of Doctor of Laws.

The question of the proper housing of lunatics seems to be cropping up every now and again in this city. Although the Ontario government has recently converted the old Victoria College buildings at Coburg into an asylum for female patients, the number of these unfortunates has not decreased in the Toronto jail. Recently the mayor of the city has taken an active interest in this matter, and in a letter to the Local Council of Women thus voices his opinions on the subject: "The government of the

Province has been constantly behind its duty in the matter of providing accommodation for the insane of the Province, and is particularly wanting in its excuse, since the succession duty tax has been levied, bringing in very large sums. The continued detention of lunatics in places not intended for their custody is a crying and cruel evil. The statement that some cases of this kind have been in the jail for years is a startling one, the evidence of which will certainly form a subject for serious pressure upon the Provincial government." The Local Council of Women will be rendering the community a distinct service if it pursues this matter to the extreme end; and it is also difficult to understand why the government does not set apart adequate accommodation, and still further difficult to understand how it is that the physicians who are members of the House of Legislature should sit idly by and see this evil continuing on from year to year, as it has done in this the banner Province of the Dominion.

Closely associated with the question of the early removal of lunatics from the common jails of the Province is that of the appointment of politicians to the positions of superintendents of different asylums throughout the Province. Two glaring instances of this political favoritism have recently taken place; and it is being whispered that a third is on the tapis. While it cannot be said that the general practitioner has had much experience in the treatment of the insane, it certainly is a distinct slight upon the abilities of the men who have devoted years in the asylum service of the Province as assistants in these institutions; men who, by reason of their experience and fitness, should be qualified to step into the position of medical superintendent when a vacancy is caused through death or infirmity or resignation of the senior officer. But the question of the proper care of the insane of the Province does not seem to weigh much with the present government. It is expedient rather to appoint someone who has rendered yeoman service on the hustings or in the councils of their party in the Province. At a time when the proper treatment of the insane looms upon the horizon of medical thought, politics seeks to tie up and gag any advanced effort which might be put forth for a more enlightened hospital régime in this regard. While no exception can be taken to the professional standing or attainments of the gentlemen who have gone or are about to go to their reward from the political caucus to the asylum service, much exception, certainly, can be taken to the pernicious system of governmental control of state asylums which supersedes trained and competent officers by men who become nothing less than political grafters, who consider that they can go from the general practice of medicine and state politics into such positions of responsibility as superintendents of asylums for the insane.

And truly it requires on the part of these gentlemen stupendous assurance to accept positions as the heads of these institutions over men who have spent the greater part of their lives in the treatment and care of the insane.

Changes have recently been made in the medical faculty of Toronto University. The Board of Medical and Dental Studies has been expanded so as to separate the boards in medicine, dentistry, and pharmacy. A statute was also passed amending the curriculum in medicine, by the terms of which an examination and attendance in ophthalmology, otology, laryngology, and rhinology become necessary in the fourth year.

The Provincial Board of Health of Ontario has been meeting in Toronto during the past week. The small-pox epidemic and the question of coroners' affidavits were the topics chiefly dealt with and discussed. Dr. Bryce, the secretary of the board, reported with regard to the former that the outbreak had decreased fully fifty per cent. during the past month. In 1901 there occurred throughout the Province 1,879 cases. In January of the present year 629 cases were reported; in February, 707 cases; in March the number was reduced to 302 cases. The total number of cases for the past fifteen months was 3,517.

An interesting discussion also took place before the board on the question of coroners and their duties. It was generally felt that the law requiring coroners to swear that there were no evidences of foul play in connection with any death before they began an investigation should be amended, and coroners who were guilty of holding inquests where there was no necessity for such investigations came in for a good deal of adverse criticism. The board might have gone a step further, as the appointment of coroners by the wholesale in this Province is disgraceful. Out of 2,500 physicians in the Province, five hundred are said to be coroners. In the city of Toronto alone there are two or three dozen. It would seem a far better plan to have one official coroner for the city, who could very well look after all cases coming to his attention. It is likely that the ends of justice would be better served thereby, and the profession and community in general would be spared those hustling scenes where one coroner endeavors to get in his affidavit before his confrère, in order that he may get the "rake-off."

Dr. Roddick's bill before the Dominion Parliament for the establishment of a Dominion Medical Council seems to be progressing favorably. It has passed its second reading in the House of Commons, it has been reported on favorably by a special committee, and its constitutionality, which was doubted at first by the Premier, Sir Wilfrid Laurier, now seems to meet with that gentleman's acceptance. It

is understood, also, that the Minister of Justice has prepared a long and exhaustive report on this point, which will shortly be presented to the House and which will support the measure. The legislation is permissive, as no Province can be dragged into co-operation with the others against its will; and each Provincial legislature must first amend its medical act ratifying the Dominion measure. Nor does it interfere with the existing medical councils of the Provinces, which will remain and continue to perform their work as at present. The Dominion Medical Council when finally established is to consist of thirty-nine members.

Therapeutical Notes.

A Gargle for Offensive Breath.—The *Practitioner* for April gives the following:

℞ Solution of chlorinated soda. . . . 1 drachm;
Peppermint water. 6 ounces.
M. ft. garg.

For Cystitis.—The *Maryland Medical Journal* for April ascribes the following to Chauvet:

℞ Oil of turpentine. $\frac{1}{2}$ an ounce;
Camphor. 15 grains;
Extract of hyoscyamus. $\frac{1}{2}$ a grain.

M. ft. massa. Sig. Take a piece the size of a cherry-stone, morning and evening.

A Spray for Acute Rhinitis.—The *Maryland Medical Journal* for April gives the following:

℞ Carbolic acid. 1 grain;
Menthol. 1 "
Oil of gualtheria. 1 minim;
Liquid petrolatum. 1 ounce.

M. To be sprayed into the nares four or five times daily.

Ergotine in Pneumonia.—According to the *British Medical Journal* for September 29, 1900, Kleczkowski employs ergotine in daily doses of from 45 to 75 grains in the early stage of pneumonia. The author believes that by this means the course of the disease may be considerably shortened. If ergotine is given too late, it is much less efficient, but even then it lowers the temperature and calms the dyspnoea and the delirium. The author has used ergotine for the last ten years and has never seen a case of pneumonia which resists this drug, except in diabetics.

The Treatment of Migraine.—Dr. Kouvalecky (*Gazette hebdomadaire de médecine et de chirurgie; Revue médicale du Canada*, February 19th) has a marked preference for sodium bromide, which he associates with strophanthus to regulate the action of the heart, and with cocaine as a calmative. The following is his formula:

℞ Potassium bromide. 120 grains;
Tincture of strophanthus. 30 minims;
Cocaine hydrochloride. $1\frac{1}{2}$ grain;
Orange-flower water. to 6 ounces.

M. A tablespoonful thrice daily in a little milk.

Calcium Iodide as a Substitute for Iodoform is recommended by William Mackie (*Zeitschrift der Oesterreicher Apotheker Verein*). He has used it, with very good results, in both powder and saturated solution as an antiseptic, in place of iodoform. It diminishes suppuration in wounds and has proved useful as a deodorant and antiseptic mouthwash.

Angustifolia Echinacea in the Treatment of Hæmorrhoids.—Hall (*Cincinnati Lancet-Clinic*, March 23, 1901) obtained such good results in the treatment of a wound of the hand with this drug, that he resolved to try it in hæmorrhoids. He injected two drachms of a mixture containing equal parts of the fluid extracts of witch hazel and of echinacea into the rectum after emptying the bowels. The injections were repeated three times, and the results were excellent, though the formula was slightly modified subsequently, as some patients complained that the remedy was too irritating.

Copper Oxide as a Remedy in Tapeworms.—Doerr (*Therapie der Gegenwart; Pharmaceutische Zeitung*, February 8, 1902) uses copper oxide as a safe and efficient anthelmintic in adults, employing the following:

℞ Black copper oxide. 90 grains;
Calcium carbonate. 30 "
Levigated white bole. 180 "
Glycerin. enough to make a mass.

M. Make 120 pills.

Two pills to be taken three times daily, avoiding sour substances in the food. After a few days, when the treatment has been finished, a dose of castor oil should be taken.

Menthol in the Treatment of Cough.—According to Sanger (*Therapeutische Monatsschrift*, July, 1901), menthol is a valuable remedy in the symptomatic treatment of cough. It is a non-toxic anæsthetic and calms the irritation of the air passages as well as does morphine. A few crystals of menthol are placed on a spoon and heated over a lamp or stove for from five to twenty seconds. In this way a sufficient amount of menthol vapor is produced for the patient to inhale. A solution of menthol in alcohol, in the strength of from 40 to 50 per cent., may also be used, from 10 to 20 drops being placed in the hollow of the hand and thus inhaled. In order to remove the mucus which lines the bronchi and sometimes interferes with the action of menthol, injections of mentholated oil may be given, thus evoking a cough which serves to remove the mucus.

Gelatin Solution in Post-operative Laryngeal Bleeding.—Goldschmidt (*Therapie der Gegenwart*, February, 1902) relates the history of a case in which he used a solution of gelatin to arrest a post-operative laryngeal hæmorrhage. A curetting for tuberculous laryngitis was followed by severe bleeding, which was arrested only for about ten minutes after applications of iron solutions or sprays with such solutions. Four pieces of gelatin, each about ten square centimetres, were boiled with 100 cubic centimetres of water, and a few drops of the solution were instilled into the larynx under the guidance of the laryngeal mirror. The bleeding ceased almost instantly and did not recur. The method is easy and efficient.

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NEW YORK, SATURDAY, APRIL 26, 1902.

THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

In our last issue we spoke of some of the features of the meeting held in Ottawa on the 17th and 18th inst. We then fully expected that Dr. Knopf's address, which we publish in this number of the *Journal*, would be appreciated at its true worth, and we are now able to confirm that forecast by the following extract from Lord Minto's speech: "There is no greater leader in that research than Dr. Knopf, who is our guest here to-night and who, in the midst of all the calls of a busy life, has generously found time to come to Ottawa and help us, and to lay before us the invaluable conclusions he has drawn from the studies which have already earned him a world-wide reputation. We are grateful to him for the favorable start his presence will give us in these early days of our association, and we hope that we may often in the future welcome him here again to share in our discussions and give us the benefit of his advice."

The attitude and aims of such an organization were well set forth by the president, Sir James A. Grant, M. D., in the following terms: "Does the present state of our knowledge warrant us in requiring the absolute isolation of phthisical patients? What we do require is better accommodation for the treatment of the poor, less of the sweating manufacturing process, increased vital capacity of air in underground or overground compartments where operatives are almost huddled together. In addition is the result of excessive strain of brain and general nerve tissue in our present system of education, the food problem and scrap diet in school or college life, the excessive use of alcohol, and defective sanitary arrangements; all of which, misdirected, have an undoubted tendency to lower the

vital powers of the system and become potent factors toward the development of tuberculosis."

In any such movement as a sanitary campaign it is always wise, we think, not to confine the organization strictly to the medical profession. Our Canadian brethren appear to have entertained this view also, for they elected a layman, Mr. W. C. Edwards, M. P., of Ottawa, president for the ensuing year. Among the members of the executive council chosen are such well-known medical men as Sir James A. Grant, M. D., Dr. Lachapelle, Dr. Fagan, Dr. Richer, Dr. Bryce, Dr. Barrick, Sir William Hingston, M. D., Dr. Bell, Dr. McNeil, Dr. Powell, Dr. Montizambert, and Dr. Roddick, M. P. We feel certain that the future usefulness of the association is assured.

THE ROCKY MOUNTAIN INDUSTRIAL SANATORIUM.

Before the organization of this institution was perfected we expressed our appreciation of the probable usefulness of the projected sanatorium. We have since had gratifying accounts of its progress, and we now learn that it is well advanced in its actual work. A card recently issued bears the statement that up to the time of the publication of the card, which is not dated, forty-four patients had been cared for, of whom thirteen had been wholly and eleven partly self-supporting. The existence of an institution in which such results have already been accomplished seems to us to add materially to the resources within the reach of those subjects of incipient tuberculous lung disease who lack the means of paying in full the cost of their maintenance and treatment, and we hope the day is close at hand when such resources will be vastly multiplied.

A scheme has recently been announced which promises to augment considerably the availability of this particular sanatorium for certain classes of persons, namely, the organization of what is termed the Sanatorium Press Auxiliary. The plan involves the publication of a magazine to be the organ of the sanatorium, and to furnish its readers with information as to matters pertaining to the maintenance and restoration of health. It is proposed that all the work of preparing the magazine, "except the actual handling of the issue after it comes from the press," shall be done by persons who are under treatment in the sanatorium. Such an arrangement, it will be seen, seems to carry with it the opportunity for many

a poor writer, illustrator, compositor, proof-reader, or pressman to take the treatment required by his impairment of health without a total loss of income. It will, of course, take time for this scheme to be put into actual operation, for a special building and a complete printing plant will have to be provided. We presume that all that is expected of the magazine is that it will pay expenses, account being taken of the prestige it may serve to give the sanatorium, and it ought not to be very difficult, we should think, to hit upon similar plans that would benefit workers in various other lines than that of literature. That, indeed, seems to be the essential feature of an industrial sanatorium, and the community will expect to see it carried out as completely as possible, regard always being paid to the avoidance of unfair competition with the regular trade on the strength of having been able to obtain "lungers'" labor cheap. We feel sure that the managers of the Rocky Mountain Industrial Sanatorium will not make the mistake of following any other course, and we shall look with much interest for the results of their venture.

SAVE THE "SOUTH FIELD."

The imposing ceremonies attending the recent installation of the new president of Columbia University and the festivities incident to the occasion have served to call the public attention anew to the crying need of more land for the university. The most heartfelt and spontaneous applause that was manifested during the formal proceedings on Saturday afternoon of last week was called forth by Mr. Bradley's eloquent insistence that what was most urgently desired by the undergraduates, on whose behalf he was speaking, was the acquisition of the "south field." At the alumni dinner given in the evening at Sherry's the matter was again brought up, and we learn that on the spot six subscriptions of \$50,000 each were secured toward the purchase of the land. Nobody need be ashamed to subscribe a sum much smaller than that amount; but there are in New York many men who ought to contribute sums much larger, out of civic pride if not from any individual interest in Columbia. It was not altogether without reason that Professor Chandler lately lamented in an after-dinner speech the profusion of rich New Yorkers' gifts to out-of-town institutions while ignoring those of their own city.

The property at present owned and occupied by the university extends south only as far as One Hundred and Sixteenth Street. The "south field" immediately adjoins it, consisting of the unoccupied land bounded on the north by One Hundred and Sixteenth Street, on the east by Amsterdam Avenue, on the south by One Hundred and Fourteenth Street, and on the west by Broadway. It appears to be the only property near that of the university that can be acquired and made to serve university purposes save at the enormous expense of buying costly buildings only to destroy them. If we are correctly informed, it is owned by the Society of the New York Hospital, an opulent organization that would undoubtedly be willing to give Columbia the most liberal terms, for the two institutions have grown up together side by side, so to speak, and there has always been an informal but none the less intimate bond of sympathy between them.

There is, of course, the possibility that, if Columbia acquired this property, a small portion of it would be set apart for the erection of dormitories, but by far the greater portion of it would be kept open for out-door athletics, serving powerfully to maintain the health of the students and to improve their physique. It is on this score that it becomes the duty of our profession to encourage the undertaking to get permanent possession of the "south field," a portion of which, under some temporary arrangement, is even now used for the students' sports. One need not be a special devotee of Columbia, as distinguished from other great educational institutions situated in the city, to induce him to cast his influence in favor of the movement; it is only what he would naturally do in behalf of any other similar institution.

A GRACEFUL MEMORIAL.

The Denver and Arapahoe Medical Society has recently issued a handsome publication in memory of Dr. Jeremiah T. Eskridge and Dr. Clayton Parkhill, both of whom, it will be remembered, died on January 15th of this year. It contains very satisfactory portraits of the two deceased gentlemen; remarks by the president, Dr. Leonard Freeman; an address entitled Dr. J. T. Eskridge, the Friend of the Court, by Tyson Dines, Esq., of the Denver Bar; an address entitled Clayton Parkhill—Citizen, Soldier, by General Irving Hale; remarks headed J. T. Eskridge as Scientist and Neurologist, by Dr. Edward Jackson; remarks under the heading of Clay-

ton Parkhill—Anatomist and Surgeon, by Dr. J. N. Hall; remarks on The Extraprofessional Characteristics of Dr. Eskridge, by Dr. William Munn; Parkhill the Teacher of Medicine, by Dr. Robert Levy; remarks by Dr. W. W. Grant; lists of the writings of Dr. Eskridge and Dr. Parkhill; and the resolutions passed by the society on the death of their two fellows.

THE HEALTH OF HAVANA.

It is gratifying to learn from Surgeon Gorgas's report for the month of February that the death rate of Havana continues to compare favorably with the rates in most of the large cities of Europe and America. There is still no yellow fever, but a close watch has to be kept of persons coming from Vera Cruz, lest some one who has contracted the disease should infect the Havana mosquitoes.

A WOMAN AMBULANCE SURGEON.

Dr. Emily Dunning has been appointed an ambulance surgeon to Gouverneur Hospital. Dr. Dunning is a graduate of Cornell, having been second in her class on June 6, 1901. She became a competitor for the post last year, and came out head of the list of applicants at the examination, but was refused appointment because of her sex. She then became assistant to Dr. Mary Putnam Jacobi, in which capacity she continued till a new Board of Charities seemed to offer her more encouraging prospects in the contest for a post on the Gouverneur staff. In the recent examination she passed fourth, but obtained 100 per cent. in the practical part of the examination, and was therefore awarded the appointment. She will undertake all the duties ordinarily required of an interne, which include ambulance service. We congratulate the plucky lady on the successful issue of her perseverance, and wish her every success in her undertaking and a prosperous career in her profession.

THE TELEPHONE AND PROFESSIONAL SECRECY.

Familiarity is said to breed contempt, and it may well be that the frequent use of the telephone by physicians may lead to forgetfulness of the fact that that useful servant cannot be relied on to conform to medical ethics. A recent incident reported from Bay City, Mich., emphasizes this fact. A man is said to have entered a public telephone-box and called up a messenger to go four miles into the country and tell his wife that he could not come home because he had small-pox. The operator heard it, and very properly notified the police and health

officers, whereupon the telephone-booth was fumigated, and the authorities went in search of the suspect and, among other things, a small-pox scare was started. There is, of course, just a bare possibility that the small-pox was of the kind insisted on by the Christian Scientists, viz., an idea of very mortal mind, and otherwise non-existent; if it were not so, it was clearly the duty of the patient to go to an isolation hospital and have the message transmitted from there, instead of infecting a public place, which, from its confined area, was specially liable to receive and retain infection. However, while in the present instance we must commend the action of the operator, who chanced to overhear, for taking such prompt steps in the public interest, we cannot overlook the fact that he or she did overhear, and must draw the inference that telephones, like walls, have ears, and remind physicians that they should be used as sparingly as possible for the exchange of professional confidences.

MATERNAL IMPRESSIONS AGAIN!

The latest wondrous addition to this subject comes to light in the columns of a New York daily of sensational proclivities. It is the story of a year-old baby who is cutting gold teeth, in place of those ordinarily supplied by Nature. The mother, so the story goes, when about three months pregnant, went to a dentist and had two front teeth filled with gold. It is now discovered that the corresponding two front teeth of the child "have all the appearance of being filled with gold." The father, who is said to be a physician and a member of the Pennsylvania Board of Medical Examiners, is stated to have "cut into the bone and found that it is apparently of the yellow substance all the way through." The child born with a silver spoon in its mouth will now have to take a back seat.

A BULLET IN THE HEART.

An extraordinary case was described by Professor Trendelenburg, on April 3d, at the opening of a surgical congress at Berlin. A young man had attempted to commit suicide by shooting himself, and the bullet had fallen free in the cardiac cavity, where, it is said, it could be plainly seen by means of the x ray tossing about with the pulsations of the heart. Bullet wounds of the heart in patients who survive are naturally not very common, and suspicions of such must be mainly supported by inference; but with the x ray to our aid the suspicion would be converted into a certainty. We are not told, however, whether the present case was actually demonstrated to the assembled surgeons.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 28th*.—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *April 29th*.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *April 30th*.—Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield) (annual).

THURSDAY, *May 1st*.—New York Academy of Medicine, Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *May 2d*.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *May 3d*.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Dr. Charles Gilmore Kerley has been appointed attending physician to the New York Infant Asylum, West Sixty-first Street and Amsterdam Avenue.

A Hospital in the Hands of the Sheriff.—St. Mark's Hospital, New York, must close its doors unless benefactors volunteer immediate assistance. A judgment has been taken against the hospital and a deputy sheriff is on the premises. The board of managers have appealed to members of the St. Mark's Hospital Association and to those who have not heretofore participated in the support of the institution for funds to continue the charitable work.

Dr. Francis M. Gunnell.—Among the death notices published in this journal on the 12th inst. is one relating to Dr. Francis M. Gunnell, formerly surgeon-general of the navy. This, we are informed by the surgeon-general of the navy, is an error, probably due to the fact that Passed Assistant Engineer Robert H. Gunnell, U. S. N. (retired), died in Washington on the date given, April 5th. That officer, after his retirement in 1873, practised dentistry for many years and until a short time before his death, but Medical Director Francis M. Gunnell, U. S. N. (retired), is still a resident of Washington and in the enjoyment of good health.

The Late Dr. E. A. Tucker.—At a meeting of the Medical Association of the Greater City of New York, held at the New York Academy of Medicine on April 14, 1902, the following report on the death of Dr. E. A. Tucker was received and adopted:

The Medical Association of the Greater City of New York has learned with the deepest regret of its loss by death of one of its most promising members, Dr. Ervin A. Tucker—one of the founders of the association.

By inherent ability, thorough preparation and hard work, Dr. Tucker had gained the front rank in his specialty of obstetrics, and had won the admiration and respect of his

colleagues and his many friends. He seemed to be at the threshold of a most useful and distinguished career when his life closed. Be it hereby

Resolved, That we extend our deepest sympathy to the bereaved widow; that this note be entered upon our minutes, and that a copy be forwarded to the widow.

EDWIN B. CRAGIN,
J. CLIFTON EDGAR,
J. MILTON MABBOTT,
Committee.

Death of "The Little Madame with the Iron Cross."—The death is announced, at her home in Lexington, of the Baroness Marie von Olenhausen. Born in Lexington, she ultimately became a designer of prints in a cotton mill at Manchester, N. H., where she met and married the Baron von Olenhausen, a Saxon nobleman, who was a chemist employed in the same mill. Her maiden name was Phinney. Shortly after her husband's death the civil war broke out, and the baroness went South and served as a nurse throughout the war. At the close of the war she was appointed the first superintendent of the Nurses' Training School, which was started at the Massachusetts General Hospital, Boston.

When the Franco-Prussian war broke out, Madame von Olenhausen set sail for Germany, and served during the war. When peace was declared the Emperor William I bestowed upon her the much coveted decoration of the Iron Cross, and she always wore it on her breast. From this fact she became familiarly known as "the little madame with the Iron Cross." This Iron Cross, together with a handkerchief given to her by King Ludwig, of Bavaria, who visited her on a battlefield, she has bequeathed to the Lexington Historical Society. After her return home Madame von Olenhausen resumed her old work of designing, and supported herself up to the last by designing and embroidering doilies and table covers.

The Medical Association of Missouri announces the following programme for its forty-fifth annual session, to be held at St. Joseph, Mo., on May 20th, 21st, and 22d: *First day*—Morning session to be devoted to addresses of welcome, general business, and the appointment of committees. Afternoon session, Report on the Progress of Gynecology, by the chairman, Dr. C. H. Wallace, of St. Joseph; A Plea for the Conservation of the Uterus in Pelvic Inflammation, by Dr. O. Beverly Campbell, of Chicago; The Methods of the Control of Hemorrhage and the Removal of the Pelvic Tumor, by Dr. H. E. Pearse, of Kansas City; Report of Committee on Progress of Medicine, by the chairman, Dr. R. T. Sloan, of Kansas City; Cellulitis, by Dr. Charles Geiger, of St. Joseph; The Care of Tuberculosis in the Home, by Dr. William Porter, of St. Louis; Laboratory Diagnosis, by Dr. F. H. Mathews, of Liberty; Tubercular Peritonitis, by Dr. T. E. Porter, of St. Joseph; Senile Degeneration, by Dr. C. A. Mitchell, of Blythedale; Auto-infection—Auto-phagism and Auto-intoxication, by Dr. C. W. Watts, of Fayette; Dyspepsia—A Study of the Gastric Functions Essential to Treatment, report of five cases, by Dr. M. D. Schmalhorst, of St. Louis. Evening session, President's Ad-

dress, by Dr. J. D. Griffith, of Kansas City; Report of Committee on Reorganization, by the chairman, Dr. Jabez N. Jackson, of Kansas City; Report of Special Committee on Medical Legislation, by the chairman, Dr. D. C. Gore, of Marshall. *Second day*—Morning session, Presentation of Ureter Cystoscopes for Male and Female, by Dr. Bransford Lewis, of St. Louis; The Causes of Appendicitis, by Dr. T. C. Witherspoon, of St. Louis; Some Clinical and Operative Phases of Appendicitis, by Dr. A. H. Cordier, of Kansas City; Has Prostatectomy Come to Stay? by Dr. G. Wiley Broome, of St. Louis; Report of a Case of Fatty Tumor, with Specimen, by Dr. John D. Seba, of Bland; Removal of Tumor of the Liver, with Presentation of Patient, by Dr. C. M. Nicholson, of St. Louis; Interoscipulo Thoracic Amputations, with exhibition of specimen, by Dr. J. W. Perkins, of Kansas City; Surgical Procedures in Stricture of the Rectum, by Dr. C. J. Morrow, of Kansas City; Cerebral Softening, Its Diagnosis and Treatment, by Dr. John Punton, of Kansas City. *Afternoon session*, A Symposium on Carcinoma, opened by Dr. F. J. Lutz, chairman of the Committee on Progress of Surgery, of St. Louis; *Ætiology*, by Dr. Roswell Park of Buffalo, N. Y., and Dr. N. Senn, of Chicago; Report of the Committee on Progress of Pædiatrics, by the chairman, Dr. Robert C. Atkinson, of St. Louis; Some Cases of Diseases of the Nails, Two of Koilonychia, by Dr. A. H. Ohmann-Dumesnil, of St. Louis. *Third day*—Morning session, Report of the Committee on Nominations; Report of the Committee on Medical Ethics, by the chairman, Dr. E. W. Schauffler, of Kansas City; Report of the Committee on Medical Education, by the chairman, Dr. A. W. McAlester, of Columbia; Medical Education, by Dr. John D. Seba, of Bland; Report of the Committee on Laryngology, by the chairman, Dr. M. A. Goldstein, of St. Louis; The Subcutaneous Use of Paraffin in Deformed Noses, by Dr. Hal Foster, of Kansas City; Nose Bleed, by Dr. H. W. Loeb, of St. Louis; Report of the Committee on Ophthalmology and Otology, by the chairman, Dr. M. F. Weymann, of St. Joseph; The Pupil as an Aid in Diagnosis, by Dr. George E. Bellows, of Kansas City; Eye Strain, Its Causes and Treatment, by Dr. J. E. Jennings, of St. Louis; Cancer of Eyelids Treated by X Rays, Presentation of Patient, by Dr. W. L. Kenney, of St. Joseph; The Evolution of the Eye, by Dr. J. W. Sherer, of Kansas City; Demonstration of a Bandage for Eye and Mastoid Dressings, by Dr. M. F. Weymann, of St. Joseph. *Afternoon session*, The Importance of Medical Examiners for Schools, by Dr. E. A. Donelan, of St. Joseph; The State's Duty in the Matter of the Prevention of Pulmonary Tuberculosis, by Dr. R. O. Cross, of Kansas City; *Ætiology of Disease, Germ or Otherwise*, by Dr. C. C. Hurst, of Salisbury; The Active Principle of Quackery, by Dr. Frank G. Nifong, of St. Louis; Report of the Committee on Necrology.

Meetings of National and State Medical Societies for the Ensuing Month:

American Surgical Association (Annual), Albany, N. Y., May 20th, 21st and 22d.

American Pædiatric Society (Annual), Boston, Mass., May 26th, 27th and 28th.
 American Laryngological Association (Annual), Boston, Mass., May 26th, 27th and 28th.
 American Gynæcological Society (Annual), Atlantic City, N. J., May 27th.
 Arkansas Medical Society (Annual), Little Rock, May 13th, 14th and 15th.
 Connecticut Medical Society (Annual), New Haven, May 28th and 29th.
 Illinois State Medical Society (Annual), Quincy, May 20th, 21st and 22d.
 Indiana State Medical Society (Annual), Evansville, May 22d and 23d.
 Iowa State Medical Society (Annual), Des Moines, May 19th.
 Kansas Medical Society (Annual), Lawrence, May 7th, 8th and 9th.
 Kentucky State Medical Society (Annual), Paducah, May 21st.
 Medical Association of Missouri (Annual), St. Joseph, May 20th, 21st and 22d.
 Medical Association of Montana (Annual), Anaconda, May 21st.
 New Hampshire Medical Society (Annual), Concord, May 15th and 16th.
 Nebraska State Medical Society (Annual), Omaha, May 6th, 7th and 8th.
 New Mexico Medical Society (Annual), Albuquerque, May 14th and 15th.
 North Dakota State Medical Society (Annual), Grand Forks, May 21st and 22d.
 Ohio State Medical Society (Annual), Toledo, May 28th, 29th and 30th.
 Utah State Medical Society (Annual), Salt Lake City, May 13th and 14th.
 Medical Society of the State of West Virginia (Annual), Parkersburg, May 21st, 22d and 23d.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 19, 1902:

DISEASES.	Weekend'g Apr. 12		Week end'g Apr. 19	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	27	10	22	8
Scarlet fever.....	335	29	369	30
Cerebrospinal meningitis.....	0	4	0	3
Measles.....	630	20	584	24
Diphtheria and Croup.....	301	35	206	42
Small pox.....	66	12	50	8
Tuberculosis.....	316	165	278	165

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending April 18, 1902.

Smallpox—United States.

California.....	Los Angeles.....	Mar. 20-Apr. 5.....	9 cases.
".....	San Francisco.....	Mar. 30-Apr. 6.....	9 cases.
Colorado.....	Denver.....	Mar. 28-Apr. 4.....	8 cases.
Illinois.....	Chicago.....	Ap. 5-12.....	14 cases.
".....	Freeport.....	Ap. 5-12.....	1 case.
Indiana.....	Evansville.....	Ap. 5-12.....	5 cases.
".....	Indianapolis.....	Ap. 5-12.....	13 cases.
".....	Terre Haute.....	Ap. 5-12.....	2 cases.
Kansas.....	Wichita.....	Mar. 29-Apr. 12.....	9 cases—One case imported from Oklahoma.

Kentucky.....	Covington.....	Ap. 6-13.....	7 cases.
Louisiana.....	New Orleans.....	Ap. 5-12.....	1 case—imported from Missis-sippi.
"	Shreveport.....	Ap. 5-12.....	7 cases.
Maine.....	Portland.....	Ap. 5-12.....	9 cases. 1 death.
Maryland.....	Baltimore.....	Ap. 5-12.....	1 case.
Massachusetts.....	Boston.....	Ap. 5-12.....	13 cases. 3 deaths.
"	Brockton.....	Ap. 5-12.....	2 cases.
"	Cambridge.....	Ap. 5-12.....	2 cases.
"	Everett.....	Ap. 5-12.....	1 case.
"	Lawrence.....	Ap. 5-12.....	1 death.
"	Lowell.....	Ap. 5-12.....	2 cases.
"	Malden.....	Ap. 5-12.....	1 case.
"	New Bedford.....	Ap. 5-12.....	1 case.
"	Quincy.....	Ap. 5-12.....	2 deaths.
"	Somerville.....	Ap. 5-12.....	3 cases.
Michigan.....	Detroit.....	Ap. 5-12.....	18 cases.
"	Ludington.....	Ap. 5-12.....	19 cases.
Minnesota.....	Winona.....	Ap. 5-12.....	2 cases.
Missouri.....	St. Louis.....	Mar. 30-Ap. 6.....	50 cases.
Montana.....	Butte.....	Mar. 30-Ap. 13.....	7 cases.
Nebraska.....	Omaha.....	Ap. 5-12.....	24 cases.
New Jersey.....	Camden.....	Ap. 5-12.....	4 cases.
"	Hudson County, including		
"	Jersey City.....	Mar. 30-Ap. 6.....	30 cases. 9 deaths.
"	Jersey City.....	Mar. 30-Ap. 6.....	24 cases.
"	Newark.....	Ap. 5-12.....	42 cases. 10 deaths.
New York.....	New York.....	Ap. 5-12.....	66 cases. 12 deaths.
Ohio.....	Cincinnati.....	Ap. 4-11.....	16 cases.
"	Dayton.....	Ap. 5-12.....	1 case.
"	Hamilton.....	Mar. 29-Ap. 5.....	5 cases.
"	Toledo.....	Ap. 5-12.....	2 cases.
"	Youngstown.....	Ap. 5-12.....	1 case.
Pennsylvania.....	Altoona.....	Ap. 5-12.....	2 cases.
"	Johnstown.....	Ap. 5-12.....	1 case.
"	Philadelphia.....	Ap. 5-12.....	35 cases. 4 deaths.
"	Pittsburgh.....	Mar. 29-Ap. 12.....	10 cases.
"	York.....	Mar. 5-Ap. 5.....	7 cases. 3 deaths.
Rhode Island.....	Providence.....	Ap. 5-12.....	5 cases.
So. Carolina.....	Greenville.....	Mar. 29-Ap. 5.....	4 cases.
So. Dakota.....	Sioux Falls.....	Ap. 5-12.....	3 cases.
Tennessee.....	Memphis.....	Ap. 5-12.....	8 cases.
Utah.....	Ogden.....	Mar. 1-31.....	4 cases.
"	St. Lake City.....	Ap. 5-12.....	1 case.
Washington.....	Tacoma.....	Mar. 30-Ap. 6.....	7 cases.
Wisconsin.....	Green Bay.....	Ap. 5-12.....	7 cases.
"	Milwaukee.....	Mar. 29-Ap. 5.....	1 case.

Smallpox—Insular.

Porto Rico.....	Arecibo.....	Mar. 1-22.....	61 cases.
"	Ciales.....	Mar. 1-22.....	6 cases.
"	Fajardo.....	Mar. 1-22.....	1 case.
"	Humacao.....	Mar. 1-22.....	1 case.
"	Ponce.....	Mar. 1-22.....	12 cases.
"	San Juan.....	Mar. 1-22.....	6 cases.

Smallpox—Foreign.

Austria.....	Prague.....	Mar. 15-29.....	13 cases.
Barbados.....	.....	Mar. 30.....	10 cases.
Belgium.....	Antwerp.....	Mar. 22-29.....	10 cases.
Brazil.....	Pernambuco.....	Feb. 14-28.....	27 deaths.
Canada.....	Belleville.....	Mar. 31-Ap. 7.....	1 case.
"	Quebec.....	Mar. 29-Ap. 12.....	48 cases. 1 death.
France.....	Paris.....	Mar. 22-29.....	1 death.
"	Rheims.....	Mar. 16-30.....	51 cases. 4 deaths.
Gt. Britain.....	Birmingham.....	Mar. 22-29.....	1 case.
"	Dundee.....	Mar. 22-29.....	1 case.
"	Glasgow.....	Mar. 28-Ap. 4.....	13 cases.
"	Leeds.....	Mar. 22-29.....	2 cases.
"	Liverpool.....	Mar. 22-29.....	4 cases. 1 death.
"	London.....	Mar. 22-29.....	389 cases. 61 deaths.
"	North Shields.....	Mar. 15-22.....	7 cases.
"	Sheffield.....	Mar. 15-22.....	1 case.
"	South Shields.....	Mar. 22-29.....	2 cases.
India.....	Bombay.....	Mar. 4-18.....	19 deaths.
"	Calcutta.....	Mar. 1-15.....	14 deaths.
"	Karachi.....	Mar. 2-16.....	8 cases. 6 deaths.
"	Madras.....	Mar. 8-14.....	4 deaths.
Italy.....	Caserta.....	Mar. 24.....	Many cases.
"	Milan.....	Feb. 1-28.....	5 cases. 3 deaths.
"	Naples.....	Mar. 15-22.....	7 cases. 1 death.
"	Palermo.....	Mar. 15-29.....	37 cases. 4 deaths.
"	Santa Maria Capuavetere.....	Mar. 24.....	Many cases.
Mexico.....	Mexico.....	Mar. 23-30.....	2 cases. 3 deaths.
Netherlands.....	Rotterdam.....	Mar. 22-29.....	2 cases.
Russia.....	Moscow.....	Mar. 15-22.....	18 cases. 3 deaths.
"	Odessa.....	Mar. 22-29.....	2 cases. 1 death.
"	St. Petersburg.....	Mar. 15-29.....	14 cases.
Switzerland.....	Geneva.....	Mar. 8-15.....	1 case.

Yellow Fever.

Du. Guiana.....	Paramaribo.....	Feb. 1-28.....	7 deaths.
Fr. Guiana.....	Mana.....	Mar. 31.....	Infected.
"	St. Jean.....	Mar. 31.....	Infected.
"	St. Laurent.....	Mar. 31.....	Infected.

Cholera.

China.....	Honan.....	Ap. 10.....	Epidemic.
"	Hongkong.....	Mar. 4.....	1 case.
India.....	Bombay.....	Mar. 4-18.....	41 deaths.
"	Calcutta.....	Mar. 1-15.....	258 deaths.
Turkey in	Djiddah.....	Mar. 1-27.....	38 deaths.
"	Mecca.....	Mar. 1-27.....	788 deaths.
"	Medina.....	Mar. 1-27.....	381 deaths.
"	Rebuk.....	Mar. 1-27.....	1 death.

Plague—Insular.

Philippine Islands.....	Manila.....	Feb. 1-22.....	2 cases. 2 deaths.
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Plague—Foreign.

China.....	Shuitung.....	Feb. 10.....	300 deaths.
"	Yeung Kong.....	Feb. 10.....	Prevalent.
India.....	Bombay.....	Mar. 2-18.....	1635 deaths.
"	Calcutta.....	Mar. 1-15.....	963 deaths.
"	Karachi.....	Mar. 2-16.....	167 cs. 147 deaths.
"	Madras.....	Mar. 8-14.....	1 death.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 17, 1902.

BANKS, C. E., Surgeon.—Granted leave of absence for five days, from April 14, 1902.

GOLDSBORO, B. W., Acting Assistant Surgeon.—Granted leave of absence for seven days.

WALKER, R. T., Acting Assistant Surgeon.—Granted leave of absence for eighteen days, from May 1, 1902.

WHITE, M. J., Assistant Surgeon.—To proceed to Reno, Nevada, for special temporary duty.

BOARDS CONVENED.

Board convened to meet at Baltimore, to inspect the steam tug *Neptune*. Detail for the board: Passed-Assistant Surgeon H. D. GEDDINGS, M. H. S., and Chief Engineer H. W. SPEAR.

Board convened to meet at the Bureau, April 14, 1902, for the physical examination of candidates for appointment to grade of second assistant engineer, R. C. S. Detail for the board: Surgeon L. L. WILLIAMS, chairman, and Assistant Surgeon S. B. GRUBBS, recorder.

Board convened to meet at New Orleans, April 14, 1902, for physical examination of an officer of the Revenue Cutter Service. Detail for the board: Passed-Assistant Surgeon C. P. WERTENBAKER, chairman, and Assistant Surgeon J. W. SCHERESCHESKY, recorder.

Board convened to meet at the Marine-Hospital office, San Francisco, Monday, April 21, 1902, to examine officers of the Revenue Cutter Service. Detail for the board: Passed-Assistant Surgeon W. G. STIMPSON, chairman, and Passed-Assistant Surgeon H. S. CUMMING, recorder.

Board convened to meet at the Marine-Hospital, Port Townsend, Washington, Monday, April 21, 1902, to examine an officer of the Revenue cutter Service. Detail for the board: Passed-Assistant Surgeon C. H. GARDNER, chairman, and Assistant Surgeon M. H. FOSTER, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending April 19, 1902.

DUVAL, DOUGLAS F., First Lieutenant and Assistant Surgeon, is relieved from duty as surgeon on the transport *Thomas* and from further duty in the Philippine Islands, and will then proceed to Fort Williams, Maine, for duty.

GIBSON, EDWARD T., Captain and Assistant Surgeon, is assigned to duty as transport surgeon on the *Crook*, to relieve Donald P. McCord, captain and assistant surgeon, United States Volunteers.

HALL, WILLIAM E., Contract Surgeon, will proceed to the Presidio of San Francisco for temporary duty.

HEIZMANN, CHARLES L., Lieutenant Colonel and Deputy Surgeon General, is relieved from duty as chief surgeon, Division of the Philippines, to take effect about June 1, 1902, when he will proceed to San Francisco.

HOWARD D. C., Captain and Assistant Surgeon, is relieved from duty at Columbia Barracks, and will proceed to Cabana Barracks, Cuba, for duty.

MAY, JAMES V., Contract Surgeon, will proceed from Madison Barracks to Fort Strong, and report for temporary duty.

McCord, DONALD P., is granted leave of absence for one month, with permission to apply for an extension of one month, upon being relieved from duty on the transport *Crook*.

MEAD, JAMES E., Captain and Assistant Surgeon, is granted leave of absence for one month.

MILLER, WILLIAM G., Assistant Surgeon, is relieved from further duty at the Presidio of San Francisco and will proceed to the transport *Kilpatrick* for temporary duty during the voyage to the Philippine Islands.

MOSES, HOMER C., Contract Surgeon, will report at the Presidio of San Francisco for temporary duty.

ROBBINS, ROBERT P., Major and Surgeon. The leave of absence granted him is further extended one month.

TRUBY, ALBERT E., First Lieutenant and Assistant Surgeon, will report at Fort Wadsworth, N. Y., for duty, upon his arrival in the United States from Cuba.

TURRILL, HENRY S., Major and Surgeon, will proceed to Omaha, Nebraska, upon his arrival at San Francisco.

WOOD, HALSEY L., Contract Surgeon, will report at Alcatraz Island, California, for temporary duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 19, 1902.

BELL, W. L., Assistant Surgeon.—Ordered to Pocatello, Idaho, on recruiting duty.

GUEST, M. S., Passed-Assistant Surgeon.—Detached from the Cavite Naval Station, Philippine Islands, and ordered to the *New Orleans*.

HOLCOMBE, R. C., Assistant Surgeon.—Ordered to proceed home, via Manila.

MUNSON, F. M., Assistant Surgeon.—Appointed assistant surgeon, April 5, 1902.

WILSON, H. D., Passed-Assistant Surgeon.—Ordered to duty with the Marine Brigade, Philippine Islands.

YOUNG, R. M., Assistant Surgeon.—Detached from the *Rainbow*, and ordered to the Cavite Naval Station.

Births, Marriages, and Deaths.

Married.

GEER—EDMUNDSON.—In Atlanta, on Saturday, April 19. Dr. Charles Carroll Geer, United States Army, and Miss Claude Edmundson.

GRISWOLD—STOUT.—In Albany, on Tuesday, April 15th. Dr. William Church Griswold, United States Army, and Miss Helen Stout.

KORNEMANN—SCHUTTE.—In Newark, N. J., on Thursday, April 17th. Dr. Henry E. Kornemann and Mrs. Augustine Schutte.

McCLAIN—POPE.—In St. Louis, on Thursday, April 10th. Dr. John H. McClain and Miss Harriet L. Pope.

McPARLAN—CUMMINGS.—In Kingston, N. Y., on Wednesday, April 23d. Dr. Thomas F. McParlan, of New York, and Miss Marie F. Cummings.

SANGER—FIELD.—In Bangor, Maine, on Wednesday, April 16th. Dr. Eugene B. Sanger and Miss Ethel Field.

SINKLER—RHODES.—In Ardmore, Pennsylvania, on Tuesday, April 15th. Dr. Seaman Deas Sinkler, son of Dr. Wharton Sinkler, of Philadelphia, and Miss Emily Beauveau Rhodes.

VON PHUL—MICHEL.—In St. Louis, on Thursday, April 10th. Dr. Philip Von Phul and Miss Celeste Emily Michel, daughter of Dr. Charles Michel.

Died.

BOXALL.—In St. Louis, on Wednesday, April 9th. Dr. William A. Boxall, in the fifty-second year of his age.

FREEMAN.—In New York, on Friday, April 18th. Dr. Nathaniel Marston Freeman, in the eighty-first year of his age.

GRANDY.—In Lipa, Island of Luzon, Philippine Islands, on Saturday, April 12th. Dr. Luther B. Grandy, United States Volunteers.

McINTYRE.—In St. Louis, on Thursday, April 10th. Dr. John H. McIntyre, in the sixty-ninth year of his age.

MEACHAM.—In Manila, Philippine Islands, on Tuesday, April 15th. Dr. Franklin B. Meacham, United States Volunteers.

NELLIS.—In Albany, on Monday, April 14th. Dr. Theodore W. Nellis.

WHITING.—In Herrick, Illinois, on Sunday, April 13th. Dr. Otis Whiting, in the thirty-second year of his age.

Obituary.

MEREDITH CLYMER, M. D.

OF NEW YORK

Advanced as his age was, Dr. Clymer retained an impressive personality up to the last. He was frequently to be seen on the streets in an open carriage, and his grave and dignified face will be missed by many, even of those who did not know who he was. For a number of years before his death he had not been in active practice, and he was not a man who took part to any great extent in society proceedings. During the civil war he was an army surgeon of prominence, but it is for his literary work chiefly that he will be remembered, the most notable of which, perhaps, is to be found in his additions to Aitken's *Science and Practice of Medicine*. They greatly enhanced the value of the work, as Dr. Aitken himself cordially recognized. Many years ago Dr. Clymer was the editor of the *Medical Examiner*, and for a time he was an associate editor of the *Journal of Nervous and Mental Disease*. His contributions to the periodical literature of medicine were not very numerous, but they were of the highest order of merit and took a prominent part in shaping current opinion.

Dr. Clymer came of a distinguished family, his grandfather, George Clymer, having been one of the signers of the Declaration of Independence. He was born in Philadelphia, and he took his medical degree from the University of Pennsylvania in the year 1837. He began practice in Philadelphia, but moved to New York in 1851. He devoted himself chiefly to the study of diseases of the mind and nervous system, but at the same time he kept up his interest in general medicine. He was a member of the Medical Society of the County of New York, of the Association of American Physicians, and of the College of Physicians of Philadelphia.

OBITUARY NOTES.

DR. THEODORE WALSER, assistant sanitary superintendent of the Department of Health, Richmond borough, died on April 23d at New Brighton, S. I. Dr. Walser was born in Switzerland, in 1825, and came to this country in his youth. He was graduated from the Jefferson Medical College in 1850 and became assistant physician on Ward's Island. Among other appointments held by Dr. Walser at various times were those of deputy health officer to the port of New York and health officer for the former village of New Brighton. He was also one of the founders of the S. H. Smith Infirmary at New Brighton. Dr. Walser was the oldest established practitioners on Staten Island, and had rendered great public professional service, especially in connection with infectious diseases. His loss will be deeply regretted.

Pith of Current Literature.

Boston Medical and Surgical Journal, April 17, 1902.

Papers on the Diagnosis of Appendicitis. By Dr. Maurice H. Richardson.—The author asks if it is well always to be so much on one's guard when acute abdominal lesions are suspected, and especially lesions in which time is of the utmost importance. One may err too often on the side of conservatism. He takes a heavy responsibility who advises delay when the symptoms point to a general peritonitis, even if those are not quite what they should be in typical cases. The diagnosis between acute thoracic and acute abdominal disease is always easy so soon as the characteristic signs of either are apparent. The chief difficulty in making a distinction is to recognize that the necessity for that distinction exists, for the thoracic symptoms are always masked by the more conspicuous and distressing abdominal ones. Once the attention is drawn to the possibility of a thoracic cause, not only for the thoracic, but also for the abdominal symptoms, an accurate diagnosis is perfectly easy.

Vaginal Hysterectomy for Carcinoma of the Uterus. By Dr. William R. Pryor.—The author finds that there is a distinct indication for vaginal hysterectomy in cancer of the cervix only in a limited percentage of cases. He believes that vaginal hysterectomy is the operation of choice in cancer of the body of the uterus in nearly all of the cases, the exceptions being few. These are those in young women—those with pus-foci and those with cancer associated with fibroids.

Pathology and Pathological Diagnosis of Carcinoma of the Uterus. By Dr. T. Leary.

Abdominal Hysterectomy for Uterine Cancer. By Dr. J. C. Irish.—The author believes that, from the standpoint of our results in the treatment of uterine cancer of the body, abdominal hysterectomy fulfils all operative requirements, and whatever advance we make in treatment must be in some direction outside of operative procedures. The same may also be said of this treatment applied to cervical cancer. The only improvement that we can hope for in an operative way will be in a wider dissection of pelvic lymphatics and glands than many surgeons now make. Increased success in the permanent cure will come from earlier diagnosis and earlier operation.

The Surgical Aspects of Carcinoma Uteri, Complicating Pregnancy, Labor, and the Puerperium. By Dr. Charles Greene Cumston.—According to the author, if the carcinoma can be radically removed, the life of the mother alone is to be considered. Up to the beginning of the sixth month of pregnancy, vaginal hysterectomy is the operation of choice; but after this period is passed, abdominal hysterectomy or Dührssen's vaginal Cæsarean section, followed by hysterectomy, is indicated. When the neoplasm is insusceptible of operation, the life of the child must be considered, but if the progress of the growth is such that the mother rapidly becomes cachetic, thus compromising the fetal vitality, pregnancy should be interrupted. Palliative treatment only should be instituted. Cæsarean section at term may be done; but when the

uterus is left there is danger of septicæmia, and consequently Porro's operation is the one of choice if the circumuterine tissues are not infiltrated to such an extent as to render this procedure dangerous.

The Treatment of Cases of Carcinoma Uteri not Justifiably Treated by Radical Operation. By Dr. Albert H. Tuttle.

Caisson Diseases. Nephritis with Orbital Hæmorrhage. Pneumococcus Joint Infection. Tumor of Thyreoid. By Dr. F. C. Shattuck.

Tumor of Neck and upper Part of Thorax. Simple Fracture of both Patellæ. By Dr. C. B. Porter.

Chronic Obstruction of the Inferior Vena Cava. By Dr. R. H. Fitz.

American Medicine, April 19, 1902.

Dry Points versus Glycerinated Virus, from a Bacteriological Standpoint. By Dr. M. J. Rosenau.—The author records a series of experiments in which, out of forty-one dry points examined, an average of 4,807 bacteria to the point was found. In fifty-one glycerinated tubes and capsules, an average of 2,865 bacteria was found. This is in excess of what a good glycerinated virus should contain. This difference in numbers, the author asserts, does not justify the confidence placed in the glycerinated virus over the dry points as found upon the market. Pus cocci were found both in the dry points and in the glycerinated virus. The author believes that some of the glycerinated virus on the market is "green"—that is, not kept a sufficient length of time before it is sold. He concludes that, on the whole, we ought not to discredit glycerinated virus, but to condemn the practice of manufacturers who place an unripe product on the market. Much of the vaccine sold must have a high initial contamination to contain an average of 2,865 bacteria per tube, and it is evident that too great a reliance is placed upon the glycerin.

Ocular Affections Associated with Glycosuria, with Especial Reference to Central Amblyopia. By Dr. Walter L. Pyle.—Diabetes mellitus or other disturbance of the carbohydrate metabolism may affect any portion of the visual apparatus. The ocular changes may be produced by chemical or physical means, or indirectly through the associated general debility. Central amblyopia may exist in glycosuria entirely independent of the toxic influence of alcohol and tobacco, or in patients addicted to the habitual use of these substances, this may be the prominent factor in causation. In these cases the initial lesion may be in the ganglion cells of the retina; the inflammation of the "papillomacular fibres" of the temporal half of the optic nerve being secondary to the retinal changes. In chronic cases of glycosuria, with the exception of cataract, the ocular symptoms are often present when the constitutional and urinary symptoms are not marked. The ocular symptoms may be the first to lead the patient to seek medical advice. Therefore glycosuria should be suspected in the following conditions: (a) Premature presbyopia. (b) Unexplained mydriasis or cycloplegia. (c) Sudden change in the refraction; particularly, marked development or increase of myopia past middle age, without catarac-

tous changes. (d) Intractable iritis. (e) Cataract in young or middle-aged persons. (f) Retinitis, particularly of the hæmorrhagic variety. (g) Unexplained optic-nerve atrophy. (h) Sudden and marked amblyopia, particularly central, without visible fundus changes.

Sinus Thrombosis Depending on Middle-ear Disease, with Report of a Case following Acute Sore Throat. By Dr. George F. Cott.—This case the author considers to be one of thrombosis following osteophlebitis, which, in turn, was caused by some infection from the throat setting up an inflammation of the middle ear. The bone, being in contact with the sinus, infected that, and consequently caused a thrombus to form. There was no pus in the antrum, nor was pus discharged from the ear.

Tonsillar and Peritonsillar Suppuration. By Dr. Henry J. Hartz.—The obstruction of the orifice of the supratonsillar fossa and the orifices of the crypts of the tonsils predisposes to circumtonsillar suppuration directly, and any vulnerable part of the organism remotely. Early incision should be done at the point of origin, which is usually within the supratonsillar fossæ or within the crypts of the tonsils. Chronic latent tonsillar abscesses may initiate an infection developing pneumonia, pleurisy, pyæmia, or septicæmia. The coccus variety of germs may be temporarily encapsuled within a wall of connective tissue. Articular rheumatism, consecutive to tonsillar inflammation, is a suppurative process produced by invasion of cocci through lymph or blood channels. Uricacidæmia does not cause suppuration, but may predispose to it.

A Fatal Case of Acute Primary Infectious Pharyngitis with Extreme Leucopenia. By Dr. Philip King Brown.

Hæmostasis in Disarticulation of the Hip Joint. By Dr. John Glendon Sheldon.

Maxillary Antral Suppuration, with Report of a Case. By Dr. Linn Emerson.

Medical Record, April 19, 1902.

Instances of Spontaneous Cure in a Leper Family. By Dr. W. Douglas Montgomery.

A Contribution to the Study of Peritonsillar Abscess. By Dr. Donald M. Barstow.—The author draws attention to a plan of treatment that he has found of value in a number of instances. Its object is to open up the supratonsillar recess so widely that it will drain itself freely, repair its diseased mucous membrane, and cease to be a catch-all for germs and débris. After cocainization, a curved incision is made with a bistoury from above downward, dividing the plica triangularis at its base from the anterior pillar. Next, with a Myle's tonsil-punch, the entire upper part of the tonsil is removed piecemeal, together with a part, or the whole, of the plica triangularis. If the tongue is smartly depressed, the patient in gagging turns the stump of the tonsil forward toward the operator, and the operation can be finished step by step under his eye.

Mind and Body. By Dr. J. Allen Gilbert.—In the final analysis, to explain the relation of mind and body is the same problem as to explain the relation of one mind or thing to another. We can do nothing

more than note, compare, and make deductions from the data derivable from each. All explanation begins and ends in the unexplained. It is absurd to make mind a product of nerve tissue. The fact that there is relation, i. e., action and reaction, between body and mind brings both within the realm of the same sort of activity, and inasmuch as man has within himself elements which stamp him as moral, one cannot help carrying similar elements over into that which is "other than me," even though absolute proof may be wanting.

On the Penetration of the Human Body by Ordinary Actinic Light. By Dr. William S. Gottheil and Dr. Milton W. Franklin.—The authors assert that light, in proper concentration from a source of sufficient actinic power, can be made to penetrate the entire thickness of the human body, including both surfaces of the skin; hence all the internal organs are accessible to its influence. The proof of the penetration of actinic light to and through the internal organs, apparently opens a field for its successful employment as a therapeutic agent in internal maladies, in view of its admitted efficacy in a number of external affections.

Suprapubic Cystoscopy. By Dr. Donald Kennedy.—Occasionally we meet with a case, as in the present instance, in which it is impossible to introduce a cystoscope, stone-searcher, or other diagnostic instrument, and, in these cases, the author believes that it is better to attempt suprapubic cystoscopy than to choose an operation regardless of intravesical conditions.

Asepsis in Dental Surgery. By William J. Lederer, D. D. S.

The Indications Calling for Operative Interference in "Gallstones." By Dr. Carl W. Strobell.

Death following an Enema. By Dr. Thomas Hayes Curtin.—This report strongly emphasizes two points: (1) The dangers of enemata as used by inexperienced nurses and by the laity; (2) the proneness of the medical profession to account for most abdominal disturbances by looking to the much-abused appendix.

Bile Burns in Anæsthesia. By Dr. Frederic Griffith.

A Case of Respiratory Tinnitus. By Dr. Philip D. Kerrison.

Journal of the American Medical Association, April 19, 1902.

The Ætiology and Spread of Typhoid Fever. By Dr. Victor C. Vaughan.

A Synopsis of the Sanitary Census of Manila. By Dr. Harry L. Gilchrist.

Agreement between the History of Yellow Fever and Its Transmission by the Culex Mosquito (Stegomyia of Theobald). By Dr. Charles Finlay.—The endemic foci of yellow fever in America, from the pre-Columbian times to the beginning of the seventeenth century, were comprised within a zone between the twentieth and ninth parallels of north latitude, limited by the Leeward Islands on the east, and by the Atlantic coast of the American continent on the west. During the seventeenth cen-

tury the northern limit reached the twenty-third parallel, and the southern limit, in 1850, reached Rio Janeiro. The transportation of the yellow fever mosquitoes appears to have been of frequent occurrence, and to it must, probably, be attributed the coincidence of the severe epidemic of the so-called *modorra pestilencial* in Santo Domingo, in 1494, with another very fatal epidemic of the same name in the Canary Islands in the same year. The range of the Andes and its prolongation along the Isthmus of Panama and Central America appears to have stood as a barrier, protecting to some extent the western coast of America against contaminated mosquitoes. This obstacle, the author fears, will disappear when the Panama or the Nicaragua Canal comes to be opened.

The Diagnostic Value of Tuberculin. By Dr. C. M. Wood.—The author's observations indicate that tuberculin, in doses of .005, carefully increased when necessary to .01, produce no bad effects in simple or complicated tuberculous or non-tuberculous cases. The characteristic tuberculin reaction is shown by a rise of at least two degrees in temperature, reaching its height in from six to thirty-six hours after the injection, typically at the eighteenth hour, and accompanied by at least two of the following symptoms: Chilliness, headache, nausea, and muscular pains. The tuberculin test ranks in value with the Widal typhoid-test, since, in the former, the technics is simpler; the materials are more readily obtainable and more permanent; the danger is no greater, and the information obtained is scarcely less reliable.

The Paraffin Injection Treatment of Gersuny, with a Report of Two Cases. By Dr. Rupert M. Parker.—The author claims for this measure a permanent place in the treatment of appropriate cases.

Diagnosis, Prevention, and Treatment of Puerperal Infection. By Dr. Frederick Holme Wiggin.

Philadelphia Medical Journal, April 19, 1902.

The Haines Case and the Medico-legal Relations of Arsenic. By Dr. Henry Leffmann.—Regarding this recent New Jersey case in the light of its own details and those of a few other cases, we may say that, to prove death by arsenic, some pathological condition characteristic of its action must be shown; and it cannot now be assumed that two grains of arsenious oxide will cause death in an adult, or that the mere finding of arsenic in the abdominal viscera proves that the poison was introduced before death.

Perineal Prostatectomy. By Dr. John B. Deaver.

The Prevention of Neurasthenia after Surgical Operations. By Dr. Charles W. Burr.—The author believes that it is well, in many cases of chronic surgical disease, to put the patient to bed for several weeks before operation. Regulate her diet and overfeed her if she is, as is often the case, chronically starved. Sometimes, milk alone is the best diet; more often a generous variety of plainly cooked food is needed. Give her exercise by proper massage, and faradaic electricity. Under such a course she will gain some weight, some color will come in

the face, she will be more cheerful, the shock of operation will be less, and recovery quicker in coming. Sometimes operation will be avoided entirely.

Four Cases of Æstivo-autumnal Malarial Infection at West Point, New York. By Dr. Thomas W. Jackson.

The Bacteriology of Erysipelas. By Dr. G. E. Pfahler.—The author writes of a spherical coccus, about the size of the pneumococcus, usually occurring in pairs, often singly, rarely in chains of four. It is found outside of, and within, the leucocytes; stains readily by aniline gentian-violet, by carbol-fuchsin, and by Gram's method. It does not stain well with Löffler's alkaline solution of methylene blue, and less well with a saturated aqueous solution of methylene blue or with Gabbett's solution of methylene blue. Koch's postulates have been demonstrated with reference to this organism.

Rational Therapeutics. By Dr. Brace W. Loomis.

Twin Pregnancy in a Uterus Bipartitus. By Dr. Charles W. Doughtie.

A Case of Moist Gangrene; Its Treatment. By Dr. Lucien Lofton.

British Medical Journal, April 12, 1902.

Observations on a Series of Cases of Fracture of the Semilunar Cartilages of the Knee, together with other Cases of Operation for Loose Cartilage. By A. W. M. Robson, F. R. C. S.—The author's experience in the surgery of the knee leads him to advise, in case of any recent injury with signs of internal derangement, treatment of the case as if it were a fractured bone, first replacing it by Hey's method, and then fixing it in a splint until all effusion has subsided, afterward applying a plaster or starch bandage, and allowing the patient either to rest completely for six weeks, or to go about on a Thomas's knee-splint, then securing a return of function in the knee by massage and gentle movement. If, after this thorough treatment, there should be any tendency to weakness, operation should be unhesitatingly advised. If thorough treatment has not been carried out from the start, and the patient suffers from recurrent displacement, immediate operation is advised. The operation is one of the simplest; an oblique incision is made from the inner border of the lower end of the patella downward and backward down to, and through, the synovial membrane, so as to open the joint freely without dividing either the ligamentum patellæ or the internal lateral ligament of the knee. If the external cartilage is displaced, then the incision is of course on the outer side of the joint. On retracting the edges of the incision and flexing the knee the displacement at once becomes manifest. The loose portion of cartilage is seized and snipped off with scissors, after which the synovial membrane, capsule of the knee, and skin are separately sutured. It is both unnecessary and inadvisable to insert the finger into the joint or to syringe the articular cavity. In conclusion, the author reports 33 operative cases of internal derangement of the knee joint; of these, 21 were for fractured cartilages, 4 were for loose cartilages, and 8 were for loose bodies in the knee joint. All except one were in men, mostly quarrymen or laborers.

The Composition and Nutritive Value of Biltong. By Dr. W. D. Halliburton.—The author's experiments go to show that biltong, or sun-cured buck's flesh, is a valuable and nutritious food, and is readily digestible in both natural and artificial gastric juice.

Four Cases of Rodent Ulcer Treated by X Rays. By Dr. J. W. Pugh.—The four cases of rodent ulcer successfully treated by x rays, here reported, are placed on record because the number of such cases hitherto published is very small. The treatment is so successful that, if applied at an early stage, the ravages of this disease ought to be almost completely prevented. The danger of dermatitis is almost absent if the treatment is carried out under proper supervision, including an efficient arrangement of masks. There can be little doubt that the exaggerated fears of dermatitis that prevail, have led to this efficacious form of treatment not being utilized to the extent it deserves. As a matter of detail, sittings for rodent ulcer should not be longer than fifteen minutes. In all the cases, the full power of the coil was never used; only sufficient to produce fair penetration, as shown by the screen. There is no doubt in the author's mind that the x rays have a marked destructive effect upon lowly-organized and rapidly-growing cells.

Five Cases of Moniliform Hair Associated with Alopecia Areata. By Dr. D. Walsh.—The congenital condition of beaded hair, known as monilithrix, is one of great rarity. The author reports five cases in which hairs were found of moniliform type, although differing from the sharply defined condition of monilithrix. The latter is congenital, and runs in families, while those affected have the hair of the head short and scanty, so that they are more or less bald. Lastly, the eyebrows and any part of the hairy body may be affected. In the cases here reported, although alopecia patches were present, the hair was not short and scanty. The peculiarity was found only in hairs that had turned, or were turning, white. It did not involve hairs on other parts of the body. Lastly, the nodes were of irregular length, except in a few hairs of one case, which showed a fairly uniform beading, and the pigment had no distinct relation to the internodes—unlike monolithrix, in which the pigment is found gathered in the internodes.

Case of Complete Baldness from Alopecia Areata (in Progress of Recovery under Treatment). By B. Squire, M. B.—The author reports a case of complete baldness occurring in a man aged thirty-seven years, in which recovery is taking place under the use of an ointment consisting of thirty grains of red iodide of mercury to the ounce of yellow vaseline. This was applied to different areas of the scalp in rotation, and always produced a certain amount of irritation. It was quite six months after the beginning of treatment before any hair showed itself.

The Causation of Death during the Administration of Chloroform. By Dr. E. H. Embley (*a continued article*).—II. Vagus Inhibition as a Cause of Circulatory Failure. Summary of conclusions of the effect of chloroform upon the cardiac inhibitory mechanism. 1. A heart which has been poisoned by inhalations of chloroform, of a strength of

two per cent. and upward, can always be permanently inhibited by stimulation of the vagi with the faradaic current when the blood pressure has fallen to about 40 to 50 millimetres of mercury pressure. 2. Chloroform raises the excitability of the vagus mechanism, particularly in the early part of the administration. 3. The increased excitability of the vagus mechanism is due to the action of chloroform on the vagus centres, and the inhibitory action is more intense from being exercised upon a heart whose spontaneous excitability is diminished by the action of the chloroform upon it. 4. Chloroform administered to morphinized dogs in air containing not more than 1.5 per cent. of the vapor, after a period of mild excitation, slowly depresses vagus excitability. The excitability may again be raised with more or less readiness, according to the duration of the administration and the endurance of the vagi, by increasing the percentage strength of the chloroform, or by asphyxia. 5. Vagus inhibition is, in dogs, the great factor in the causation of sudden death from chloroform. 6. Dangerous inhibition is liable to occur whenever the strength of chloroform in the air inhaled rises above two per cent.

Lancet, April 12, 1902.

Abiotrophy. By Sir W. R. Gowers.—Under the head of abiotrophy, or abiosis, the author discusses the various bodily degenerations due to defects of vital endurance. Apart from the vitality of the organism as a whole, many parts of the body have their own vitality, and may die from many causes. A good illustration is early baldness, the essential cause of which is the failure of the life of the hair follicles of the scalp. Without complete degeneration of the follicles they may fail to produce the normal pigment of the hair, and early grayness is hardly less common than early baldness. It is a qualitative failure, an enduring defect of one function of the follicles. The muscular system furnishes very striking and instructive forms of true abiotrophy, among them the various forms of idiopathic muscular atrophy, in which there is a primary atrophy of the muscular fibres. To all these primary myopathies it has become customary to apply the term "muscular dystrophy," which term includes both simple muscular atrophy and its congener, pseudo-hypertrophic paralysis. In these, the muscular fibres, after full development, cease to maintain their nutrition, slowly waste, and ultimately perish, the connective tissues between them increasing by overgrowth. The defect in the muscular system may be not only qualitative, but also quantitative. Certain muscles may be absent from the beginning, especially the lower part of the pectoralis major and the latissimus dorsi. There is a special tendency for males to suffer in all these abiotrophies, from simple baldness to the severest neural forms. In the degenerations of the nervous system there is a slow decay of the nerve elements which have a common function—a decay limited to those, but extending throughout their entire extent. The groups of neurones which are differentiated in function differ also in their tendency to decay—in their vitality. Whenever the nerve elements waste there is always an overgrowth of the interstitial neuroglia. This overgrowth may, on first inspection, be the most conspicuous element, and its aspect has led the pro-

cess to be termed "sclerosis." When the overgrowth is started it often proceeds with an independent energy, in consequence of which it may overstep the strict limits of the degeneration and pass a little into adjacent tracts. For a long time attention was fixed upon the conspicuous interstitial tissue and it was thought to be the primary change and to start from the vessels or the membrane; hence the terms "posterior" and "lateral sclerosis."

Certain groups of abiotrophies of the nervous system may be distinguished.

The first group consists of those in which the failure of vitality occurs before, or soon after, adult life is attained. In most of these cases there is a family grouping. Of the many forms of abiotrophy in the nervous system, the most striking is the infantile form in which the spinal motor neurones are affected. This abiotic infantile atrophy commences about the end of the first year of life, and progresses so rapidly as to cause almost universal paralysis and death at the end of the fifth or sixth year. The optic nerves frequently suffer from abiotic wasting, many family groups of cases being on record. Friedreich's disease, or hereditary ataxy, consists of abiotrophies.

The second group of degenerations are those which occur at the other end of life. While general life still seems full of vigor the nutrition of some neurones fails; they slowly die. The neurones which most frequently thus decay are the spinal motor neurones. According to the position of the tracts which suffer first and most, the effect shows the symptoms of spinal progressive muscular atrophy or of labio-glossal paralysis. These maladies often come on without any apparent cause, simply because the term of life for those structures is reached and they decay in a true abiotrophy. Mental change, especially simple mental failure, also often occurs under the same conditions, and no doubt from a slow degeneration of cerebral neurones which connect and combine in a way which we cannot yet perceive.

Another senile malady, paralysis agitans, must be referred to vital failure of some cerebral motor structure.

A third group remains, a large and important class of degenerations, the precise nature of which cannot be ascertained. They are the varied degenerations which occur, especially in middle life, as the result of some definite cause. The degeneration may be the result of the presence in the blood of some material which is able to enter into the constitution of the nerve elements, but is not adequate for their proper functional or structural maintenance. They may slowly recover if the supply of the noxious matter ceases. Arsenical neuritis is an example. The most common neuronc degeneration of middle life is tabes, which must be ascribed to the influence of a post-syphilitic toxine. Here the question arises as to whether a transient toxine has an influence in reducing future vital endurance. General paralysis of the insane seems, often at least, to be due to the same cause as tabes.

The discernment of these diseases, which we may call "abiotic," the recognition of the symptoms, the course, and the conditions which indicate them, are of extreme importance, and may save one from

many errors, and prevent many mistakes, both in prognosis and treatment.

Some Abnormal Psychical Conditions in Children. By Dr. G. F. Still.—(The first of the Goulstoman lectures.)—The author sums up as follows: A morbid failure of moral control is not uncommon in children with general impairment of intellect—there is, in fact, a congenital limitation of the capacity for the development of moral control, associated with a similar limitation of the general intellectual capacity; that, except in the lower grades of idiocy and imbecility, where the cognitive relation to environment is absent or extremely defective, there is not necessarily any direct proportion between the moral limitation and the general intellectual limitation; that no particular type of idiocy or imbecility can be specially associated with moral defect; nor is there any evidence that any particular gross lesion of the brain is requisite to the limitation of moral control.

The Ætiology of Typhoid Fever and Its Prevention. By Dr. W. H. Corfield.—(Conclusion of the second of the Milroy lectures.)

The Surgical Treatment of Obstruction in the Common Bile-duct by Concretions, with Especial Reference to the Operation of Choledochotomy as Modified by the Author, Illustrated by Sixty Cases. By A. W. M. Robson, F. R. C. S.

On a Case of Pneumococcic Gastritis and General Infection, with some Remarks on the Infection of Mucous Membranes by Diplococcus Pneumoniæ. By A. G. R. Foulerton, F. R. C. S.

The Treatment of Gonorrhœa, with Special Reference to Bladder Irrigation. By F. S. Edwards, F. R. C. S.

An Analysis of a Series of Operations for the Extraction of Cataract. By R. H. Elliot, M. B.

Gazette hebdomadaire de médecine et de chirurgie, March 2, 1902.

Suture of Olecranon Fractures.—M. Paul Beiger describes the technics of his operation for suturing recent fractures of the olecranon by encircling the bone with a silver-wire suture, in and out of the olecranon. The operation is best adapted to young, healthy subjects, and must be performed with the most rigid asepsis. Fractures without displacement are best suited to this method of treatment. As good a result can be obtained by immobilization, but at the cost of greater time, pain, and trouble.

March 9, 1902.

Curious Multiple Congenital Deformities.—M. Albert Mouchet reports the case of a man who has the following congenital deformities: Backward luxation of both radii, forward dislocation of both wrists, posterosuperior dislocation of both hips, an incomplete forward luxation of the sternal end of the right clavicle, double flat-foot, and a scoliosis with a costal gibbous. The fingers were also markedly deformed.

Lyon médical, March 2, 1902.

Ovarian Pregnancy Lasting Eight Years.—M. R. Condamin reports the case of a woman, aged

thirty-nine years, who, in November, 1893, ceased to menstruate. She presented all the external appearances of a normal pregnancy, with a marked increase in the size of the abdomen, more on the right side than on the left. In July, 1894, she was seized with labor pains, which lasted for several days and were particularly felt on the right side of the abdomen and radiating toward the sacral region. The breasts increased in size, and for several days there was a flow of milk. These false labor pains ceased in four days and did not reappear. In two months, the menses recurred and were regular thereafter. The abdomen remained large. In November, 1901, she had a nephritic colic and simultaneously the diagnosis of extra-uterine pregnancy was made. The right ovary was the seat of the tumor and its vessels corresponded with the pedicle. The fœtus was well preserved within the cyst cavity. The author proves the correctness of the diagnosis by the integrity of the uterus and the tubes, by the absence of the ovary on the right side, and by its presence on the left side.

Researches on Scurvy.—M. Pierre Thomas and M. Albert Morel conclude that antecedents of the disease are a prolonged physiological deterioration, inanition of a special kind for some time, and poor dentition. Characteristics of scurvy are subcutaneous hæmorrhages in the form of petechiæ or ecchymoses, and tenacious and severe gingivitis, absence of changes in the character of the blood, which permits a diagnosis from purpura and hæmophilia. A physico-chemical examination of the blood shows that its serum is identical with that of normal blood. It is not, therefore, a disease of the blood.

March 9, 1902.

Chloroform vs. Ether.—M. H. Poncet concludes, in a very exhaustive review of the subject, that chloroform is more dangerous than ether. Ether does not cause primary syncope or laryngeal spasm, so suddenly fatal, as chloroform does. Etherization is simple, given alone, and is preferable to a mixed anæsthesia. It has never been proved that the pulmonary complications following the use of ether are due to the irritant action of the fumes of the ether. The author here refers to bronchitis, congestion, bronchopneumonia, pulmonary œdema, etc. The pneumonias following either ether or chloroform are, above all, he says, infections, and, moreover, pulmonary accidents are as frequent in persons operated on, who have not been narcotized, as in those who have been.

Pathogenic Substance in the Urine of Patients with Parasitic Orchitis. By M. A. Dorland.

Centralblatt für innere Medizin, March 1, 1902.

Relation between Dyspeptic Disturbances and Diseases of the Female Genitals.—Dr. August Sommer has examined a large number of women suffering from anomalies of gastric secretion who had, simultaneously, some pelvic disturbance—in the majority of instances, uterine displacements. The greater number of the patients had a gastropexia, which usually causes secretory disturbances of the stomach, but in only two instances was any improvement noted in either the genital or the gastric difficulty by the improvement of the other. The author

scarcely believes that any definite relation exists between the two classes of disease.

Münchener medicinische Wochenschrift, March 4, 1902.

Relations between Arteriosclerosis and Brain Diseases.—Dr. Windscheid speaks of the origin of arteriosclerosis (a) due to senility; (b) due to toxic agents, such as lead, alcohol, and tobacco; and (c) due to syphilis. He draws attention to the actual lesions in the brain caused by sclerotic degeneration of the arteries—hæmorrhage, softening due to thrombosis, and aneurysms, and to the functional disturbances caused by the condition, hysteria, and other similar functional diseases.

Newer Clinical Views of Arteriosclerosis. By Dr. Karl Grassman.—A review of recent views on the ætiology of arteriosclerosis. As to treatment, prophylaxis is important, and iodide of potassium is recommended. The lactate of sodium is also advised, together with the Nauheim treatment.

Hyperkeratosis Lacunaris Pharyngis. By Dr. Hans Arasperger.

Serum Antitoxicity of Alcohol.—Dr. S. Mircroli says that, if definite quantities of a certain quality of alcohol are administered, they produce a certain immunity in the blood against tuberculous protein substances, even if they do not modify the organism itself. Alcoholics show marked improvement, when they are tuberculous, after the use of Maragliano's serum. A number of facts and theories are cited to prove the value of alcohol in tuberculous subjects.

Chronic Enlargement of Bronchial Glands and Apical Tuberculosis. By Dr. Esser.

Aspirin. By Dr. S. Merkel.

Acquired Dislocation of the Scapula. By Dr. O. Bender.

Carcinoma of the Stomach, with Marked Development of Elastic Tissue. By Dr. Arthur Meinel.

Neurasthenic Crises. By Dr. A. Diehl.

Riforma medica, February 15 and 17, 1902.

On the Spasmodic Diplegias of Infancy. Lectures by Professor A. Cavazzani.—In speaking of the treatment of Little's disease the author recommends the use of the faradaic current on the lower limbs. Progressive passive and active movements, more or less complex, with or without the opposition of resistance, are also useful. Massage is of value in order to prevent deformity, to impede the muscular contractures, and to favor the reflex development of voluntary responsiveness in the muscles.

February 18, 19, 20, and 21, 1902.

On a Second Series of Five Cases of Cerebral Tumor. By Dr. Orazio D'Allocco.—The cases reported were as follows: (1) A gliosarcoma of the corpus callosum and of the centrum ovale of both hemispheres; (2) a hæmorrhagic diffuse gliosarcoma of the corpus callosum and of the centrum semi-ovale of both hemispheres; (3) a sarcoma of the left Rolandic region, trephining, removal of the tumor, and relative cure; (4) tuberculosis of the

right hemisphere of the cerebellum; (5) a glioma of the whole frontal lobe.

February 22, 24, 25, and 26, 1902.

Gastro-intestinal Intoxications and Infections in Children. By Dr. M. L. Concetti.—The author considers the various features of the pathogenesis of gastro-intestinal infection in children, and gives the results of a series of experiments conducted in his clinic, with a view of establishing a method of serum diagnosis for colon-bacillus infection. Out of 361 serum tests, 260 were positive. The colon bacillus, isolated from the fæces of children affected with enterocolitis, was always agglutinated, not only by the serum of the same individual, but also by that of children affected with the same disease. On the other hand, the reaction was always negative between the bacillus from dysenteric stools and the serum of normal children or of children affected with other diseases, or the serum of a donkey immunized by the plasmo-protein of typhoid. It was equally negative between the bacillus coli isolated from gastro-enteritis or from normal fæces and the serum of children affected with colon bacillus dysentery. Negative results were also obtained with the *Bacillus coli* in children affected with tuberculous peritonitis, malaria, etc. The specific character of the agglutinating property of the serum of children affected with colon-bacillus dysentery on the *Bacillus coli* isolated from their intestines is, therefore, demonstrated without doubt. The important practical deduction of these observations is that serum diagnosis may, perhaps, be applied to the isolation of the various germs concerned in the production of gastro-intestinal infection in children, and this, in turn, may open the way to the application of serum therapy in these cases.

Celli succeeded in immunizing asses and horses by the toxi-proteins of certain species of the colon bacillus. After a number of attempts he succeeded in preparing a colon protein which is called by the conventional terms, CO and CR, in analogy with Koch's tuberculin. After three years of treatment the donkeys could bear two grammes of the dry substance. The serum obtained from these animals was used in a number of children in the author's clinic with the following results: Of thirty-nine children affected with colon-bacillus dysentery and treated with the serum, only three died after having been admitted in a very grave condition. In a corresponding number of cases treated without serum, the mortality was thirty per cent. The serum begins to act within the first twenty-four hours, producing a general improvement in the general condition as well as in the stools. Antistreptococcus serum was given in one case in which the enteritis was due to this germ, with very satisfactory result. The great difficulty lies in the fact that the serum must be produced by immunizing against the exact species of colon bacillus or streptococcus which causes the disease to be treated.

February 27 and 28, March 1 and 3, 1902.

Histological and Experimental Researches upon the Bone Marrow and the Blood in Infectious Diseases. By Dr. Alberto Michelazzi.—The bone marrow reacts differently in the various infections, according to the age of the patient and

the nature of the infection. The histological features of the medullary reaction do not differ in men from those seen in animals in the presence of the same infection. The duration of life after infection depends upon the site of inoculation. In anthrax infection, and in tuberculous infection death ensues more rapidly in animals that have been inoculated in the jugular vein or subcutaneously; less rapidly in those that have been inoculated into the bone marrow directly, or into the spleen. This difference in the course of an infection of such virulence as the two mentioned may be traced to the influence of the spleen and the marrow without, however, as yet any demonstration of the specific influence of any elements constituting these tissues.

Roussky Archiv Patologiyi, Klinicheskoy Meditsiny, i Bakteriologiyi, February 28, 1902.

On the Injurious Influence of Chronic Alcoholism upon the Development of the Organism and of the Brain. By Dr. Livanoff.—The development of the organism and of the brain is markedly interfered with by chronic alcoholism. Chronic alcoholism in youth impedes the development of the organism and of the brain much more markedly than in more advanced years. The diminution in weight may reach 60 per cent., and is more marked in persons who become habituated to drink in early age. The dimensions of the brain are diminished in all directions from 8 to 12 per cent., and the anteroposterior diameter participates to the smallest degree in the general retardation of development. The convolutions of the brain are markedly effaced, but the development of the hypophysis is retarded less than that of any other part of the brain. The bony envelope of the brain is also more or less underdeveloped. In the alcoholism of the young, a dose of 2 grammes of alcohol for each kilogramme of body-weight, diluted two thirds with water, may be considered sufficient to produce these effects on the development of the brain.

On the Pathology of Gastric Hæmorrhages. By Dr. N. N. Michailoff.—The causes of hæmorrhage in the stomach may be, in the first place, ruptures of aneurysms into the organ, ulcers of the stomach, varicose veins of the lower segment of the œsophagus (in cirrhosis or cancer of the liver), round ulcers of the œsophagus, varicose veins in the stomach, miliary aneurysms of the gastric walls, congestion of the stomach due to heart disease, to some forms of poisoning, typhoid fever, uræmia, grave jaundice, abscesses of the liver, acute suppurative cholecystitis, and acute septicæmia. Cases of hæmoptysis have also been reported in appendicular inflammation, in the post-operative stage of gastric operations, in pneumonia. Tuberculous ulcers of the stomach, syphilitic ulcers of the stomach, and a series of other conditions which may be termed idiopathic hæmoptysis are also causes of gastric hæmorrhage. Idiopathic hæmoptysis occurs in hæmophilia, chlorosis, hysteria, and as vicarious menstruation. (*To be concluded.*)

The Initial Stage of Locomotor Ataxia and its Treatment by Re-educating the Muscles. By Dr. Grebner.—The author analyzes 168 cases of locomotor ataxia, of which 62 were treated. He finds that there are no cases of locomotor ataxia without mus-

culo-articular hypæsthesias, and the degree and the localization of this hypæsthesia generally corresponds to that of the ataxia. Articular hypæsthesia almost always begins in the distal articulations of the extremities and progresses toward the central ones. In the initial stage the joints of the foot are almost always involved, while those of the thigh are not. The initial stage (when the patient can still walk without a cane) is characterized chiefly by a tendency on the part of the patient to avoid exerting the hypæsthetic joints. In hypotony of the muscles, Raymond's method of treatment, that of re-educating the muscles, is, more properly speaking, a re-education of the remainder of articular sensibility and of the sense of sight, as auxiliaries to orientation in space. In a number of cases it is the sense of sight particularly that comes to replace the loss of articular sensibility. In these cases there is an improvement in the ataxia so long as the eyes are kept open, but when they are closed the walk becomes unsteady. The author uses, as Fraenkel does, a series of lines and designs drawn upon the floor of the exercise room of his sanatorium, and has but slightly modified the technique of Fraenkel in this treatment. He generally combines exercise with baths and massage of the back and of the lower extremities. Sometimes he adds suspension.

Roussky Vrach, March 16, 1902.

On Anastomosis between Nerve Cells. By Professor M. D. Lavdovsky.—The question as to whether there exist connections between nerve cells is an important one from the viewpoint of physiology in general, and from that of the neurone theory in particular. Numerous researches on this question have as yet not conclusively demonstrated the truth or the falsity of the theoretical connections between nerve cells. The recent work of Carrière and Dogel, who attempted to prove the existence of such connections, is by no means conclusive. The question is, What do we understand by the expression "connection" or "anastomosis"? There are five possibilities: True or organic connections; apparent, or, better, accidental connections; true connections, which are due to the fact that the cells have not yet completely separated; artificial connections, due to the presence of an intermediate substance (these are not found between nerve cells); and anastomotic connections, *i. e.*, connections by contact without continuity. The author believes that the latter is the method of connection between nerve cells, the contact or contiguity between the dendrites taking place at acute or obtuse angles, or even in a straight line. He also criticizes the theory of Max Schultze regarding the fibrillated structure of the axone, and says that better methods of fixation and more accurate observations are necessary to clear up this question.

On Penetrating Punctured and Incised Wounds of the Abdominal Cavity. By Dr. B. K. Finkelstein.—An analysis of eighty cases of abdominal wounds, with a view to determining the relative value of the expectant and the operative treatment. (*To be continued.*)

A Case of Communication between the Aorta and the Pulmonary Artery. By Dr. V. F. Or-

lovsky (*concluded*).—The diagnosis of persistent Botallian duct had been made during life, and, on autopsy, it was found that there was an opening of communication between the aorta and the pulmonary artery caused by ulcerative endocarditis. In addition, there were an acute purulent meningitis, a chronic adhesive pleurisy, yellow consolidation of the lungs, acute and chronic hyperplasia of the spleen, chronic perisplenitis and perihepatitis, cirrhosis, and nephritis. The opening of communication was situated at the anterior and lower wall of the descending portion of the aorta, two centimetres below the left subclavian artery. This opening, which was of the size of a goose-quill, led directly into the first part of the right branch of the pulmonary artery. Therefore, according to its situation, this opening corresponded to the Botallian duct. No other case of this kind has heretofore been reported.

The Relation of the Bacillus of Diphtheria in Man to the Bacillus of Bird Diphtheria. By A. M. Maksutoff.—The bacillus of bird diphtheria is classed by consensus of opinion among the pseudodiphtheria bacilli. A study of the bacilli isolated by culture from hens affected with diphtheria, shows that these germs present considerable differences as compared to those of human diphtheria. The author concludes, however, as the result of his investigations, that the bacillus of chicken diphtheria, while not belonging to the same species of germs as that of human diphtheria, certainly is more closely related to the latter than to the pseudodiphtheria bacilli. He has also found that Neisser's method of staining does not appear characteristic for the Klebs-Löffler bacillus, as was formerly supposed, for the bacilli of chicken diphtheria stained with this method.

Extract from the Report of the Commission Appointed to Investigate the Epidemic of Plague in Astrakhan. By Dr. V. P. Kaschkadamoff.—The measures taken to prevent the spread of the disease from the infected district of the village in which the cases of plague had occurred, included the establishment of a sanitary cordon, the use of prophylactic inoculations, and the strict isolation of the suspected persons, together with a personal inspection of all inhabitants (about a thousand in number), and a disinfection of all houses and articles supposedly infected. The cordon consisted of pickets stationed at a distance of about one third of a mile from each other. Each picket was provided with a wagon, etc., in which he lived, and was obliged to patrol his part of the cordon. Nearly the entire population of the surrounded infected district was inoculated with protective serum (Haffkine's). In all cases the usual reaction was obtained, and no unpleasant symptoms followed. The disinfection was conducted in a very thorough manner. The bodies of all those who died from the plague were burned, as well as their infected belongings and the houses in which they had lived. The other houses in the infected district were disinfected with glycoformaline gas. The medical commission had a disinfecting station where the members changed their clothing completely after visiting an infected house, and dressed in sterilized clothing. In this plant, also, glycoformaline gas was used for the disinfection of the clothing of the physicians and attendants.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

XIV.—How do you treat chronic ulcers of the leg? (Answers due not later than July 10, 1902.)

XV.—How do you treat rhus poisoning? (Answers due not later than August 11, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Henry L. Shively, of New York, whose paper appears below.

PRIZE QUESTION NO. XI.

THE TREATMENT OF PNEUMONIA IN CHILDREN.

By HENRY L. SHIVELY, M. D.,

NEW YORK.

In the treatment of pneumonia in children my main reliance is placed upon a large initial dose of calomel, a hot mustard bath at the beginning, and the continued administration of creosote until deferescence occurs. All other treatment is symptomatic and supporting. There is good reason to believe that in some cases, if given sufficiently early, a pneumonic process may be aborted by calomel, and in most cases the course and duration of the disease appear to be favorably influenced by this drug. Children bear mercurials well, and it is my custom to give in one dose the number of grains corresponding to the age in years of the child. Thus, for a child five years old the dose would be five grains. If within twelve hours there is not a free evacuation of the bowels, this single dose of calomel should be followed by a saline—Rochelle salts or citrate of magnesium. As soon as possible the child should receive a full bath as hot as the back of the hand will comfortably bear. In the bath two tablespoonfuls of mustard are stirred, and the patient is kept im-

mersed for ten or fifteen minutes until the entire surface of the body is quite red. The hot bath given early in the disease, by dilating the superficial vessels, will relieve the congestion and hyperæmia which it may be assumed are a part of the pathological process at the beginning of a pneumonia, and may thus exercise some specific effect upon the progress of the disease. After the bath the child is put to bed in a well-ventilated room kept at a temperature not above 70° F.

Creosote I usually combine with ammonium iodide, which is a good stimulating expectorant, and strychnine to safeguard the heart. The following is a useful prescription:

℞ Ammonium iodide. ½ drachm;
Strychnine sulphate. ¼ grain;
Beechwood creosote. 20 minims;
Glycerin. 1 ounce;
Solution of ammonium acetate, enough
to make. 4 ounces.

M. S. A teaspoonful every two hours. This is for a child five years old and should be modified according to the age of the patient. Creosote carbonate may also be used, but is, I believe, inferior to pure beechwood creosote where the latter is well borne. Hyperpyrexia is controlled by cold sponging or the full bath at 70° to 85° F. During the bath the child should be briskly rubbed to obtain a good reaction. The bath and friction will cause the child to cry, and are thus an efficient means of securing deep respirations. The forcible expirations induced by crying also clear the smaller bronchial tubes of exudates and prevent atelectasis. The effect of the baths is also seen in an improved heart action and relief of cyanosis when it is present. The temperature should be taken every three hours, and whenever it exceeds 104° F. another bath should be given.

Except in mild cases, alcohol will be necessary, and it is best administered in the form of whiskey—the amount being regulated by the state of the pulse, temperature, and mental condition of the patient. When there is high fever with delirium, it should be given freely. When the second sound of the heart becomes weak or muffled and indistinct, the sign of a flagging right heart, nitroglycerin is indicated, as first suggested and taught by Dr. Andrew H. Smith, of New York. Sudden failure of the heart may be tided over by hot enemata of normal salt solution, to which a little whiskey may be added. This is a measure which should always be tried; the results are often most gratifying and are prompter and more lasting than those of hypodermic stimulation. Digitalis is too slow in its action in pneumonia, and is also undesirable on account of its effect in increasing arterial tension. Caffeine or strophanthus is better when a cardiac tonic other than strychnine, alcohol, or nitroglycerin is indicated.

The child should be encouraged to drink as much water as possible. This, with the baths, will usually keep the kidneys performing their function properly. Should there be any considerable diminution in the amount of urine passed or much albuminuria or many casts present, mild diuretics, such as the acetate of potassium or spirit of nitrous ether, may be given. If uræmic symptoms develop, the wet hot pack will be necessary to promote diaphoresis.

The diet should be entirely fluid, and nothing can be better than milk, either peptonized or with lime water. Pneumonia is a disease of short duration, and in a previously healthy child the question of nourishment is not so important as in longer-continued and more wasting diseases. Care should be taken not to overload the stomach and bowels, which when distended may further embarrass the labored respiration and struggling heart by upward pressure on the diaphragm. When delirium or convulsions occur, the ice cap should be applied to the head and bromides be given. Opium in any form should never be administered to a child with pneumonia, and antipyretics, if used at all, should be given sparingly and with the greatest caution.

When the patient is convalescent, tonics of cod-liver oil, iron, and wine are indicated, especially after recovery from bronchopneumonia, in which resolution is apt to be slower than in the lobar form of the disease. Removal to the country or seaside is desirable after convalescence is well established.

303 AMSTERDAM AVENUE.

THE IMPORTANCE OF AN OCCASIONAL EXPECTORANT.

Dr. Helen I. Doherty, of Boston, says:

In cases of pneumonia among children, not much can be done for the disease, but a great deal can be done for the patient. Every case of bronchitis should receive careful and early attention, for every attack should be regarded as a possible forerunner of pneumonia.

The patient should be isolated in a large, well-ventilated room. Infants can be held in the nurse's arms part of the time, but older children should be kept in bed. In the case of the latter, a frequent change in position should be remembered, turning from the back to the side. An oiled silk jacket should be worn throughout the attack, and if the case is seen very early, hot flaxseed poultices may be used, otherwise they are of no benefit.

In the early stages we can only keep the bowels open, the temperature lowered, and the patient nourished. Calomel in divided doses, one tenth of a grain, will keep the bowels in order, while nourishment, given every two hours, may consist of milk, malted milk, junket, peptonized milk, albumen

water, beef tea, and broths, not forgetting occasional drinks of water that has been boiled.

For the fever, the bath is the safest and best remedy. Given when the temperature is over 102° F., three times a day, the water being at 80° F. with part alcohol, sponging for ten minutes will reduce the temperature one or more degrees. The patient who was previous to the bath restless and nervous, with a hot, dry skin, becomes calm and cool, frequently falling into a quiet sleep.

As young children will not expectorate, a dose of ipecac should be given every second or third day to raise whatever may be swallowed.

When the pulse becomes weak, irregular, and rapid we depend upon stimulants, brandy or whiskey, one half to two ounces daily, diluted with water and strychnine, $\frac{1}{200}$ of a grain, every three hours.

If there is danger of mechanical embarrassment of the heart and respiration, counter-irritation by means of the mustard paste should be continued, and for sudden heart failure associated with pulmonary congestion, nitroglycerin, $\frac{1}{300}$ of a grain, may be given every hour for four or five doses. Oxygen also, freely mixed with atmospheric air, is administered.

In sudden attacks of general collapse, the patient should be put immediately into a hot mustard bath. strychnine and nitroglycerin being used hypodermically, with alcohol used freely.

Inhalations of creosote are best for relieving the cough, and in protracted cases creosote internally benefits greatly. A change of air is of value if the convalescence is delayed, combined with a general tonic plan of treatment, cod-liver oil, iron, and arsenic being used, whichever is especially indicated.

HEART FAILURE SHOULD NOT BE AWAITED, BUT ANTICIPATED.

Dr. Leo Jacobi, of New York, says:

Leaving aside the futile attempts at abortive and specific treatment, our management of pneumonia (croupous or lobular) still remains chiefly expectant and symptomatic. The patient must fight his own battle, and our duty is to support his strength, reinforce his resources, and guard against accidents.

The child should occupy a well-ventilated, moderately warm (about 65° F.) room. The younger the child, the warmer should the apartment be kept.

A liquid, nutritious, concentrated diet is the mainstay of our treatment. The feedings should be small, but frequent. Milk, the white of egg, custard, strong broths, meat juice, and thin gruels are at our disposal. Ice cream is a grateful alternative. Alcohol, being a food as well as a stimulant, fulfills a double indication and should be administered frequently in small quantities, preferably together with the nourishment. At no time of the disease should

constipation be tolerated, and a dose or a course of divided doses of calomel is a safe inaugural measure in our treatment.

A hydropathic compress, consisting of a large towel wrung out of cool water and snugly applied to the chest, covered with a layer of oil-silk and followed by flannel, is changed every two hours and forms the best local application. Cold wet cloths or a small ice-bag to the head act as a sedative and somewhat reduce the temperature. Excessive fever is to be met by means of cool or cold sponging of the body with alcohol diluted one half with water. If properly carried out, this measure will render a full cool bath rarely necessary for the reduction of high temperatures. The use of internal antipyretics, particularly those of the coal-tar group, is fraught with danger, and has been known to precipitate collapse. Judicious recourse to hydrotherapy will often enable us to avoid them altogether.

Cardiac debility being the cardinal danger in pneumonia, it is a grave negligence to wait until the heart is failing. Cardiac failure ought to be prevented rather than combated. Begun early in the disease, the administration of small and frequent doses of stimulants will prove more efficient than large doses when exhaustion is imminent. Caffeine in doses of from $\frac{1}{2}$ to 3 grains, according to age, or caffeine sodiobenzoate in double the quantity, or camphor in doses of from $\frac{1}{2}$ to 2 grains, every two to four hours, ammonium carbonate or, better, liquor ammonii anisatus, in the usual doses, should be given from the start. Less suitable for continuous administration, but very valuable in cardiac emergencies, is strychnine, best given beneath the skin in doses of from $\frac{1}{120}$ to $\frac{1}{60}$ of a grain for older children.

A solution of camphor in sweet almond oil (1 to 10), a syringe-ful hypodermically, to be repeated frequently if necessary, will often help to tide over a dangerous period. Digitalis in pneumonia seems to be of inferior value.

As a rule, no one stimulant ought to be employed continuously for any length of time, but rather should the various cardiac tonics be exhibited alternately.

An excellent measure in threatening collapse, especially in the bronchopneumonia of children, is the "mustard pack." A handful of mustard flour is added to a basin of hot water and stirred until the volatile oil strikes the nostrils. A towel or cloth is then soaked in the water, wrung out, snugly wrapped around the child's thorax, and covered with a piece of flannel. After fifteen or twenty minutes this application is removed. Prompt improvement in the general condition of the little patient usually follows, and is especially marked in the easier breathing. This measure may be cautiously re-

peated at intervals of not less than six hours. Intense dyspnoea is also relieved to some extent by inhalations of oxygen.

Individual symptoms, such as pain in the chest, sleeplessness, delirium, and headache, call for the usual remedies, such as a dose of Dover's powder or of a bromide, strapping the chest, etc.

The cough mixtures so generally prescribed as a routine measure, while they meet the indication *ut aliquid fiat*, often sin against a cardinal rule of therapeutics—that of *nil nocere*.

The convalescence from pneumonia should be guarded, and the danger of possible sequelæ, particularly empyema, constantly borne in mind.

(To be concluded.)

Book Notices.

The Perverts. By WILLIAM LEE HOWARD. New York: G. W. Dillingham, 1902. Pp. 5 to 338.

It is difficult to know what to say of such a book as this. It is the *ultima Thule* of "novels with a purpose." The story is that of a young scientist, the neurotic offspring of a degenerate race, who works out his own redemption on physiological principles alone, while his sisters gradually succumb to their heritage of infamy and crime. While there is very much truth in the lessons it is intended to inculcate, the work seems to us all out of proportion, not only from an artistic, but also from a scientific point of view. In a scientific treatise its material would have its proper place; but then it would not reach the laity, and so would miss the author's objective. On the other hand, as a novel, there is nothing in it to prove attractive to the salacious, while we doubt if it would benefit the healthy-minded, and still more if it would not rather weary than interest them, despite the fact that, interspersed among much scientific discourse, it contains some powerful and dramatic scenes and some of intense human interest. It abounds in fearsome expressions, such, for instance, as: "Surely such detraction of a purely lycanthropic condition could only arise from a false ascetic pietism."

It gives us vivid though carefully worded pictures of the saloon, the brothel, the insane ward, and the flagellant convent, of dipsomania, morphinism, sadism, and scientific murder—in the last of which connections we cannot but protest against the mischief that might ensue from the dissemination in detail of such criminal possibilities as lie hidden in the science of bacteriology. The one charming feature of the book is the picture of Oberea, the hero's lovable wife, to whose semibarbarian ancestry is ascribed her wholesome normality.

The author's motives, however, are beyond suspicion. He apparently believes honestly that the people at large must be made to study the science of heredity at all costs and whether they will or no; and he has chosen this way to compel their attention. We, on the other hand, think that normally minded laymen will refuse to dive into the recesses of the morbid, unless some individualistic cause compels them to do so, for the same reason that, while all admit the necessity for the scavenger, few to whom

less nauseous occupations are open become scavengers from choice. As we close the book, the words of Macbeth involuntarily ring in our ears—

"My fell of hair

"Would at some dismal treatise rouse, and stir

"As life were in't. I have supped full with horrors."

Syphilis and other Venereal Diseases. By H. DE MERIC, Surgeon to the French Hospital, London, etc. New York: William Wood & Company, 1901. Pp. vi-132.

The alleged reticence of English writers in presenting their clinical experience in venereal affections in book form was the incentive that prompted this book, of moderate scope, dealing with the most common facts of these maladies. The narrative is didactic, but somewhat too sketchy to be anything like a complete exposition of the subjects, and there is a decided lack of a pathology expressed in scientific terms. Considerable space is devoted to the distinction between hard and soft chancres and to the niceties of their treatment. The existence of such an affection as *bubon d'emblée* is denied in the strongest of terms.

The author repeatedly emphasizes the variance in the results of treatment in ambulant patients from those domiciled in hospitals. This thought is embodied in the concluding chapters on the prophylaxis of syphilis and the public disease act, wherein he pleads for a hospital, the earnest and kind care of which toward the venereally afflicted would be a most potent factor in mitigating the spread of this evil.

The strong side of this book is syphilis, not gonorrhœa, which we are told to believe can be readily cured within from four to six weeks by the use of iodoform bougies and sulphate of zinc injections. While the gonococcus as the cause of the disease is conceded, yet the treatment is not outlined along antibacterial lines, and consequently silver and its numerous albuminous combinations are not considered. In the demand of time requisite for the proper execution of Janet's irrigations the author sees the greatest drawback to their use in out-patient practice. It would seem to us from such an utterance that the author by not recognizing the fine distinctions between anterior and posterior urethritis, subjects himself to criticism. Save for these few digressions, the teaching proffered is clinically sound, but representative of no particular school.

A Practical Guide to the Administration of Anæsthetics. By R. J. PROBYN-WILLIAMS, M. D., Senior Anæsthetist and Instructor in Anæsthetics at the London Hospital, etc. London, New York, and Bombay: Longmans, Green, & Company, 1901. Pp. 211.

The title of this book truly mirrors its contents, and we are prepared to say that the subject is handled in a decidedly practical manner, one void of that prolixity so characteristic of the more comprehensive works. The topics are grouped under the headings General Considerations of the Administration of an Anæsthetic and Difficulties and Dangers of Anæsthesia, followed by a description of the most

commonly used anæsthetics, ether, chloroform, nitrous oxide, and the A. C. E. mixture.

The allegations made for each are precise and free from bias, though it is evident that the widest use is accorded to ether alone or in combination with nitrous oxide. That chloroform should only be given by the "drop method" is not duly emphasized, for we know that thus only can the danger of its cumulative action be minimized. The author's only admonition as to the administration of chloroform is with reference to the danger of its causing burns of the face and conjunctiva. The technics of ether anæsthesia is intimately linked with the description of the Clover inhaler, which has marked an era in ether narcosis in England, and is rightly gaining ground with us. Local anæsthesia with cocaine is briefly dwelt upon.

To the novice in anæsthesia, this concise exposition of its first principles offers an excellent foundation on which to build.

BOOKS, ETC., RECEIVED.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, in the Medico-Chirurgical College of Philadelphia, etc. Fifth Edition, thoroughly Revised. Philadelphia: F. A. Davis Company, 1901. Pp. viii-1143. (Price, \$5.)

Genito-Urinary Diseases and Syphilis. By Henry H. Morton, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospitals, etc. Illustrated with Half-tones and Full-page Color-plates. Philadelphia: F. A. Davis Company, 1902. Pp. xii-372. (Price, \$3.)

Manual of Childbed Nursing, with Notes on Infant Feeding. By Charles Jewett, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. New York: E. B. Treat & Company, 1902. Pp. 5 to 84. (Price, 80 cents.)

Studies of the Psychology of Sex. Sexual Inversion. By Havelock Ellis. Philadelphia: F. A. Davis Company, 1901. Pp. xi-272. (Price, \$3.)

The Practical Medicine Series of Year Books, comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School, etc., with the Collaboration of William Healy, A. B., M. D., March, 1902. Chicago: The Year Book Publishers. Pp. 3 to 212. (Price, \$1.25.)

Selected Essays and Addresses by Sir James Paget. Edited by Stephen Paget, F. R. C. S. New York and Bombay: Longmans, Green & Company, 1902. Pp. viii-445.

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Fifty-third Annual Report of the Board of Trustees and Superintendent of the Central Indiana Hospital for Insane, for the Fiscal Year ending October 31, 1901.

Annual Report of the United States General Hospital, Presidio, California.

Twenty-sixth Annual Report of St. Francis Hospital, New York, for the Year ending December 31, 1901.

Quarterly Report of the Board of Health, of the Department of Health of the City of New York, for the Quarter ending September 30, 1901.

Quarterly Report of the Medical Officer of Health of Islington. Fourth Quarter, 1901.

New Inventions.

A NEW INSTRUMENT FOR THE ESTIMATION OF THE SPECIFIC GRAVITY OF BLOOD.

By A. J. ROSENBERG, M. D.,

KING'S PARK, N. Y.

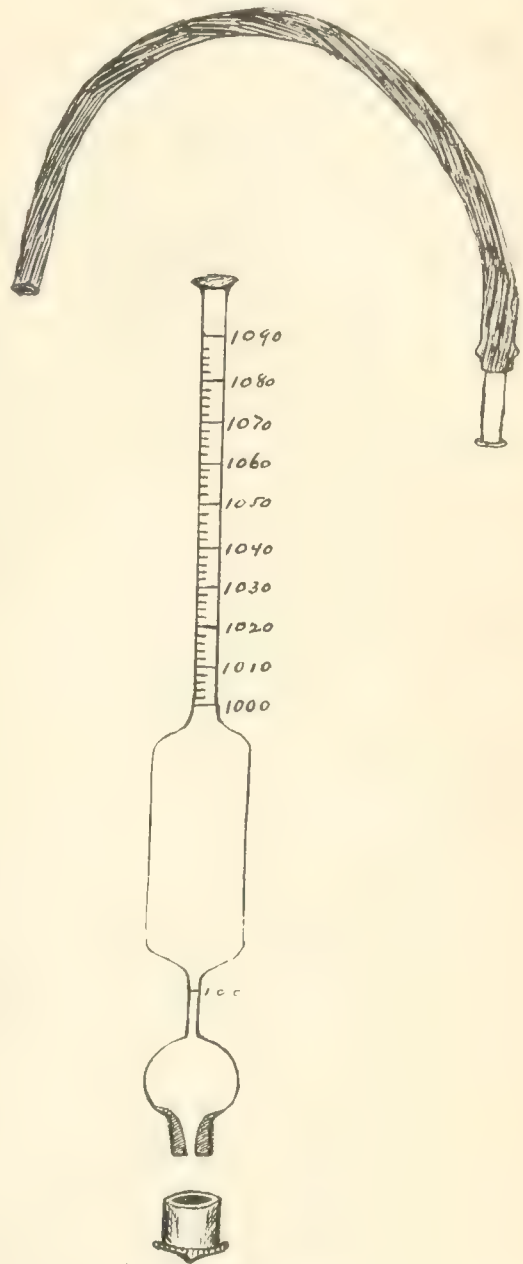
The specific gravity of the blood is known to be in most cases a reliable index of the percentage of hæmoglobin; the exceptions are cases of dropsy, leucæmia, pernicious anæmia, great hyperleucocytosis, and perhaps a few other rare conditions.

The instrument shown in the accompanying illustration will, I think, facilitate somewhat the technique of estimating the specific gravity of blood, and will perhaps introduce this test into more general use in the hospitals, clinics, and among private practitioners, in which case its utility will be evident.

The principle upon which this instrument is based is the same as that involved in ordinary hydrometers. It consists of a graduated stem, open above, surmounting the air bulb, beneath which is another bulb having a capacity of exactly one cubic centimetre; this latter bulb terminates below in an opening which can be closed by a metal screw cap. The screw cap weighs about 3 grammes, and by its weight holds the instrument in a vertical position while it is immersed in water.

To use the instrument a puncture is made in the lobe of the ear with a large surgical needle, and the blood is sucked up into the lower bulb to the 1 c. c. mark; the puncture must be large enough to allow of the escape of a sufficient quantity of blood without the necessity of applying pressure; the opening of the bulb is then carefully wiped and the screw cap put on. The instrument is now immersed in pure water at ordinary room temperature, and the reading is taken. Of course, the greater the specific gravity of the blood, the lower will the instrument sink.

The specific gravity of other liquids can be determined by the use of this instrument, when a sufficient quantity cannot be obtained for use with the



Dr. Rosenberg's Instrument for Measuring the Specific Gravity of the Blood.

ordinary hydrometer. If the liquid is too heavy or too light it may be diluted with a known quantity of pure water.

Miscellany.

The Rocky Mountain Industrial Sanatorium, at Denver, Col., is, we are informed, now open to worthy patients properly recommended, who can be received either as pay patients, or to take part in the remunerative industries. The ideal season for tent life has commenced in Colorado, and many patients at the sanatorium are using tents, in preference to rooms, with most satisfactory results. This institu-

tion was incorporated under the laws of the State of Colorado for the care and treatment of those afflicted or threatened with tuberculosis, is intended only for those in the early stage of the disease, and is conducted upon the industrial and cooperative plan. When so desired, patients will be given an opportunity to reduce their expenses by taking part in the remunerative industries connected with the institution. The amount of compensation allowed depends on the strength and ability of the patient.

The board of trustees is as follows: President, A. M. Holmes, M. D.; vice-president, Rev. Richard E. Sykes; treasurer, F. B. Gibson; secretary, Ralph Hartzell; members, W. A. Hover, T. C. Scott, J. A. Sewall, M. D., Ph. D., C. L. Myers, and E. E. Whitted; business manager, H. B. Schofield; medical director, Dr. A. M. Holmes.

The Bacteriology of Ophthalmia Neonatorum.—Dr. E. Andrade (*American Journal of the Medical Sciences*, February) says that it is a conceded fact that the gonococcus is not the only cause of ophthalmia neonatorum. The diplococcus, the streptococcus, the *Bacillus coli communis*, and the *Micrococcus aureus* also produce purulent conjunctivitis in the new-born. The last statistics of Groenouw show that in one hundred cases of ophthalmia neonatorum the gonococcus was present in only forty-one. All observers agree, however, in the opinion that when the disease is due to the gonococcus it usually assumes a very severe character. Among the several micro-organisms described in connection with purulent conjunctivitis of the new-born the bacillus of Weeks and the diplobacillus of Morax and Axenfeld have never been mentioned. He then reports an unusual case of ophthalmia neonatorum caused by the last-named bacterium, which as a general rule is only found in cases of subacute catarrhal conjunctivitis, and adds: "The history of this case will show, I hope, the importance of making an early bacteriological examination in all cases of ophthalmia neonatorum, and demonstrates also the fact that the diplobacillus described by Morax and Axenfeld as the cause of subacute catarrhal conjunctivitis can produce other forms of infectious ophthalmia."

The Lying-in Room as a Salon.—The custom which still obtains among the poorer classes in many countries of making the chamber of a lying-in woman a place of social entertainment, appears from a citation from the *Polyclinic* for March, to be probably a survival of a custom at one time sanctioned by the example of the "highest circles." The *Polyclinic* cites the following passage from Brydone's *Tour through Sicily and Malta*, written toward the end of the eighteenth century: "There are here a number of particular conversations every night, and what will a good deal surprise you, they are always held in the apartments of the lying-in ladies, for, in this happy climate, child-bearing is divested of all its terrors, and is only considered as a party of pleasure. This circumstance we were ignorant of until to-day morning. The Duke of Verdura, who does us the honour of the place, with great attention and politeness, came to tell us that we had a visit to make that was indispensable. 'The Princess Paterno,' said he, 'was brought to bed last night, and

it is absolutely incumbent on you to pay your respects to her this evening.' At first I thought he was in joke, but he assured me he was serious, and that it would be looked upon as a great unpoliteness to neglect it. Accordingly, we went about sunset, and found the Princess sitting up in her bed, in an elegant undress, with a number of her friends around her. She talked as usual and seemed perfectly well. This conversation is repeated every night during her convalescence, which generally lasts for about eleven or twelve days. This custom is universal; and as the ladies here are very prolific, there are, for the most part, three or four of these assemblies going on in the city at the same time."

The Treatment of Prostatic Hypertrophy.—Dr. A. C. Bernays (*Interstate Medical Journal*, February) discusses the various methods that have been practised for dealing with this condition. Of his own operation, which he has called myomectomy, he says that it does not aim to remove the whole prostate, but merely those parts of it which have impinged upon the vesical end of the urethra, and have interfered with the function of the bladder in such a manner as to prevent complete evacuation of its contents. Myomectomy is a perineal partial prostatectomy, and its technique is practically the same as that of the perineal prostatectomies which are now before us in recent surgical literature. In order to perform a myomectomy of the prostate the capsule of this organ need not be removed.

Dr. Bernays's conclusions are as follows: 1. In old cases of hypertrophied prostate, palliative measures are sometimes preferable to radical measures. 2. Drainage of the bladder by the suprapubic route is preferable to perineal drainage in cases of cystitis, because the suprapubic method gives the sphincter apparatus more complete rest than the perineal buttonhole or fistula. 3. In cases of hypertrophy in which the patient's health has not been injured by chronic cystitis or nephropylitis, the dangers of myomectomy or perineal prostatectomy are minimal, and in these cases a radical and satisfactory functional result can be achieved by myomectomy. 4. Bottini's operation must be regarded as a palliative measure, intended to enable the patient to evacuate his bladder more completely than before. It will probably have a very limited usefulness and will be crowded out of practice as the technique of myomectomy or perineal prostatectomy is perfected. 5. Bottini's operation is a dangerous operation and must not be undertaken unless most careful measurements have been made. It is often followed by extravasation of urine into the perinæum, and perineal section must be done in order to save the patient's life so soon as swelling of the perinæum is noticed. 6. Myomectomy done through a perineal incision is the operation which promises the best results, and is the operation of choice. It is applicable to the greatest number of cases in which permanent cure may be expected, the kidneys being physiologically sufficient and unimpaired. The greatest dangers associated with prostatectomy are produced by injuring or removing parts of the capsule of the organ. Myomectomy must be done without this dangerous manipulation. So long as the capsule is left intact, there is but little hæmorrhage, and the danger of infiltration of urine and of sepsis is reduced to a minimum.

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WHOLE No. 1222.

Original Communications.

THE MECHANICAL AND OPERATIVE TREATMENT OF TUBERCULOUS AND OTHER

AFFECTIONS OF THE JOINTS.*

By A. M. PHELPS, M. D.,

NEW YORK,

Great difference of opinion exists in the profession in regard to the mechanical and operative treatment of joint diseases. Just when and how mechanical treatment shall be employed before operative procedures are resorted to is a mooted point. Many members of the profession believe that no suppurating joint should be interfered with surgically; others teach that mechanical treatment should be employed, and that abscesses should be interfered with only when they cause disturbance; while a third portion of the profession believes that mechanical treatment should always be employed from the beginning to the end of the disease, and that every abscess should be attacked as soon as a diagnosis is made.

This last proposition is exactly the position that I take in the matter, and have always taken. These points will be discussed a little later.

When should mechanical treatment be commenced and how should it be applied?

In answer to the first proposition, I will say that so soon as the diagnosis of joint inflammation or disease has been made, mechanical treatment should be commenced. If the patient is suffering from an acute attack with great pain, it is better that he be treated in bed for a few days until relief is afforded. Just so soon as the pain has subsided and the deformity been overcome, braces or supports should be applied. The operative treatment of such joints will be considered under another head.

What is the object of mechanical treatment?

To restrict every motion of the joint, putting it absolutely at rest and effecting extension in proper lines for the relief of intra-articular pressure. Intra-articular pressure, produced by spasm of muscle, which is always present in joint disease, results frequently in destruction of the articular cartilages and the invasion of the bony structures from the infected joint, and rapidly leads to destruction of the

entire joint, which means either amputation or excision.

The study of the mechanics of the various joints of the body is interesting, and from these mechanical principles, together with those of the action of the muscles, is determined the manner of application of extension and fixation.

And then, again, the joints of the lower extremities require infinitely more protection than those of the upper extremity, on account of the fact that these joints sustain the weight of the body during locomotion, whereas those of the upper extremities are not submitted to the same amount of trauma in

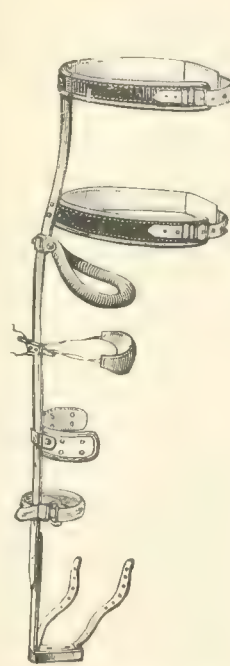


Fig. 1—Fixation Brace.

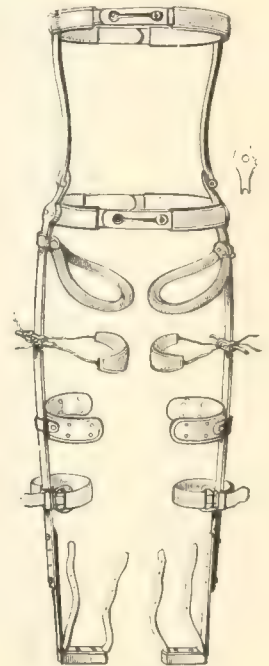


Fig. 2.—Fixation Brace.

locomotion. It is for this reason that joints in the lower extremities are protected by braces which prevent the patient from stepping upon the foot, because by so doing the articular surfaces would be driven together and the trauma resulting would precipitate more inflammatory action and disease. It is for this reason, also, particularly in children, that any form of apparatus which is applied to the lower extremities should extend at least $2\frac{1}{2}$ inches below the bottom of the foot, and should have a point of impact against the tuberosity of the ischium; and by far the best supporter is one that has for its upper point of impact a steel ring properly padded.

With an adult, who usually has sense enough not

*Read before the Medical Society of the County of New York, December 23, 1901.

to step upon the diseased limb, other forms of appliances can be used.

In hip-joint disease, extension must be made for the relief of the intra-articular pressure in a line with the axis of the neck of the femur, for the reason that the muscles affected by spasm, the glutei group and the adductor, pass diagonally across the body and act on a line with the axis of the neck of the bone, and the only way to overcome intra-articu-

extension in the line of deformity and at right angles to that line. I have always felt that the treatment of every case of joint-disease should begin by overcoming the deformity; a straight brace cannot be applied to the deformed limb successfully.

Some of my orthopædic friends advocate the curing of the joint and then afterward the doing of an osteotomy or some operation to overcome the deformity. This is all wrong, because there is hardly

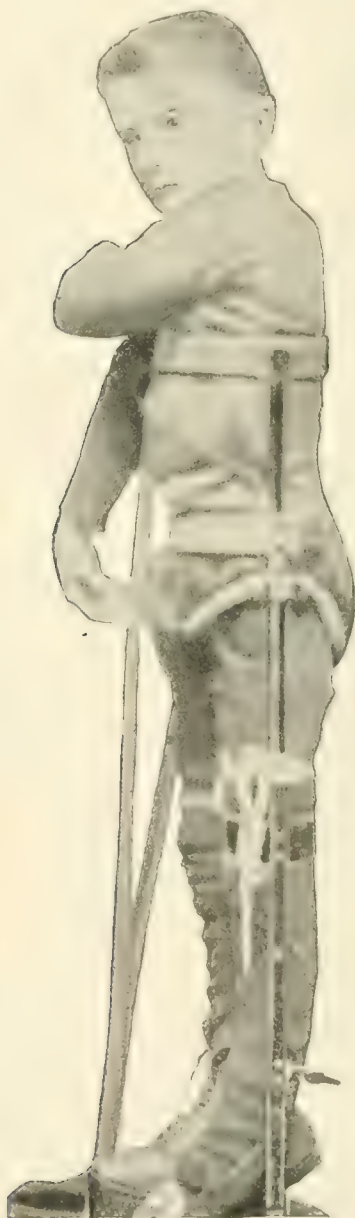


Fig. 3.—Fixation Brace applied.

lar pressure in hip-joint disease is to pull against these muscles which are affected by spasm, and then the iliacus internus and psoas muscles act upon a line with the axis of the shaft, therefore longitudinal traction is necessary to overcome the spasm of this group of muscles. These two lines of extension are absolutely necessary in hip-joint disease, if we hope to relieve intra-articular pressure. All patients with deformity should be put to bed, with



Fig. 4.—Knee Brace.

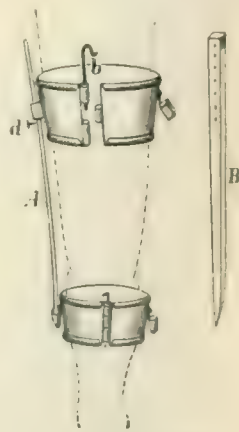


Fig. 5.—Knee-brace modified.

any deformity in joint disease that cannot be best overcome by extension in bed and by forcible means under an anæsthetic when the treatment begins. After the deformity has been overcome I use this lateral traction or fixation brace (Figs. 1, 2 and 3), which I devised many years ago, which is perfectly straight, and when properly applied, will prevent the limb from ever becoming deformed again. The ring fitting against the tuberosity of

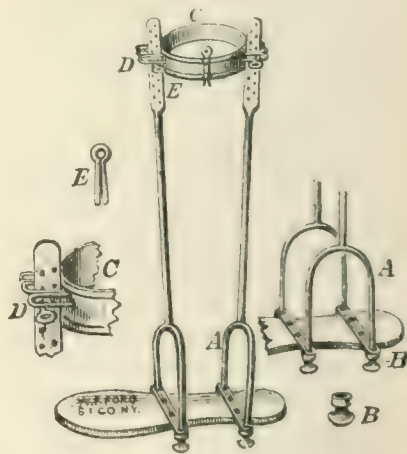


Fig. 6.—Phelps' Ankle Brace.

the ischium, with the pelvic band and abdominal band, restricts every normal movement; and, when lateral traction is applied, no matter how sensitive the joint is, the child can be handled and can move about without pain, because the head of the bone no longer impinges against the acetabulum. The theory that longitudinal traction relieves intra-articular pressure is wrong; the glutæi and adductor groups of muscles are pulled upon, and, by the di-

rection of their origin, any exertion must necessarily force the head of the bone into the socket.

Patients treated with this splint seldom recover with ankylosis. It is only in cases where there has been destruction of the joint that I ever see it, and none of these patients recover with deformity to any

disease have subsided. I then apply a walking brace, such as I show you here. This protects the child from injuring his limb if he falls. The limit of motion in such limbs prevents the child from getting it out of the way when he falls, and the result is that the capsule is injured. Hemorrhage takes

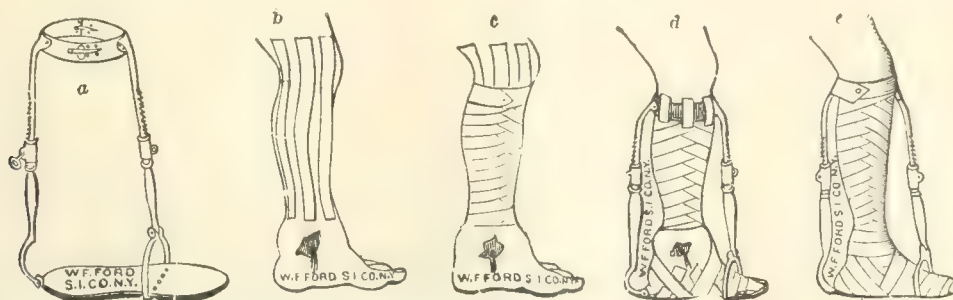


Fig. 7.—Sayre's Ankle-brace showing the same application of adhesive plaster as with Phelps' brace.

considerable extent, and nearly all of them have every degree of limit of motion, from 10 to 15 degrees to normal.

Another point which I wish to emphasize is this: That no case of hip-joint disease recovers inside of two years, and the mistake that is constantly being made is to remove the brace after it has been on for six months or a year, believing that the patient is cured; relapse occurs, and then begins a course of two years of treatment, and such patients go on sin-

place in the joint and a relapse of a severe nature is likely to occur. We frequently see joints with all the symptoms of inflammation, which recover within a few months. These are transitory conditions and are due to simple normal inflammation. If such joints are protected they will soon recover, but if infection takes place, then disease begins and there is a vast difference between an inflamed joint and a diseased one. Inflammation of the joint is a normal process of repair, and, if that joint is properly pro-

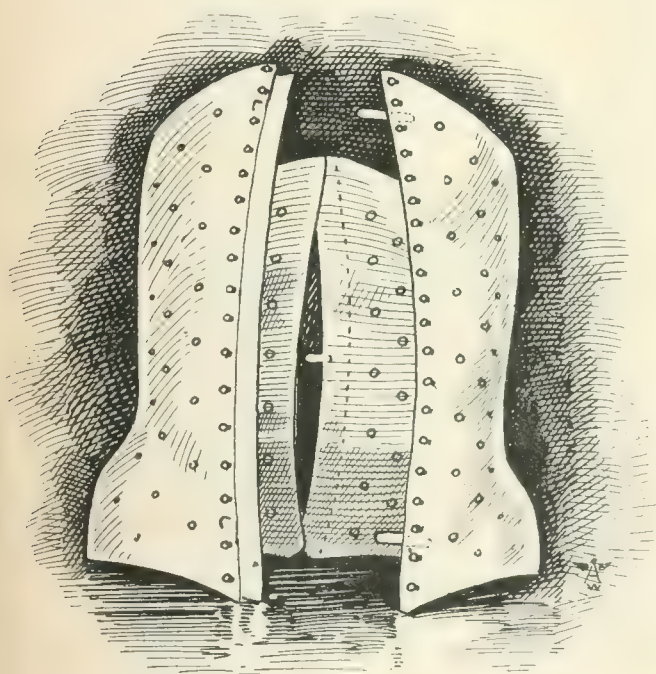


Fig. 8.—Aluminum Corset for spinal disease.

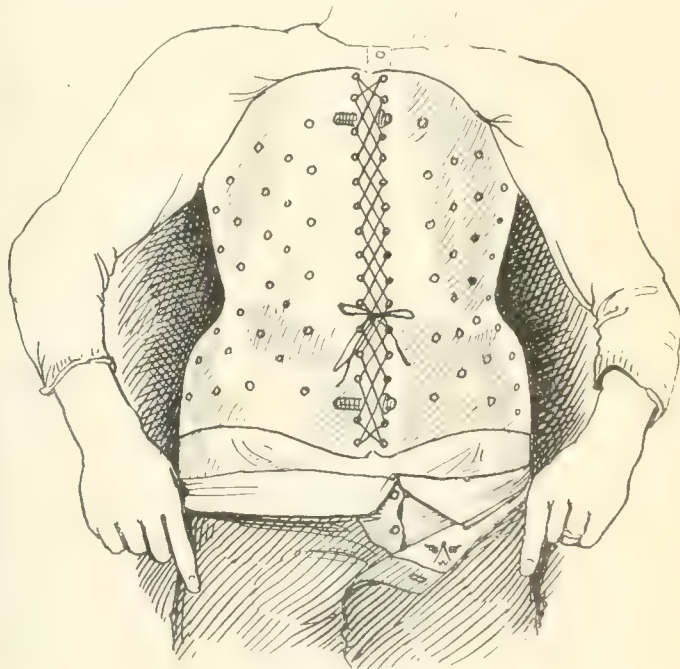


Fig. 9.—Aluminum Corset applied.

ning and repenting until destruction of the joint occurs, and abscess is the result in 75 per cent. of the cases which come into my hands from such treatment.

After the patient has worn the brace for eighteen months or two years, the spasm of the muscle and

ected from trauma, recovery will take place very soon, but when infection has taken place, disease begins, as I have already said, resulting in abscess tuberculous, purulent or gonorrhœal, frequently resulting in surgical intervention.

In knee-joint disease, particularly in children, I

know of no brace so good as Thomas's. I have constructed a knee-brace essentially on the same principles (Figs. 4 and 5), but it is no better than the Thomas brace. When I first brought the Thomas brace to this country in 1887, I put into it the extension straps which you see here, which enable me to make extension. In knee-joint disease extension must be made also into two lines. The muscles of the flexor group produce flexion and outward rotation;

the other at right angles to it at the head of the tibia, which pulls the head of the tibia forward, making extension and relieving the intra-articular pressure. This can be applied in bed by a weight and pulley over the foot of the bed and by passing a towel around the head of the tibia with a weight and pulley over the bed; and when the Thomas brace is applied this principle must not be lost sight of. Thomas did not believe in extension; his hip-brace was not de-

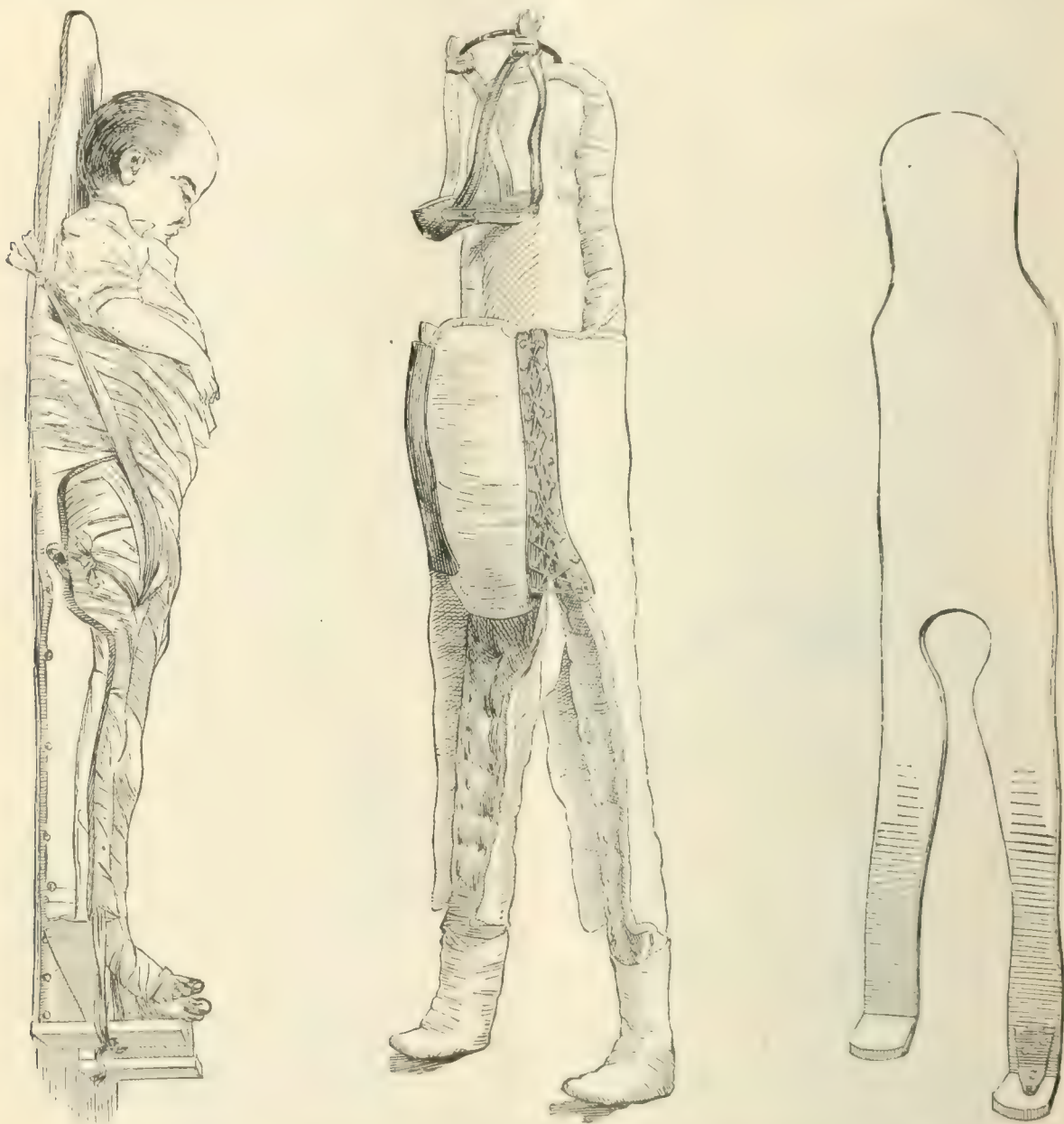


Fig. 13.—Portable Bed for the Treatment of Pott's disease and of hip-joint disease in very young children.

when affected by spasm, when an attempt is made to straighten the deformed limb and make longitudinal traction, the limb is used as a lever, the flexor muscles as a fulcrum which drives the head of the tibia against the head of the femur.

Sayre taught, many years ago, that two lines of extension should be applied, one longitudinally and

vised for the purpose of making extension, neither was his knee-brace. The objection to the Thomas hip-brace is that it does not make extension to relieve intra-articular pressure and only extends to the calf of the leg; and if the child slips on his crutches, he usually comes down upon his foot, driving the head of the bone into the acetabulum. In the

adult, however, Sayre's knee-brace is a capital appliance to use. The only objection to it is that it interferes with the circulation of the limb somewhat, unless great care is exercised in adjusting it. For the same reason that we apply the Thomas brace in

extends the foot (Fig. 7). Plaster of Paris, no doubt, is the best fixation appliance for mediotarsal joint disease.

In diseases of the shoulder joint I use a very simple appliance, which seems to be very effective. The deltoid, pectoralis, and latissimus dorsi muscles tend to force the head of the humerus into the glenoid cavity. By adjusting the pad into the axilla and passing adhesive straps around the arms and body, it throws the head of the bone away from the glenoid cavity and absolutely fixes it. I know of no other apparatus that I prefer to this.

In elbow-joint disease plaster of Paris is the best dressing. It should be applied by padding in the axilla, including the shoulder and hand, and, while the plaster is setting, the arm should be dressed a little beyond the right angle while an assistant moulds the plaster in the axilla.

In disease of the wrist joint plaster of Paris is very efficient, except when extreme spasm of the muscles is present. It is extremely difficult to make extension by plaster of Paris at the wrist joint; for this reason I employ a brace which I here present, which is a fixation brace very easy of application.

Now, in disease of the spine the same law applies as in the treatment of disease of the lower extremities, and I have found no brace or support so efficient as the plaster of Paris and aluminum corsets,

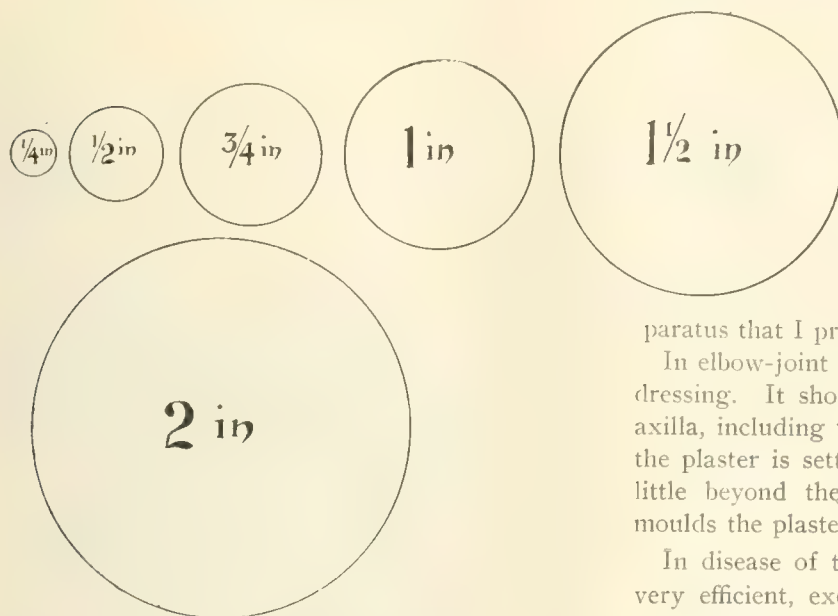


Fig. 11.—Glass Specula.

knee-joint disease, to prevent the child from slipping upon the foot, I also use it in ankle-joint disease or inflammation. The foot and leg are enveloped in plaster of Paris and, while the plaster is setting, extension is applied and the cast carefully moulded to the limb. The plaster is put on over one layer of

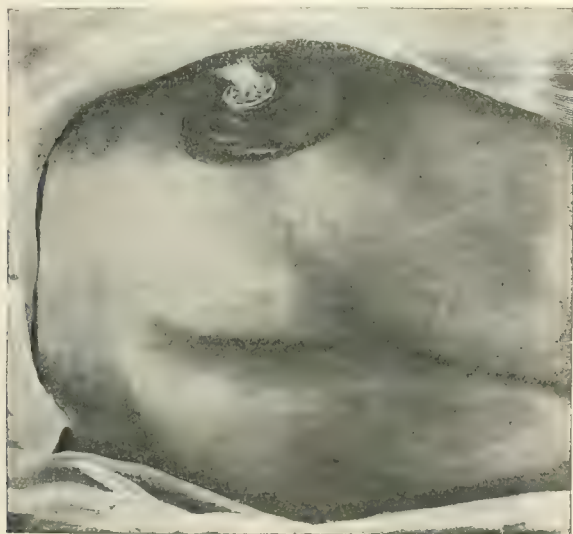


Fig. 12.—Glass Speculum.

gauze bandage, and dries quickly. Thomas's brace is applied and the child is allowed to walk upon the brace with a high shoe. In the adult, however, I prefer the use of this brace (Fig. 6), which I devised many years ago, which absolutely fixes the joint and

made while the patient is in a position of suspension. The aluminum corset is made by taking a cast of the body, filling it with plaster of Paris, and making a mould of the body upon which the aluminum is worked. Then the patient is suspended again and

the aluminum corset applied. The corset is light, durable, and cheapest in the end where patients require treatment for two or three years, as is usual in Pott's disease of the spine. (Figs. 8, 9 and 10.)

In regard to operative treatment, this is a rule which I always follow and in 1888, before the

moved, after which the joint should be thoroughly flushed out with a two-per-cent. solution of carbolic acid, or a five-per-cent. solution of bichloride, wiping the joint dry and then injecting it with pure carbolic acid, letting it remain in from one to two and a half minutes. After which the joint should be washed out with two-per-cent. pure carbolic acid, and then, in deep joints, glass speculum drainage should be used; indeed, in all cases of bone operations in any deep structures as, for instance, the thigh, glass speculum drainage should be employed instead of packing the wounds. (Figs. 11 and 12.) Packing with gauze is a pernicious practice, it acts as a plug and prevents free drainage, and infection and burrowing is frequently the result.

In abscesses of the wrist, in particular, the earlier the operation is performed the better will be the result, because pus finds its way along the sheaths of the tendons, and I have seen the entire group of the flexor muscles destroyed by the burrowing of pus.

In hip-joint disease with abscess I cannot urge too early an operation. The moment it is discovered it should be removed, and thus may be prevented many disastrous results such as I have observed. When abscesses burrow down by the side of the rectum they frequently perforate it, making a fistulous opening, which communicates with the joint; in other cases, they destroy the sphincter muscle, leaving the case almost hopeless. Then, if these abscesses are



Fig. 13.—Brace for dislocating patella, preventing destruction of the joint. (Notice the loop in the patella pad, into which the patella slips, when knee is flexed.)



Fig. 14.—Combined spine and hip-brace

Academy of Medicine, I presented a paper on this subject, which was not well received by the majority of the orthopædists present, and the principle which I laid down was this: That every joint condition attended with an abscess should be immediately operated upon for two reasons: First, and most important, for the purpose of exploring the joint. No man can judge of the condition of a joint which is suppurating until he has put his finger into it. The largest abscess attended with the most pain is frequently the most benign and attended with the least amount of bone disease, while small abscesses are often found to have originated from foci of disease in the bone which required immediate operation, to avoid excision.

And then, again, particularly in hip-joint disease, the head of the bone is very frequently found separated from the neck, and, when the surgeon has put his finger into the joint, then only can he determine to do a complete excision, if necessary, thus anticipating by many months what would necessarily follow.

Then I believe that any abscess of any name or nature should be immediately opened and cleansed out. The curette should be freely used when it can be employed. If the disease is so extensive that it cannot be removed by the scoop, then the tissues which have been destroyed by disease should be re-



Fig. 15.—Walking hip brace

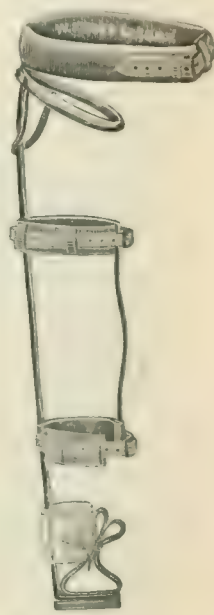


Fig. 16.—The author's knee brace.

not immediately attacked, they frequently ulcerate through the anterior border of the capsule into Scarpa's triangle and into the iliacus internus muscle, and find their way over the border of the pelvis into the iliac fossa, and destruction of the bone within the pelvis follows. I am constantly operating in

these cases coming into my clinic from other institutions. When the hipjoint is opened for exploration and the epiphysial lines of the acetabulum are found to be infected, or, in other words, when the case is one of acetabular disease, excision should be practised, whether the neck and head of the bone are diseased or not, for the reason that it stands in the way of free drainage, and such cases invariably go on to the formation of other abscesses, and eventually amputation or excision must be performed. It is true that a few of these cases recover, but that is exceptional, and I believe that exception is not more than one or two per cent.

Abscesses which have discharged into Scarpa's triangle should never be opened at that point. The incision should be made along the anterior border of the femur. The abscess should be opened and washed out with pure carbolic acid.

If disease of the bones of the knee is found to be quite extensive in children under fourteen years of age, nothing but curetting should ever be performed, and this may be repeated from time to time. When such conditions of the bone are found, the capsule of the joint should be freely incised and a flat bit of gauze drawn through from side to side, after washing out and cleansing.

In tarsal disease in children, with suppuration, immediate operation is required. Frequently an abscess will be found involving one of the tarsal bones. The bones lying next to the diseased one should be examined, as other bones will frequently be found infected, which would go on to suppuration. I have frequently removed every bone of the tarsus including the astragalus, leaving the periosteum of each bone, thoroughly cleansing out with carbolic acid and alcohol, and perfect reproduction of the bones of the tarsus has followed. This does not always follow, but it does in a large percentage of cases, some sixty to seventy per cent.

The general principles which I have described for conditions of the lower extremities, apply to the upper. One point that I am convinced of is, that single rheumatic joints never exist. If joint disease is due to rheumatism, more than one joint will become infected; every single joint disease is always either purulent, tuberculous, gonorrhœal, or due to pneumococcus or to some central nerve lesion. If one joint becomes infected and subsequently others, it is presumptive evidence that such joints are secondarily infected from the original foci of disease.

Gentlemen, I have hurriedly gone over this subject, it is too vast for a paper of fifteen minutes.

Denver Colleges to Consolidate.—A movement is on foot to consolidate the Gross Medical College and the Denver Medical College, which, from the last information at hand, seems very likely to prove successful.

A NEW TREATMENT FOR DEAFNESS FROM CHRONIC CATARRH OF THE MIDDLE EAR; A PRELIMINARY REPORT.*

By W. H. BATES, M. D.,

NEW YORK.

As is well known, in advanced cases of chronic catarrh of the middle ear one finds an increased amount of connective tissue. The Eustachian tube may be open. The membrana may appear nearly normal or show a variety of pathological changes. The mucous membrane of the middle ear becomes thinned and its glands atrophied from the increased production of connective tissue. Connective-tissue bands are found in the tympanum, forming adhesions between the drum membrane, ossicles, and other parts, so that the function of these structures is lessened. The ossicles are often ankylosed. The membrane covering the oval and round windows becomes fibrous and unable properly to vibrate. In short, we find that the principal cause of deafness in these cases is the effects produced by the formation of new connective tissue.

The treatment of these cases has been unsatisfactory. I allude to those in which the deafness is marked and of long standing. It is not necessary for me to give you in detail the various methods of treatment of the nasopharynx and Eustachian tube. My experience, which I believe to be that of many others, is that such treatment is not usually beneficial in the very deaf. When treatment of the nasopharynx and Eustachian tube does not promise benefit, we are led to consider the question of operation on the drum membrane or ossicles.

The literature on the subject of operative measures in the middle ear is voluminous. Among the earlier writers on this subject are Himly, Fabrizi, Brunner, Deleau, Politzer, Bonnafont, Vreden, Schwartze, Kessel, Lucae, Kretschmann, Stacke, Burnett, and Sexton. More recently Dench has in a number of valuable papers described the numerous operations for improvement in the hearing impaired from chronic catarrh of the middle ear. All the writers have endeavored to improve the hearing by operative measures alone, and have expected nothing from after-treatment. That these operative measures are often insufficient materially to benefit is apparent from the excellent paper by Blake on the removal of the stapes. I have gone a step further and, while performing a radical operation, I endeavor to obtain benefit not so much from the operation, but more by the effects of after-treatment.

In some cases of chronic suppuration of the middle ear good hearing is obtained by removal of connective tissue from the inner wall of the tympanum.

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This fact suggested to me the propriety of similar treatment for chronic catarrhal inflammation of the middle ear. To obtain room for treating the region of the oval window in these cases, I found it necessary to remove not only the drum membrane and ossicles, but also the upper and outer bony wall of the external auditory canal with the outer wall of the attic and aditus ad antrum. The operation did not improve the hearing in one of my cases. The after-treatment was successful, but required many months before material benefit was obtained. I have practised this treatment during the past eight years and have studied its indications and limitations.

Indications.—The patients improved by this treatment had symptoms of an obstruction to the sound-conducting part of the ear. All heard the tuning forks of the Hartmann series better by bone conduction than by air conduction. Most of them were unable to hear a loud ticking watch. Ordinary conversation was heard with great difficulty. Hearing was usually better in a noise. Tinnitus was not always present. The membrane was in some cases sunken or otherwise altered, while in others it appeared nearly normal. This treatment was only employed after other well-known methods had failed to be of service.

Operation.—The object of the operation was to obtain room for treating the region of the oval window, and not to improve the hearing immediately. The patient received no special preparation. The hair in the neighborhood of the ear was not cut or the parts treated with antiseptics, as is the practice of many operators previous to a mastoid operation. An incision was made through the skin over the mastoid, close to the insertion of the auricle and the bone, beginning above close to the hair and ending below at the tip of the mastoid. The auricle was rapidly dissected from the bone with blunt scissors until the external auditory canal in its cartilaginous portion was cut through. With a chisel the superior and posterior walls of the external auditory canal were removed until the antrum was reached. A bent probe was inserted in the aditus ad antrum and was found a useful guide in preventing injury to the facial nerve in the further steps of the operation. The outer wall of the attic, the membrana and ossicles, and overhanging bone were removed, converting the tympanum, the external auditory canal, and the mastoid antrum into one cavity with smooth walls. During the operation the hæmorrhage was controlled in the usual way, either by pressure with moist pads of cotton, by hot water, or by the use of artery forceps. After the completion of the operation, the cavity was dusted lightly with iodoform powder. The skin wound was closed with sutures (silk No. 000) and covered with a collodion, iodo-

form, and cotton dressing. A small pledget of cotton was placed in the orifice of the external auditory canal, the ear covered with a large wad of cotton, and a bandage applied. The day after the operation the bandage was removed and was not used again. Secondary hæmorrhage occurred, but was not alarming. The sutures were removed with the collodion dressing usually in five days. Primary union of the skin wound was the rule, with healing of the parts without deformity. The patients were confined to bed until recovery from the anæsthetic. The ear did not in any of my cases produce uncomfortable symptoms. Most of the patients were able to go outdoors the day after the operation. To prevent infection of the middle ear, the patient instilled twice daily in the external auditory canal a solution of bichloride of mercury, 1 to 3,000, and this was continued during the after-treatment.

After-treatment to Improve the Hearing.—The object of the after-treatment was for the removal and prevention of recurrence of connective tissue from the inner wall of the tympanum. This may seem a simple matter to accomplish, but it is not. In all my experience in the treatment of the ear no lesion has taxed my patience so much as has this one. At the outset it is well to understand something of the difficulty of accomplishing this result and prepare the patient for a tedious treatment in which benefit is slow to appear and relapses are many and frequent before the final improvement is obtained.

For the removal of connective tissue the best method I found was that by the use of some cutting instruments, and not by the use of caustics. The instruments I found most useful were three: 1. A Graefe cataract knife. 2. Sexton's trowel-shaped knife. 3. Wilde's ear forceps, mouse-toothed. The knives should be sharp, so that the connective tissue is separated from its attachment to the bone with as little irritation as possible. The forceps should be kept sterile to prevent infection. I found that less reaction followed with not so much reformation of connective tissue when pain was prevented. To produce local anæsthesia it was usually sufficient to apply cocaine to the outside of this tissue. Quite often this method failed. In these cases I was able to obtain complete local anæsthesia by the use of a tympanic syringe with a very fine tip. It was used as follows: With the sharp-pointed knife a small opening was made in the outer portion of the connective-tissue mass, when the tip of the syringe was inserted in this opening and a minute quantity of cocaine was injected. The opening was enlarged with the knife, more cocaine injected, and the process repeated until local anæsthesia was obtained. In some cases beta-eucaine seemed more satisfactory than cocaine. I also found that local anæsthesia with cocaine was obtained quicker and continued

longer after a previous application of a solution of suprarenal extract.

The immediate effect of the removal of connective tissue was a temporary loss of hearing in most of my cases. I believe this was due to the reaction from the use of the knife. For this reason I have not removed much at a time. But as long as the hearing remained good or improved I continued the manipulations. In one case the patient obtained nearly normal hearing at one sitting, when I removed nearly the whole of the connective-tissue mass in the region of the oval and round windows, no hæmorrhage appeared, no pain was produced, and no reaction followed; that is, the parts remained pale, and the immediate result was permanent. This case was ideal and was cured in a month after the operation. My experience with most cases has taught me to proceed cautiously.

Two days after a mass of connective tissue is removed, the open space will be replaced in part by a soft material which becomes in a week hard and fibrous. I believe it best to remove this soft material as rapidly as it forms and also as much of the firmer tissue beneath it as can be done without much reaction or a lowering of the hearing. If one waits, the tissue becomes very dense, more difficult to remove for this reason; and, what is more disadvantageous, is that it is more sensitive to pain and the reaction with increase of new tissue is greater. In short, I remove small portions at frequent intervals.

The treatment of the ear by the patient at home was practised in all cases.

A number did best by instilling into the ear once or twice daily: (1) Peroxide of hydrogen, followed by (2) a solution of bichloride of mercury, 1 to 3,000, and after this solution flowed out (3) olive oil, decolorized by animal charcoal, was instilled. In some peroxide of hydrogen was objectionable, being followed by dizziness, pain, and lowered hearing when it was discontinued. Some antiseptic solution was used daily by the patient and was found necessary in order to prevent infection.

When these cases are cured, the inner wall of the tympanum is lined with a thin, light-colored, smooth, dry membrane.

As I said above, the best method I found for the removal of connective tissue was by the use of the knife and forceps. Caustics were employed, but the results obtained after their use were uncertain and sometimes disagreeable. In one case, after the use of caustic soda, the hearing became at once very good, but in seven days so much irritation followed that the patient became very deaf. I have used chromic, nitric, carbolic and sulphuric acids.

Among the other remedies tried were alcohol, nitrate of silver, iodine, boric acid, pepsin, balsam of

Peru, and the salts of iron, copper, aluminum, and zinc. My experience with them all was not encouraging.

Treatment of the nasopharynx is beneficial in many cases, especially when congestion or hypertrophy of the mucous membrane is present. The relief to these parts is followed by lessened congestion in the tympanum. Politization is often beneficial and the hearing improved by it, although the drum membrane is absent.

General Treatment.—I believe that most of my cases were benefited by treatment prescribed by the family physician. One case with a history of chronic gout was not benefited by three months' local treatment. The manipulations for the removal of connective tissue were difficult because local anæsthesia was not readily obtained, and continued a very short time; hæmorrhage was unusual and controlled with difficulty; the reaction was severe, and the recurrence of new connective tissue took place rapidly. After this patient received treatment for gout (diet, medication, etc.), the local treatment rapidly produced a permanent improvement in the hearing. I now make it a rule to advise these patients to employ whatever general treatment their family physician considers proper.

Report of Cases.—During the past eight years I have treated twenty cases. The youngest patient was eight years old, the oldest sixty-eight. In none was the hearing made worse. No bad effects followed the operation, except those due to the anæsthetic. No deformity was apparent, and the line of incision behind the auricle left no appreciable scar.

In some cases a marked improvement in the hearing of the ear not operated upon followed. The improvement in the hearing by *aural sympathy* has been known for some years. In some the hearing became worse again when a relapse occurred in the ear operated on, while in others no effect was observed. The degree of improvement varied. In one case it was considerable, the patient becoming able to hear ordinary conversation at more than ten feet, when before the operation on the opposite ear hearing for conversation was less than two feet.

The length of time for the after-treatment varied exceedingly and did not always depend on the degree of deafness. The shortest time required to obtain hearing for ordinary conversation at ten feet or better was one month after the operation. The average time was about six months.

The permanency of the result of treatment is a matter of interest. One patient has still normal hearing six years after all treatment was stopped. A number have relapsed at various periods after cessation of treatment. Some of these have been again improved by local treatment. Before closing this paper I wish to report the history of one case.

Mr. A., aged forty-six, was first seen October 30, 1897. The patient had been growing deaf for a number of years. Conversation was heard with difficulty at two feet, and a loud whisper at three inches. His hearing was better in a noise, as on the street, than in a quiet room. A watch was not heard. The snapping of my fingernails was heard at a distance of eight inches in the right ear and six inches in the left ear. All the Hartmann's series of tuning forks were better heard by bone conduction. The patient was unable to use the telephone. Tinnitus was present, but not annoying. His increasing deafness interfered seriously with his work, and he was for this reason about to lose his employment.

On examination, the drum membranes were found nearly normal in appearance.

The man was a victim of chronic nasopharyngeal catarrh and frequently had attacks of rhinitis, when his hearing became less acute.

The use of Siegle's otoscope showed the membranes to be freely movable. Politization readily forced air into the tympanum, but did not improve the hearing. A paracentesis of the left drum membrane was not followed by any relief to the deafness.

Local treatment, three times a week, for the nasopharyngeal catarrh was begun now and continued during a period of four months without an appreciable gain in his hearing.

Operation, March 3, 1898. The left ear was operated upon under chloroform in the manner described above.

The bandage was removed the next day and left off permanently. The collodion dressing and sutures were removed five days after the operation. He had primary union of the skin wound.

The local treatment of his nose and throat was continued. For the left ear, a solution of peroxide of hydrogen was instilled twice daily and the ear cleansed of discharge by syringing with warm water. Three weeks after the operation I began to remove new connective tissue from the tympanum with instruments. His hearing steadily improved, and in twenty-six days the hearing of the left ear was for the first time better than that of the right.

May 20th.—A relapse occurred, followed by improvement.

June 10th.—Three months after the operation another relapse occurred, when his hearing was as poor as in the beginning of treatment. The patient was treated regularly three times a week and, although the removal of connective tissue in the tympanum was followed by benefit, this tissue would reform, sometimes so rapidly that in a space of a few days the deafness would be worse. The ticking of a watch was first heard on June 16th, three months after the operation.

July 22d.—R. Nails = 18"; L. W. = P. After local treatment, L. W. = 12". The patient received no treatment for three months, when a relapse occurred with his hearing as poor as in the beginning of treatment. The amount of new connective tissue in the left ear had increased. Local treatment improved the left ear to L. W. = 6".

November 7th.—R. W. = 2"; L. W. = 7". Note the improvement in the right ear after treatment of the left ear only. The patient had had many relapses. From this time on his family physician rec-

ommended that he drink three quarts of water daily. It was gratifying to see the hearing more rapidly improve after local treatment with fewer relapses. I wish to emphasize the value of "water" to lessen the formation of new connective tissue in the ear. So impressed was I with its value in this case and others that I devoted two years of experimental work on animals in connection with the effect of water upon the formation of new connective tissue after wounds. The evidence I accumulated convinced me of its great value in these cases.

December 9th.—R. W. = 4"; L. W. = 30".

January 10, 1899.—R. W. = 4"; L. W. = 30". After local treatment by removal of connective tissue, L. W. = 48", C₂, L. A. C. > L. B. C.

April 18th.—R. W. = 4"; L. W. = 30"; C₁, L. A. C. > L. B. C.

June 5th.—R. W. = 6"; L. W. = 36"; R. B. C. > R. A. C.; L. A. C. > L. B. C. for all the t. f.

The patient had now been under treatment fifteen months since the operation. He had visited my office ninety-three times since the operation and had faithfully carried out at his home the treatment I recommended. I believe that the time could have been materially shortened, by later methods, learned from experience. It was gratifying to me to find that the hearing by air conduction became better than by bone conduction for all the forks after I successfully removed the excess of connective tissue covering the inner wall of the tympanum. He still hears better in a noise. The improvement in the hearing of the ear not operated upon is interesting.

From July 5th to November 13th, a period of four months, the patient was not treated.

November 13th.—R. W. = 1"; L. W. = 10", C, C₁, L. B. C. > A. C.

He had an increased amount of connective tissue in the tympanum. This was removed at intervals and was followed by improvement in the hearing.

December 4th.—R. W. = 4"; L. W. = 36", R. B. C. > R. A. C.; L. A. C. > L. B. C. for all the forks.

February 26, 1900.—R. W. = 5"; C₄, C₃, C₂, R. A. C. > R. B. C.

March 31st.—R. W. = 14"; L. W. = 48".

April 28th.—R. W. = 18"; L. W. = 48".

The patient was not treated for three months, and the hearing became less.

August 7th.—R. W. = 4"; L. W. = 30"; R. B. C. > A. C.; L. B. C. > A. C.

11th.—R. W. = 10"; L. W. = 36".

The patient was not treated for three months. The hearing declined a little.

November 10th.—R. W. = 7"; L. W. = 24". R. B. C. > A. C.; L. B. C. < A. C. Local treatment of the left ear and treatment of the vault of the pharynx was immediately followed by benefit: R. W. = 18". R. B. C. < A. C. for C₄, C₃, C₂; L. W. = 36"+.

17th.—R. W. = 12"; L. W. = 48".

December 8th.—R. W. = 30"; L. W. = 48".

The patient's visits became less frequent and irregular. He was faithful in the use of local treatment at home. His hearing was good and he had no difficulty in attending to his work. He had been promoted.

March 2, 1901.—R. W. = 8"; L. W. = 18". After local treatment, R. W. = 24"; L. W. = 40".

April 20th.—A decided relapse. The patient was

unable to use the telephone and L. B. C. > A. C. for all the forks except C₄. On examination a brown material, not much larger than the head of a pin was seen occupying a space in the region of the oval window. When part of this was removed, C₄, C₃, C₂, A. C. > B. C. When all was removed C. A. C. > B. C.

May 18th.—R. W. = 14"; L. W. = 36".

For C₄, C₃, C₂, R. A. C. > B. C. For all the forks L. A. C. > B. C.

The patient received no treatment for four months. The hearing remained good.

September 5th.—R. W. = 12"; L. W. = 30".

January 9, 1902.—R. W. = 12"; L. W. = 36". The tuning forks are heard as well as ever. Although the patient is treated at very irregular intervals, the hearing does not become less. In a noise he still hears better than in a quiet room. His hearing for conversation is greatly improved, but it has not gained in the same proportion as has his hearing for the watch and tuning forks. The patient is well satisfied with the result of treatment.

In conclusion, the treatment was found beneficial in a class of cases which were not benefited by treatment of the nasopharynx or Eustachian tube or by operative measures in the middle ear. Perhaps the only objection to this new method is the necessary time required in order to obtain good hearing. Yet I believe this objection can be overcome after further experience has perfected the technique of removing the excess of connective tissue from the inner wall of the tympanum.

567 PARK AVENUE.

DEFORMITIES DUE TO MUSCULAR PARALYSIS; METHOD OF PRODUCTION; POSSIBILITIES IN TENDON TRANSPLANTATION; COMBINATIONS THAT HAVE BEEN MADE TO CORRECT DEFORMITY.*

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Deformities due to muscular paralysis, whether the cause be cerebral, spinal, or peripheral, generally follow a perfectly regular course in their development. The original lesion does not primarily produce a deformity, but simply a loss of power in the muscle or muscles affected. This fact is of extreme importance, as it should teach those who see these cases early that the prevention of deformity must be one of the principal objects of treatment; and when this is clearly understood, the proper treatment of such cases will give more satisfactory results than when it is not. Massage, electricity, muscle stimulation, etc., are more efficient remedies when the muscles act in their normal relations or

positions than when they are unduly stretched or contracted.

The production of the deformity is due to several causes: 1. Gravity. 2. The action of non-paralyzed muscles. 3. The arrested development and growth of all tissues in proximity to the muscles paralyzed. 4. The results of weight applied to weakened structures. 5. All other causes.

Gravity is the primary and important factor in producing many deformities, as the erect and normal position of the body is largely maintained by muscular exertion. When paralysis of the muscles of the back of the neck occurs, the head drops forward as the weakened posterior muscles fail to hold it up; when the deltoid is paralyzed, the weight of the arm pulls it downward and toward the body. In the foot, the action of gravity is clearly shown when the anterior muscles are destroyed; the forepart of the foot falls and a talipes equinus follows. The same force of gravity producing a deformity is seen when the extensors of the wrist from any cause lose their power and a drop wrist follows.

The second cause involves the study of the action of the different muscles of the body. Each muscle has its separate function, although very few motions are produced by muscles acting separately, as most of them are arranged in groups and most motions are complex in character. When paralysis occurs, the deformity that follows often results from the action of opposing muscles which have not lost their power. Deformities of the foot are among the most frequent of all deformities due to muscular paralysis, as anterior poliomyelitis is of such common occurrence in the lower extremity in childhood. In this disease, only one muscle of a group may be affected, although in the majority of instances it is either the anterior group of extensors or the posterior group of flexors or the peronei that suffer.

When the tibialis anticus alone is paralyzed, the foot assumes a position of talipes valgus, and this may or may not be associated with equinus in a later stage, as any loss of power on the front of the foot permits the tendo Achillis to shorten. The valgus position is due to the fact that the extensor proprius hallucis and the extensor longus digitorum, in raising the front of the foot, pull it toward the outer side, allowing the inner side to fall.

Paralysis of the extensor proprius hallucis alone produces very little alteration, except in the large toe, to which it is attached. The flexor muscles may cause a bending of the last phalanx and a condition similar to hammer toe.

In paralysis of the tibialis anticus and extensor longus digitorum, the foot assumes a position of equinus and when the extensor proprius hallucis is not paralyzed, we have in addition undue extension of the last phalanx and the deformity of hammer

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toe. In severe cases we may find a partial dislocation of the first phalanx of the great toe on the metatarsal bone and also a dislocation of the second phalanx on the first, due to the fact that the extensor proprius hallucis is shorter than the stretched paralyzed muscles alongside of it and by its active contraction causes these deformities. The action of the extensor proprius hallucis produces no deformity, however, until the equinus deformity has occurred.

Paralysis of the extensor longus digitorum alone, by permitting unopposed action by the tibialis anticus and the extensor proprius hallucis and the posterior muscles, causes the foot first to assume the position of talipes varus, the weight being borne on the outer side. To this may in time be added the deformity of equinus and of flexion of the toes, as the heel cord action is not properly opposed by the two remaining non-paralyzed muscles in front, and the toes are strongly flexed by the unopposed flexors and interossei.

Paralysis of the peronei produces the deformity of talipes varus because of the failure of the peronei to hold down the inner side of the foot and raise the outer, but paralysis of the peroneus longus alone permits of a lessening of the palmar arch and valgus.

The posterior muscles forming the tendo Achillis, or heel cord, if paralyzed, permit the anterior muscles to contract and produce the deformity of calcaneus, but unless the patient bears the weight of the body upon the foot, this is slight in degree as compared with the deformity that follows after walking. The severe types of calcaneus are only in a small degree due to unopposed muscular action, although in rare instances the extensors may be so shortened as to produce extreme elevation of the forepart of the foot, and corresponding depression of the heel, with a marked arching or cavus of the centre of the sole.

Paralysis of the interossei and flexors of the toes permit of over-extension of the phalanges, and the so-called "clawfoot" by the unopposed action of the extensors.

At the knee, a loss of power in the quadriceps extensor cruris causes a flexion deformity, as the inner and outer hamstrings, being unopposed, tend to contract and draw the lower leg backward. Paralysis of the hamstrings alone causes the opposite deformity of genu recurvatum, but this can only occur after the ligaments of the joints have been stretched. At the hip, the loss of power of the flexors permits of slight drawing backward of the lower extremities, while the loss of power in the abductors causes the leg to be drawn inward. Paralysis of the psoas and iliacus permits of a rotation outward and abduction, sometimes very marked, if the abductors are also weak, but unopposed muscular action alone causes but few of the deformities seen at the hip.

In the hands and fingers, very characteristic deformities follow paralysis of the different groups of muscles. When the extensors of the wrist are affected, the flexors shorten and produce a drop wrist, which is followed by a flexion of the fingers if the extensors of the fingers are also involved. Even if the extensors of the fingers are not paralyzed, slight flexion of the fingers may occur from a stretching of the extensors due to the drop wrist. Paralysis of the flexors of the hand is followed by extension of the hand, but as extension of the fingers is limited by the arrangement of ligaments and joints, practically no deformity follows.

Paralysis of the serratus gives us the characteristic deformity known as angel wing, which is but slightly marked when the scapula is at rest, as compared with the deformity seen when the arm is raised. Gowers, in his *Diseases of the Nervous System*, explains it as follows:

"The serratus fails to hold the scapula against the chest, and it is rotated on its vertical axis by the action of the anterior part of the deltoid on the humerus and of the middle part on the scapula. Thus the posterior edge recedes from the thorax, leaving a groove, into which the hand can sometimes be placed. The scapula is at the same time rotated, lower angles inward and upward."

In the trunk, the action of opposing muscles is to a certain extent overcome by the respiratory act, which is more perfect on the healthy side and causes a concavity of the spine on the paralyzed side.

Other deformities might be mentioned, but the more important have been referred to and the action of the opposing muscles, so called, clearly shown in their production.

The third cause is only effective after the others have begun to act. Arrested development and growth affects all the tissues and the resulting changes may be serious and far reaching. Dislocations at the hip and knee may occur, in addition to slight deformities, and as the result of a shortened leg, the pelvis may be tilted and a permanent spinal curvature follow. Bony changes may occur, such as knock-knee and the formation of new and irregular facets on the tarsal bones, whereby the ability to use the foot as a base of support is seriously interfered with. The ligaments being shortened or lengthened may give flail joints and serious inconvenience follows. All of these conditions are liable to be aggravated by the fourth cause, the weight of the body applied to weakened structures, a familiar example being the flat foot which follows when the weight is borne on a weakened plantar arch. We also find in many instances that the efforts of the live muscles to do the work of those paralyzed still further increase the deformity. Other causes may be

faulty braces, imperfect operations, and diseases producing muscular or bony changes.

In the endeavor to correct these deformities by tendon transplantation, we may attempt to improve either position or function, or both. Many different combinations have been suggested, and if we desire to improve position alone, certain combinations are possible which are of no use where function is also desired. A paralyzed muscle may be attached to periosteum or bone or muscle or ligament and used to hold the foot in varus or valgus or equinus without any hope of function, but if we desire function we must use non-paralyzed muscles and attach them either to perfect muscles, to palsied muscles or periosteum, bone or soft parts. Practically, every possible combination has been tried. Anterior muscles have been attached to anterior and posterior to posterior, and vice versa. Many results brilliant at first have been noted as failures later, owing to stretching of muscles, to pulling apart of sewed portions and other causes, while other cases, at first only fairly successful, have been markedly improved by subsequent massage, electricity, and use.

In the lower extremity, where the opportunity is more frequently given to transplant tendons, the weight of the body is a factor that has not been sufficiently considered in most cases, and for a long time after the operation, apparatus should be used to prevent the recurrence of the deformities for which the operation was done. Although the extensor longus digitorum may perfectly extend the inner side of the foot when attached to a paralyzed tibialis anticus, it is certainly expecting too much to hope that a severe valgus or flat foot of many years' standing will not recur if, within six or eight weeks after the operation, the small muscular tendons are left alone to hold up the foot. Ligaments, fascia, muscles, and skin that have been unduly stretched for years do not resume their normal condition, simply because certain tendons have been transplanted, and all these factors must be taken into consideration. The subsequent development of the muscles and tendons has also not been properly looked after in many instances, as muscles that have been inactive for many years will need long and careful treatment if they are to be expected to perform active movements.

The relative strength of the muscles must also be taken into consideration. A large muscle like the tendo Achillis may easily be deprived of part of its power and that force utilized to take the place of the peronei or of the tibialis anticus; but we cannot expect, even by long stimulation, that a muscle the size of the peroneus brevis can alone be made to do the active work of a paralyzed tendo Achillis and raise the heel as well as a large and stronger muscle would, nor can we expect a muscle like the tibialis posticus if fastened to the tibialis anticus to over-

come the opposing action of a well-developed tendo Achillis. In such a case the heel cord must be deprived of part of its power. The strength of individual muscles has been carefully studied by Frick, of Leipsic, and bears a direct relation to the work they have to do. Whitman, in his *Orthopædic Surgery*, says: "The most important function of the dorsal flexors is to lift the foot as it is swung forward, while the plantar flexors serve in the active propulsion of the body. The difference in function is shown by the relative strength of the two groups, the plantar flexors being five times the stronger; in fact, the calf muscle (the gastrocnemius and soleus) alone is three times as strong as all the other muscles of the foot combined. It is practically the leverage muscle, the others serving more especially to fix and hold the foot or fulcrum in its proper relation to the leg."

A study of the manner in which the muscles act to perform their work is also important, and to transplant the sartorius to the quadriceps extensor cruris in such a way that the newly attached tendon tends to pull the patella downward and inward, instead of extending the leg, is certainly unscientific, and the result cannot be good. Muscles that raise the foot or hand by passing under the annular ligaments cannot be expected to do the same work if acting in absolutely faulty lines, and often extensive dissections may be necessary to overcome these difficulties. The ordinary laws of mechanics cannot be defied, even in tendon transplantation.

This is well explained in an article by Goldthwait, in the *Transactions of the American Orthopædic Association* for 1895, who says: "In certain cases, as the deformity develops and increases, the mechanics of motion change, so that the relation of the power to the fulcrum and the fulcrum to the weight or the portion moved is entirely unlike the original condition. . . . in infantile paralysis, when all the posterior muscles of the calf are paralyzed with the exception of the two peroneals. The action of these muscles, normally, is to extend the foot at the ankle, and to abduct or turn out the front part of the foot, the fulcrum being the posterior edge of the malleolus. There being no power in the gastrocnemius or in the muscles of the inner side of the back of the leg to control the peroneal muscles, their action gradually stretches the internal lateral ligaments and the whole foot is drawn outward. The internal malleolus becomes more prominent, while the outer malleolus is less so, owing to the turning out of the foot. Mechanically, this places the outer malleolus or the fulcrum over which the peroneal tendons act, distinctly inside the line of motion. As the result of this, the tendons are gradually drawn outward, until they slip over the edge of the malleolus and rest on its outer surface, and in cases of long standing, well

toward its anterior edge. With the tendons in this position, the action causes flexion and abduction instead of extension and adduction." Thus to get the proper action of the peronei the power should be applied so as to produce the same results as if the peronei were themselves acting.

Other procedures, in addition to the union of one tendon to another, may also be used to advantage in correcting deformities due to paralysis, such as arthrodesis, advocated by Whitman.

The literature of tendon transplantation is increasing rapidly, and from it we find that the operation has been done for every possible deformity due to muscular paralysis. In the list here given, the aim has been to report only the operations done for the relief of paralytic deformities, but it does not claim to include the name of every operator who has reported one or more cases.

The results are not quoted, for the reason that in many cases it is impossible to say what the result was, as some cases are reported too early to speak definitely; and in others it is impossible to say just how good the result was, as the writers have not seen fit to state in exact terms just what the patient was or was not able to do, but have simply stated the result as "good," "fair," or "bad." It must be clearly understood, however, that to analyze them understandingly, it is necessary to know exactly what the previous condition was, for which the operation was done. In many instances these data are so incomplete that it is also impossible to state why certain tendons were used instead of others, but the presumption always is that the operator has selected the method which was best adapted to the particular case. It may be stated that a very large proportion are reported as successful results.

To give all the details connected with these cases would make the report too long for ordinary purposes; therefore, only the deformity and the operation that has been done for its relief are given.

Talipes Equinovarus.—Division of the peroneus longus and attachment of one portion to the extensor longus digitorum and of the other to the tibialis anticus. Brunner and Schultheiss. *Centralblatt für Schweiz. Aerzt.*, 1898.

The same operation, with tenotomy of the tendo Achillis added better to correct the equinus. Same authors.

Tenotomy of the tendo Achillis. Transplantation of the tendo Achillis into the peroneus longus and union of the peroneus longus and brevis. Division of the plantar fascia. Winkelman. *Deutsche Zeitschrift für Chir.*, 1894.

Tenotomy of the tendo Achillis and transplantation of a strip from the outer side to the peripheral end of the divided peroneus brevis tendon. Rochet. *Lyon méd.*, 1897.

Transplantation of a strip from the outer side of the tendo Achillis and soleus into a buttonhole open-

ing in the peroneus longus tendon. Eulenburg. *Zeitschrift der orthop. Chir.*, 1898.

Same operation, with the addition of complete tenotomy of the tendo Achillis. Same author.

Tenotomy of the tendo Achillis, freshening the contiguous surfaces of the gastrocnemius and the peronei muscles and suturing the same together. Lentz. *Jahr, Fort. Chir.*, 1898.

Tenotomy of the tendo Achillis. Transplantation of the peripheral ends of the extensor longus digitorum into the tibialis anticus. F. Franke. *Verhand, d. deutsche. Gesellsch.*, 1897.

In fourteen cases of equinovarus, in eleven, half the tendo Achillis was transplanted into the peronei, either into both or into the peroneus longus or brevis. In four the tibialis posticus or a part of it was fastened to the anterior abductors of the foot. A. Cordivilla. *Pubblicazioni estratte dall'Archivio di ortopedia*, 1899, anno. 16, No. 4.

Splitting in half of the tendo Achillis, attachment of the outer strip to the tibialis anticus, inner strip left attached to the os calcis. Hoffa. *Berliner klin. Woch.*, 1899.

In another case, shortening of the tibialis anticus, division of the paralyzed peronei and attachment of these tendons to the tendo Achillis. At a subsequent date, an operation for the shortening of the extensor proprius hallucis. Same author.

Occasionally the extensor proprius hallucis or the extensor longus digitorum was fastened to the tibialis anticus, or the tibialis posticus upon the two lateral peronei, or a portion of the peroneus longus upon the extensor longus digitorum. Nine times the tendo Achillis was plastically lengthened; three times the same was done with the tibialis posticus, and twice with the tibialis anticus. Same author.

Transplantation of the extensor proprius hallucis and half of the extensor longus digitorum to the tibialis anticus and one third of the tendo Achillis to the peroneus longus. Vulpius. *Klin. Vorträge*, 1898.

The same authority recommends for talipes equinovarus the same operations as are reported for talipes equinus over his name.

Division of the extensor proprius hallucis and transplantation to the extensor longus digitorum. Drobnik. *Deutsch. Zeitschr. f. Chir.*, Bd. 43.

Transplantation of one half the tibialis anticus to the extensor longus digitorum. Same author.

Transplantation of part of the gastrocnemius to the peroneus longus and part of the tibialis anticus to the extensor longus digitorum. Same author.

Division of the tibialis anticus and transplantation into the peroneus brevis. Division of the tibialis posticus, carrying the same above the internal malleolus and attaching it to the extensor longus digitorum. Subsequent lengthening of the tendo Achillis. Eve. *Transactions of the Clin. Soc. of London*, 1897.

Transplantation of the outer half of the tendo Achillis into the extensor tendons on front of the foot. Vegas and Aguilar. *Centr. f. Chir.*, 1901.

An incision was made along the posterior margin of the subcutaneous surface of the fibula, the peronei tendons exposed, and the tendon of the peroneus longus isolated. A second incision was made above the ankle just internal to the crest of the tibia, and the tendon of the tibialis anticus exposed. This

was divided subcutaneously on the dorsum of the foot, and pulled out of its sheath. Next it was pushed through subcutaneous tissue superficial to the extensor longus into the first wound. A slit was then made in the peroneal tendon, and the tibialis tendon drawn through it and secured by two criss-cross sutures of silk. Starr. *Canadian Practitioner and Review*, 1901.

An oblique incision was made from above the outer malleolus downward and inward, so as to expose the peroneal tendons and tendo Achillis. After freeing the tendo Achillis the peroneus brevis was divided, carried under it and attached through a slit to the tendon of the flexor longus hallucis. The peroneus longus was then divided and attached in the same way to the tendo Achillis. Same author.

An oblique incision was made over the extensor tendons just above the annular ligament of the ankle, and the extensor longus digitorum isolated. Its outer segment and the peroneus tertius tendons were divided, carried over the balance of the extensor tendon and united through a slit to the tibialis anticus. Same author.

A curved incision was made, exposing both peronei and the tendo Achillis. The peroneus longus was isolated and divided, the distal end pulled strongly so as to correct the varus position of the foot, and then passed through a slit in the tendo Achillis and held in position by a mattress suture of kangaroo tendon. The superficial wound was closed with horsehair sutures. An oblique incision was then made on the anterior surface of the leg, just above the annular ligament, exposing tendons on tibialis anticus and common extensor, just as it divides into separate tendons to the toes. A loop was formed of the latter and drawn firmly through a slit in the tibialis anticus, and sutured as before. The extensor tendon was drawn up sufficiently tight to fully correct the equinus before being fastened. Same author.

Talipes Equinus.—The tendo Achillis was lengthened and then the extensor proprius hallucis was divided at the metatarsophalangeal joint, and transplanted by its proximal end to the peroneus brevis on the fifth metatarsal bone. Tschudy. *Centralbl. f. Schweiz. Aerzte*, 1898.

Transplantation of the peroneus longus to the tibialis anticus. Vulpius. *Klin. Vorträge*, 1898.

Division of the tendo Achillis into three parts, outer portion attached to the peronei, the inner to the tibialis posticus and tenotomy of the middle portion. Vargas and Aguilar. *Centr. f. Chir.*, 1901.

Transplantation of the tendo Achillis into the extensor longus digitorum. Same author.

Transplantation of the peroneus longus or half of the extensor longus digitorum to the tibialis anticus and at the same time shortening of the tibialis anticus and lengthening of the tendo Achillis. Codivilla. *Archivio di ortopedia*, anno xvi, 1899, No. 4.

Splitting of the tendo Achillis into three parts, attaching one to the peroneus longus, one to the tibialis anticus, and lengthening the other. Same author.

Splitting the tibialis anticus and attaching half to the peroneus longus, and also taking a strip from the tendo Achillis and fastening it to the peroneus brevis. Same author.

Transplanting the extensor proprius hallucis and

one half of the extensor longus digitorum to the tibialis anticus and one half the tendo Achillis to the peroneus longus. Same author.

Talipes Equinus with Cavus.—Division of the tibialis posticus at its insertion and attachment of the same to the tibialis anticus. Division of the peroneus brevis and attachment to the extensor longus digitorum. Subsequent lengthening of the tendo Achillis. Eve. *Transactions of the Clinical Society of London*, Vol. xxxi.

Talipes Equinovagis.—Transplantation of a slip consisting of one half of the tibialis anticus tendon into the extensor proprius hallucis. Vulpius. *Jahr. Fortsch. Chir.*, 1897.

Transplantation of the peroneus longus to the extensor longus digitorum and the peroneus brevis to the tibialis anticus. Eve. *Transactions of the Clinical Society of London*, 1897-1898.

An incision was made over the space between the tendons of the tibialis anticus and the extensor proprius hallucis extending from the annular ligament, three or three and a half inches upward. Both the tendons were found and isolated. The tendon sheaths were cut away, and the foot was inverted and extended so as to shorten up the tendon of the tibialis anticus and pull down the tendon of the extensor proprius hallucis. The outer flap of the sheath of the extensor proprius hallucis was then sewn to the inner flap of the sheath of the tibialis anticus with a continuous suture, so as to prevent the newly united tendons becoming adherent to the overlying structures, thus making a new sheath, which would not interfere with the action of the muscle. Skin was closed with catgut sutures. Plaster of Paris over all. Parrish. *N. Y. Medical Journal*, 1892.

Talipes Valgus.—Transplantation of the tendon of the tibialis anticus to the tendon of the extensor proprius hallucis. Phocas. *Revue d'orthopédie*, 1893; *Zeitschrift für orth. Chir.*, 1894.

Transplantation of the flexor longus digitorum to the tibialis posticus above the malleolus, followed by a second operation with transplantation of the peroneus brevis to the tibialis posticus. Dorfner. *Münchener med. Woch.*, 1898.

Division of the peroneus longus at the cuboid and the tibialis anticus six centimetres from its insertion. The proximal end of the former tendon was passed through a tunnel made under the skin and spliced in with the tibialis anticus. Good. Ghillini. *Centralbl. für Chir.*, 1895.

An incision an inch and a half long was made, extending from just below the annular ligament obliquely over the tendons of the extensor proprius hallucis and the tibialis anticus. The sheath of each tendon was carefully opened for a distance of about an inch. The tendons were then split with a small Adams's fascia knife and an inch flap taken off of each, the flap from the tibialis anticus being left attached to the distal, while that from the extensor of the great toe was attached at its proximal or muscular end. Before incising the tendon of the extensor of the great toe, it was pulled down by means of a blunt hook, so that a flap could be gotten as high up as possible, first, to relax the tendon and relieve the hammer toe; secondly, so as to insure the action of the extensor proprius hallucis on its new insertion. The opposing tendon surfaces were then

freshened and sewed together with a catgut suture for a space of an inch or more and the wound closed. Plaster-of-Paris cast applied to hold the foot in position. Milliken. *Medical Record*, 1895.

In four cases the transplantation of the extensor proprius hallucis to the tibialis anticus, in five more a portion of the tendo Achillis to the tibialis posticus, and also the peroneus longus to the tibialis posticus. Codivilla. *Public. estratte d'all Archivio di ortopedia*, anno xvi, 1899, No. 4.

Talipes Varus.—A tendinous strip, $2\frac{3}{8}$ centimetres from the outer side of the gastrocnemius, was attached to the peripheral ends of the peronei tendons with the foot placed in the greatest possible pronation and flexion. Good. Lipburger. *Centralbl. für Chir.*, 1895.

Talipes Calcaneus.—The tendons of the peroneus longus and brevis were divided behind the malleolus and attached to the stump of the tendo Achillis after it had been divided. The peronei were thus fastened to the distal extremities of the divided tendo Achillis. Nicoladoni. *Archiv. f. klin. Chir.*, 1882.

A similar case is reported by v. Haecker, and three others are referred to by Maydl as having been done in Albert's clinic. *Wiener med. Presse*, 1886.

The peroneus longus was divided above the external malleolus and its proximal end sutured into a buttonhole opening made in the tendo Achillis. Joachimsthal. *Centralbl. f. Chir.*, 1899.

Transplantation of one half the flexor longus digitorum and the peroneus longus to the tendo Achillis. Drobnik. *Deutsch. Zeitschr. f. Chir.*, Bd. 43.

Transplantation of the tendo Achillis to the tibialis posticus and the peroneus longus. Codivilla. *Public. estratte d'all Archivio d'ortopedia*, anno xvi, No. 4.

Calcaneocavus.—The tendo Achillis was cut two centimetres from its insertion in such a way that strips $1\frac{1}{2}$ millimetre in thickness were left standing on either side, and by prolonging them upward three centimetres, a flap with its base upward was formed. The flexor hallucis was then divided and implanted into the peripheral stump of the tendo Achillis. The strips were then applied to its side and the flap let down and attached posteriorly. Schramm. *Klin. ther. Woch.*, 1898.

Talipes Calcaneovalgus.—An oblique incision, four inches long, crossing the tendo Achillis about one inch above its insertion into the os calcis. The tendo Achillis freed, and the tendon of the peroneus brevis passed under this and attached to the tendon of the flexor longus pollicis. The tendon of the peroneus longus was then attached to the tendo Achillis. Goldthwait. *Trans. of the Am. Orthop. Ass'n*, 1895.

The same operation, supplemented two weeks later by an operation on the anterior tendons. An oblique incision was made across the front of the leg just above the ankle joint and the tendons carefully separated. The tendon of the peroneus tertius and the outer segment of the tendon of the extensor longus digitorum were divided as low down as possible and attached to the tendon of the tibialis anticus. Same author.

The same operation was done on the anterior muscles as was done in the second case, and then instead

of attaching the peroneus tertius to the tibialis anticus, the tibialis anticus was split and attached to the peroneus tertius. Same author.

Shortening of the tendo Achillis and fastening of the tibialis anticus to the extensores proprii hallucis. Le Dentu. *Revue d'orthopédie*, 1901.

Paralysis of all the foot and leg muscles except the peronei and extensor longus digitorum.

Transplantation of the peroneus longus to the tendo Achillis, of the peroneus brevis to the flexor longus pollicis and of the extensor longus digitorum to the tibialis anticus. Cone. *Johns Hopkins Hospital Bulletin*, 1901.

Hamstring Contraction.—Knee flexed and foot dropped, due to paralysis of muscles supplied by the external popliteal nerve, as the result of an injury dividing the nerve. Nerve exposed and reunited. Tibialis posticus divided near insertion and attached just below the ankle to the tendons of the extensor longus digitorum. Then the tendo Achillis was exposed, and a longitudinal incision about three inches long having been made toward its outer edge, the band thus separated was divided near its insertion and its lower end, being carried around the fibula just above the external malleolus, was attached to the tendon of the peroneus longus where this passes along the outer surface of the os calcis. Eve. *Transactions of the Clin. Soc. of London*, Vol. xxxi.

Deformity of the Knee.—In three cases the sartorius was fastened to the quadriceps extensor cruris as there was paralysis of the anterior thigh muscles without involvement of the sartorius. Owing to these changed conditions, the quadriceps extensor, instead of being a large, fleshy muscle, acting as the fulcrum over which the sartorius should act and produce flexion, abduction and outward rotation of the thigh, and to a limited extent extension of the knee, it was merely a thin band and the sartorius rested on the femur, and by its contraction produced flexion at the knee. By attaching it to the quadriceps extensor cruris it was made to act as an extensor of the leg. Goldthwait. *Trans. of the Am. Orthop. Ass'n*, 1897.

In speaking of this operation, Bradford says that the transplantation of the sartorius to the rectus is a measure usually without difficulty, the only difficulty being the abnormal position of the sartorius, which is often nearer the hamstring at its lower attachment. A curved incision at the lower end of the femur will bring to light the attachment of this muscle, which should be entirely freed, brought up and transplanted into the firm sheath of the extensor cruris. He also suggests that possibly we may be able to transfer the glutei to supplement the power of the paralyzed adductors, adding that shortening of the adductors also may be of value, but he does not report any case. (*Medical News*, 1901.)

Persistent Contraction at Knee Joint.—Division of the semi-tendinosus and biceps at their insertion. Transplantation respectively of the cut tendons to the inner and outer side of the quadriceps extensor cruris. Heusner. *Deut. med. Woch.*, 1901.

In the upper extremities, many cases of tendon transplantation have been reported. Many of them, however, have been for traumatism, where it was impossible to find the divided ends of the cut tendons, but as this paper deals only with paralytic

cases they are not referred to. In the following cases the operation was for the relief of paralytic conditions:

"At the Clinical Society, Mr. Tubby and Dr. J. Purves Stewart showed a case illustrating a new method of treating old-standing paralysis of the upper root of the brachial plexus. A man, aged fifty-seven, fell on his shoulder and head two years ago. He was unconscious for an hour afterward, and on recovery was unable to use his left arm. After treatment at various hospitals without benefit he was admitted to Westminster Hospital. There were marked paralysis and atrophy about the left shoulder and upper arm, and total loss of electrical excitability in the deltoid, infraspinatus, biceps, brachialis anticus and supinator longus on the left side, and consequent inability to adduct the left arm or flex the elbow. There was also some anæsthesia along the outer side of the upper arm and forearm, which subsequently disappeared. These symptoms pointed to paralysis of the upper roots of the brachial plexus of the Erb-Duchenne type. Twenty months after the accident Mr. Tubby transferred part of the triceps and fixed it into the biceps, with the object of restoring the power of flexion at the elbow, and a month later attempted to restore power to the deltoid. Since the operation the transplanted portions of muscles have been assiduously massaged and the faradaic current has been applied. There has been great improvement in the movements and in the utility of the limb. The patient can flex the elbow fairly, and during flexion the transplanted part of the triceps can be felt in front of the elbow and both galvanic and faradaic excitability have returned. He has not yet recovered the power of abducting the arm, but the transplanted part of the pectoralis major can also be felt to harden. At first there was a total loss of excitability both to induction shocks and to the galvanic current. Three months after operation the galvanic excitability returned and six months after faradaic reaction could be demonstrated." London letter, *Journal of the Am. Med. Ass'n*, February 27, 1902.

Drop-wrist.—Median incision on dorsal surface of the forearm, above the wrist, twelve centimetres long. The extensors of the fingers and the extensors of the wrist were divided six or seven centimetres above the joint. A median palmar incision was then made and after dividing the superficial flexors, an opening was made in the interosseous space and the central stumps of the flexors were brought through and sutured to the peripheral stumps of the flexors. Rochet. *Lyon méd.*, 1897.

Incision made on ulnar side of forearm. After the flexor carpi ulnaris had been divided, its central end was brought around and fastened to the peripheral end of the extensor carpi ulnaris, which had also been cut across. The wound was closed and the hand fixed in hyperextension. Suture material used was catgut. On account of its early absorption, the skin reopened; the tendons, however, remained perfectly united. To close the skin opening, silk sutures were used. Wound healed *per primam*. Operation was unsuccessful in that there was only a minimum amount of extension afterward and the deformity soon returned.

In a second operation on the same individual, Franke decided upon transplanting the supinator

brevis, because there was a slight amount of supination present. On examination it was found so atrophied that the plan was abandoned. Instead, the tendon of the extensor carpi radialis longior was shortened; but the surgeon not being satisfied, a third operation was done in order still further to shorten the tendon. This was followed by a complete motor paralysis of the forearm, due to the fact that the Esmarch bandage was left on for several hours after the operation, but finally the arm was not only restored to its former position, but showed marked improvement on the radial paralysis. The hand was somewhat overextended and the motion was very good. Franke, Jena, 1898.

Old hemiplegia, paralysis of the extensors of the hand. Function of the thumb and little fingers retained. Tendon of the extensor carpi radialis was sutured to the extensor communis digitorum. Keiler. *Centralbl. f. Chir.*, 1899.

An incision three inches in length is made in the middle of the forearm as for ligature of the radial artery. The inner edge of the supinator longus is rapidly defined, and beneath it the radial artery and nerve. The latter structures are drawn inward and the distal part of the pronator radii teres is separated from the surrounding muscles and fascia. Its tendon is then removed from the radial attachment, care being taken not to remove the periosteum. The pronator radii teres is then held aside and an opening is made into the interosseous membrane just internal to the inner border of the flexor longus pollicis. An aneurysm needle is then passed behind the radius from without inward and as close to the bone as possible; a sufficient space is made for the passage of the tendon of the pronator radii teres, and the aneurysm needle is left with its eye toward the ulna. The tendon of the pronator radii teres is then transfixed with silk of medium thickness, in the form of a Staffordshire knot, leaving two free ends. The ends are passed through the eye of the aneurysm needle, and by traction on it the tendon of the pronator radii teres is brought around the radius. The ends are now utilized in the following way so as to secure the tendon to the bone. They are re-threaded on separate suture needles and the tendon is grafted thus to the periosteum. One suture is passed through the periosteum on the outer side of the radius above the transplanted tendon and the other passes through below. The two ends are then knotted together over the tendon. But I am disposed to think that it is better to work a drill through the bone from before backward and near the outer surface and then secure the ends through the aperture. This completes the first part of the operation.

The second part consists in dividing the tendons at the wrist. A transverse incision is made there, the median nerve is defined and protected, and the following tendons are divided; the flexor carpi radialis, the flexor sublimis, palmaris longus, flexor carpi ulnaris, and, if the thumb is strongly flexed and adducted, the flexor longus pollicis. Both wounds are then closed and dressed and the limb is put up with the elbow extended, the forearm supinated, and with wrist well flexed for eight days. From this time onward till the sixth week the angle of flexion at the wrist is gradually diminished until it is in a straight position. Here the limb should

be maintained while the extensors and supinators are massaged and stimulated with interrupted current, care being taken to control the limb with a splint reaching from the upper arm to the fingers. The arm recovers its use very rapidly indeed.

I have now practised this operation in two cases with great success, and I find that in three months after the operation the patients could use the hands well and perform such fine movements as picking up a pin. Tubby. *Pædiatrics*, 1898.

Transplantation of two muscles to the extensor communis digitorum. First, division of the extensor carpi radialis longior, and attachment of the proximal end to the extensor digitorum, and the distal end to the supinator longus. Secondly, a slip was taken from the extensor carpi ulnaris and fastened into the extensor digitorum. To effect extension of the thumb, he freshened and united the sides of the abductor pollicis and the extensor brevis pollicis. Then he attached half the tendon of the extensor carpi radialis brevior to these. Keiler. *Centralbl. für Chir.*, 1899.

Shortening of the extensor carpi radialis longior, then division of the extensor carpi ulnaris, and fastening to the extensor communis digitorum. Hoffa. *Berliner klin. Woch.*, 1899.

Transplantation of the extensor carpi radialis longior to the extensor digiti and half of the extensor brevis to the extensor pollicis. Drobnik. *Deut. Zeitschr. f. Chir.*, Bd. 43.

An incision two inches long was made over the dorsal surface of the wrist; the extensor carpi radialis longior and brevior were cut and shortened as much as possible. The divided ends of the tendons were sutured together by means of silk. Wound closed with catgut, hand put up in hyperextension. Wound healed *per primam*. October 17th, incision on dorsal aspect of wrist, two inches long, over outer extremity of the right ulna and extensor carpi ulnaris was exposed and shortened as much as possible. To this shortened tendon was then fastened the flexor carpi ulnaris which had previously been divided. Hand put up in hyperextension. Wound healed *per primam*. Whitman, quoted by Townsend, *Medical News*, 1900.

Incision in the middle of the flexor surface over the wrist exposing the tendons. The flexor carpi radialis, the flexor carpi ulnaris, and the palmaris longus were divided by scissors just above the annular ligament. Silk was stitched to each tendon and each fastened to an artery clamp, so that they should not draw up out of reach. The parts were then covered with sterile gauze, and the hand turned over and an incision made on the dorsum of the wrist; the extensor communis digitorum was exposed about one and one half inches above the joint, the tendon being pulled to one side; dissection was made through the upper edge of the pronator quadratus and between the bones to connect with the flexors previously cut. These tendons were then slipped through, and to the extensor communis were attached the three flexor tendons previously mentioned. The lengthened extensor communis digitorum was folded on itself twice, so as to shorten it and between these folds the flexor tendons were stitched. The sewing was done with silk. The wounds were then closed with catgut and dry dress-

ings applied. The hand was placed in a hyperextended position and a plaster-of-Paris bandage applied. Townsend. *Medical News*, 1901.

As a result of noting many failures from stretching of tendons or from a failure for the tendons transplanted to properly unite, in 1900 Fritz Lange suggested a new departure, which he states was originally employed by Drobnik, presumed to be an improvement on the other methods, namely, to attach the live tendons that were expected to do the work of the paralyzed tissues directly to the periosteum, and he reports a number of interesting cases. He alleges a double advantage in the new operations. First, the security of the new attachment, no atrophied tissue being used. Second, the surgeon has a wider scope for satisfying the indications in a given case. He is very careful as to the selection of the point of insertion, and specially insists that care be taken not to interfere with the nutrition of the tendon by unduly stretching it, yet recognizes the necessity of so stretching it that it will be enabled to act to the best possible mechanical advantage.

In a case of equinovarus, the tibialis anticus tendon was split from its insertion to the belly of the muscle. The outer edge was then separated and attached to the periosteum of the cuboid bone.

In a case of calcaneo valgus, he divided the peroneus longus on the outer border of the foot, passed it between the tendo Achillis and the bone and attached it to the periosteum of the os calcis, internal to the insertion of the tendo Achillis.

In another case, the peroneus longus was cut at the outer border of the foot and brought across the front of the leg and attached to the periosteum of the scaphoid bone.

In an interesting case of quadriceps paralysis, where the patient was unable to raise the leg, he divided the tendons of the biceps and semitendinosus as their insertions to the tibia and fibula brought both of them anteriorly, the biceps on the outer side and the semitendinosus on the inner side, and united them on the median line, above and below; then, by means of thick strands of silk, he fastened them into the patella and fastened the conjoined tendon thus made into the periosteum of the tibia. In these cases it was necessary to lengthen the tendons, as the biceps and semitendinosus were not long enough to reach over the front of the patella. This procedure was used successfully in three cases.

Wolf, of Berlin, has suggested another possibility in tendon transplantation, namely, that we transplant into the bone, thinking this an improvement over the transplantation into the periosteum, and he drills a groove, into which a tendon is fastened.

From a review of the literature and from a personal experience the author believes that there are great possibilities for good in the operation of ten-

don transplantation for the relief of paralytic deformities. From the nature of the cases it is not desirable to lay down rules as to the particular operation that should be done in a given case of deformity, as this can only be done after a careful study of the individual case. Everything possible should be studied and a careful analysis made of the paralyzed and of the non-paralyzed muscles, and then a clear idea established of what can or cannot be done. Success will depend upon the selection of suitable cases for the operation; on the tendons transplanted or on the combinations employed; on the manner in which the work is done and upon the after-treatment. Perfect asepsis is essential and strict attention to technics, dressings, and the position in which the limb is placed after the operation.

In the lower extremity the after-treatment is most important, as the body weight on weakened structures may quickly undo the work of the surgeon. To those who contemplate doing this work, therefore, a thorough knowledge of the use of braces will be of great benefit. In the upper extremity for wrist drop the author begs leave to repeat what was said in an article printed in the *Medical News* for July 14, 1900:

"Most of the operations so far done have consisted simply in dividing tendons that were too strongly contracted and fastening them to other tendons which were too long or paralyzed. Future operators, I believe, will somewhat modify this procedure. It is very essential that the tendons which are too long should be shortened before the paralyzed tendons are fastened to them. But I believe that our procedure in regard to the cutting of the tendons which produce the deformity will differ somewhat from what it has been. There is no reason why we should entirely destroy the utility of these tendons by cutting them loose from their attachments, because there are various methods of lengthening them, and a tendon which sharply contracted, if lengthened, might still continue to act and a portion of its power might be given to another which does not properly act. In many of these cases the contractures are active, and yet the muscles on both the dorsal and palmar surfaces of the wrist will act to faradism and voluntarily contract, but the hand is held so flexed that the power of the extensors is *nil*. Yet, if we divide entirely the flexors of the wrist, our future wrist flexion is done away with and can only occur secondarily after the fingers have contracted by the action of the deep flexors. In these cases it seems to me that it would be desirable to save at least one or more of the flexors."

The City Hospital, Kansas City.—Dr. C. C. Conover, of Kansas City, has been appointed house surgeon at the City Hospital, to succeed Dr. O. H. Parker, who has resigned.

OPERATIONS FOR THE RELIEF OF PARALYTIC DEFORMITIES, WITH SPECIAL REFERENCE TO TENDON TRANSPLANTATION: INTRODUCTION, HISTORY, INDICATIONS FOR OPERATION.*

By ROYAL WHITMAN, M. D.

The subjects for discussion this evening are the operations for paralytic disabilities that are in a sense curative, the procedures that are undertaken simply for the purpose of overcoming deformity being excluded from present consideration.

When one speaks of paralysis from the orthopædic standpoint he has in mind anterior poliomyelitis, beside which other diseases of the nervous system are relatively insignificant. In at least 80 per cent. of this class of cases the lower extremity is involved. It will be understood, therefore, that the treatment to be discussed refers primarily to the disabilities of the lower extremity caused by anterior poliomyelitis.

The operations that have been referred to as being in a sense curative are tendon or muscle transplantation, arthrodesis, and their combinations. The object of the first procedure is the restoration or improvement of function by a readjustment of the power that has become unbalanced by the loss of one or more of the muscles.

Arthrodesis has for its purpose the abolition of joint motion. It is almost never indicated unless the paralysis is complete, and it is curative only in the sense of preventing recurrent deformity.

Tendon Transplantation.—The first record of tendon transplantation is that of Nicoladoni, in 1882 (*Archiv für klinische Chirurgie*, Bd. 27). In three instances he divided the peronei tendons behind the external malleolus and attached them to the tendo Achillis, with the aim of remedying paralytic calcaneus. This operation was repeated by von Hacker in 1886, and the procedure was described in Hoffa's text-book, published in 1891, with the suggestion that the principle deserved wider application. It is also noted in Redard's *Orthopædic Surgery*, which appeared in 1892.

The first operation on the front of the leg was performed by B. F. Parrish, then of New York, in 1892 (*New York Medical Journal*, October 7, 1892), who united the tendon of the extensor proprius pollicis to that of the paralyzed tibialis anticus for the relief of valgus. Since this time the principle has been applied to paralysis of the larger muscles of the extremities and to other forms of paralytic disability. Of the many variations in tech-

*Contributed to a "symposium" on Tendon Transplantation at the New York Academy of Medicine, Section of Orthopædic Surgery, March 20, 1902.

nique the most important is the direct attachment of the tendon of the transferred muscle to the periosteum at the point of greatest mechanical advantage, as suggested by Lange (*Münchener medicinische Wochenschrift*, No. 15, 1900).

The history of the operation covers, then, a space of twenty years, the first half of which might be characterized as a dormant period as contrasted with the second half, in which there has been a very general exploitation of the possibilities of the procedure. Its actual worth in orthopædic treatment is, however, as yet undetermined.

The principles of the treatment have been indicated. As each muscle has an essential function, its loss induces distortion. The object of the transplantation is to readjust the remaining power by taking motive force from one part and placing it where it will be of greater service. The operation should not be undertaken until the degree of final and irremediable paralysis has been determined. This stationary stage may be reached in a comparatively short time, but in the ordinary cases in which, for want of protection, the part has become distorted, it is practically impossible to estimate the latent muscular power until the deformity has been corrected, and until the enfeebled muscles have been stimulated by functional use. In general, a period of two years at least should intervene between the onset of the paralysis and the operation.

The first essential for success by this means is a clear understanding of the mechanism of the disabled part and of the relative importance of its functions. As regards the foot, for example, plantar flexion is far more important than dorsal flexion, because the inability for plantar flexion indicates the loss of the principal lifting and propelling power of the body. Dorsal flexion is more important than adduction or abduction, because the drop-foot, so called, interferes seriously with locomotion. Adduction is more important than abduction, because the loss of power to turn the foot inward induces the attitude of valgus, which is more disabling and more difficult to remedy than the opposite deformity.

To the importance of these movements the power of the muscles corresponds, and as each of them is indispensable to perfect function its loss can never be entirely replaced.

In fact, practical cure is only possible in those cases in which the paralysis is restricted to one of the weaker muscles. Successful treatment is, therefore, by no means synonymous with cure. On the contrary, some of the most satisfactory results are those in which the main object of the procedure has been primarily to remove a distorting force, the actual transplantation being of secondary importance.

The possibilities of tendon and muscle transplan-

tation are greatly overestimated, at least in the popular mind; and many of the reported cases indicate a trust in the supplemental power of Nature that it is not warranted by experience. To illustrate: The original operation of Nicoladoni, of transplanting the two peronei muscles into the tendo Achillis, is a useful procedure in the sense that it may lessen the tendency toward deformity, but one must indeed be credulous to believe that these two feeble muscles working at a disadvantage can actually replace the function of the great calf muscle. Nor is it probable that one muscle can act as a flexor and as an extensor at the same time, a possibility that is apparently believed by those who would replace the principal dorsal flexor of the foot by a section of the principal plantar flexor.

It may be admitted that, under favoring conditions, one may count upon a certain degree of compensatory hypertrophy of the transferred muscle, but it is very doubtful if a weak muscle can ever carry on its own work and at the same time that of a far more powerful neighbor, as in the original operation of Parrish.

It has been suggested that a section of living muscle implanted in one that is paralyzed will actually regenerate the dead structure, but this hardly deserves serious consideration.

The reports of results of tendon transplantation are unsatisfactory, first, because one is uncertain of the standard by which success is estimated, and, secondly, because these results are in few instances final. Many of the cases have been reported a few months after the operation, and it is usually assumed by the writers that, with the lapse of time, further functional improvement may be expected, whereas in most instances the contrary is the fact.

As ordinarily performed, the preexisting deformity is over-corrected and the foot is then fixed in a plaster bandage for several weeks or months until the position of over-correction is so impressed upon it that, on the removal of support, functional success seems assured. This primary effect persists for a certain time, until the shortened tissues again stretch and the grafted muscle is subjected to the full strain of use, when functional weakness again becomes manifest. This partial relapse may be delayed or prevented by massage, exercise, and appropriate support; in other words, by the care that almost always makes a result in private practice better than in hospital work.

Thus far, tendon and muscle transplantation has been considered in its relation to disabilities of the foot, but the principle applies, of course, to any other part of the body. With the aim of restoring the power of extension of the leg, the smaller muscles, notably the sartorius and the extensor vaginæ femoris, have been transplanted to the insertion of

the quadriceps extensor; and the hamstring tendons have been readjusted with more or less success. The field of the operation in the upper extremity is limited, because paralysis from anterior poliomyelitis is comparatively uncommon in this situation, and because the complicated functions of the hand can hardly be restored by operative treatment.

In cerebral palsy of childhood the flexors of the knee have been transferred to the extensor side with the effect of improving function somewhat, an effect explained rather by removal of a distorting force than by the strengthening of the opposing group.

It is probable that the operation will be most serviceable in cases of the hemiplegic type, in which the use of the hand is hampered by a persistent palmar flexion. This may be overcome in part by transferring the palmar flexors to the dorsal aspect of the wrist.

Tendon transplantation applies in principle, of course, to paralysis from any cause, but it is hardly necessary to discuss such unusual applications of the treatment.

The standard by which to test the results of tendon transplantation as a means of cure should be the normal function; as regards the foot, for example, the ability to carry out the normal movements and to assume the normal postures when in use. From this standpoint one must conclude that the operation is essentially palliative, rather than curative, and that in most instances it will supplement, rather than supplant, mechanical support.

It may be stated, however, that the judgment of the parents and relatives of the patients is far less critical. What appeals to them is the improvement in functional ability and in the circulation and strength of the limb, effects that are often apparent even when the local result of the operation is far from satisfactory.

Arthrodesis, or artificial ankylosis, was introduced by Albert in 1881 (*Centralblatt für Chirurgie*, No. 48; *Wiener medicinische Presse*, 1882, No. 23), originally for the purpose of enabling the patient to dispense with apparatus, by changing a dangling and insecure support into a stiff one. The field for the operation is very limited. The majority of patients with paralyzed extremities are children or adolescents in whom the operation will hardly restrain deformity. The stiffened hip joints and knee joints almost always become flexed, and, even at the ankle where the operation is of greatest service, support is usually required to prevent deformity. The operation is of special service in those exceptional cases in which the muscles of the shoulder joint are paralyzed, while those that move the scapula retain their power. In certain cases it may improve the use of the limb if performed at the elbow or wrist joint.

As a rule, the operation should be performed only in later adolescence or adult life.

Thus far arthrodesis and tendon transplantation have been considered separately, but it is often possible to combine them with advantage. For example, the abolition of the mediotarsal joint, combined with tendon transplantation, may prevent deformity and restore dorsal flexion of the foot; and one of the most effective procedures for talipes calcaneus with lateral distortion toward valgus, is removal of the astralgus, together with the transplantation of the peronei tendons to the os calcis (Whitman, *American Journal of the Medical Sciences*, October, 1901).

In this brief introduction I have endeavored to indicate the principles of operative treatment and its inevitable limitations, which make it necessary to classify results as satisfactory or otherwise, according as they fulfill the purpose for which they are undertaken, quite apart from restoration of normal function.

SUTURE OF A PERFORATING WOUND OF THE SCLEROTIC.*

By CARY KOLLER, M. D.

NEW YORK.

J. F., four years old, was brought to Mt. Sinai Hospital twelve weeks ago with a perforating wound of the sclera of the left eye. The wound was situated near the insertion of the external rectus, had sharp edges, and had the shape of an obtuse angle with a retracted flap. Each side measured a quarter of an inch, so that the whole length was not quite half an inch. Vitreous body hung out of it; the eyeball was not collapsed, but of course very soft. The lens and iris had sunk back, so that the anterior chamber was unnaturally deep. The wound had been produced by the little fellow running against the protruding point of a broken pane of glass placed upon a table.

Under deep general anæsthesia, conjunctiva and Tenon's capsule were dissected and three sutures put through the sclera to unite the wound. On account of the extreme thinness of the sclera, the sutures had to go through its whole thickness. The conjunctival wound was closed over it. The healing was undisturbed. On the next day the lens and iris had regained their normal position. The appearance and function of the eye were perfect. On ophthalmoscopic examination, nothing of the injury can be seen, as it is too peripheral for that.

Suturing of the sclera in suitable cases is no new proceeding, since it was first done by the Italian, Baretti, in 1833. Windsor, Lawson, and Pooley wrote about it in the seventies; since then it has been done more frequently and has been replacing the old method of rest on the back and a bandage.

In wounds with no tendency to gaping, suturing

*Case presented at the Ophthalmological Section of the New York Academy of Medicine on March 17, 1902.

of the conjunctiva may be sufficient, but there is no doubt that suturing of the scleral wound produces a quicker and surer union and diminishes the dangers of infection and, later on, of an interposed cicatricial tissue with a tendency to staphyloma or cystoid cicatrization. Contraindications to suturing are very extended laceration of the sclera, the presence of a foreign body in the eyeball, and symptoms showing that infection has already taken place. The suturing requires very delicate handling to prevent loss of vitreous; for the same reason a speculum is to be avoided and the ends have to be separated by an assistant. If the thickness of the sclera permits of it, the sutures should not take in the whole thickness, but should enter the edges of the wound, threads with two needles being used, as Lawson and Pooley have already pointed out.

Therapeutical Notes.

Cacodylic Acid in Diseases of the Skin.—Saalfeld (*Therapeutische Monatsschrift*, June, 1901) has used cacodylic salts in fifty cases of various skin diseases. The cacodylate of iron or sodium may be given internally in the form of pills containing four grains each, four times daily. A five-per-cent. solution may also be used, of which the dose is from 10 to 20 drops, the maximum daily dose being 40 drops. Subcutaneously a five-per-cent. sterilized solution of sodium or iron cacodylate may be injected in doses of 15 drops. These solutions may also be administered by the rectum in the form of suppositories or enemata. According to the author, the cacodylic salts are far superior to all the arsenical inorganic compounds in the treatment of skin diseases. He has never seen any disagreeable symptoms from their use, though he has found that the injections given hypodermically are often painful. He has obtained excellent results with these drugs in the treatment of lichen ruber planus.

Oil of Turpentine in Nosebleed.—Isatchick (*Vojenno meditsinsky Journal*, 1901, No. 7) saw a case of uncontrollable nosebleed in a malarial patient, the hæmorrhage occurring on an afebrile morning. Tamponing, ergot internally, etc., were of no avail, until, in the evening, tampons soaked in turpentine were introduced, whereupon the bleeding stopped. Two days later, the bleeding recommenced, and tampons of turpentine and cotton were again introduced, with the effect of arresting the hæmorrhage. A third attack of nosebleed was arrested in the same manner after a few days. Billroth recommended oil of turpentine in hæmostasis.

Calcium Peroxide and Its Therapeutic Uses.—Dr. Sophie Hornstein (*Archives internationales de pharmacodynamie et de thérapie*, Vol. 8, p. 428) says that calcium peroxide decomposes on contact with water and is transformed into calcium hydrate, liberating an atom of oxygen. The presence of organic substances favors this decomposition. The antiseptic value of calcium peroxide is equal to that

of calcium hydrate, but is inferior to that of hydrogen peroxide. It is, however, to be noted that calcium peroxide lacks all the faults of the last-named substances. Calcium peroxide has given excellent results in the treatment of gastro-intestinal affections in infants, particularly in acid dyspepsia. The action of this substance is of a double nature. On the one hand, it possesses the alkalinity furnished by the presence of the earthy base, and, on the other, it has the oxidizing antiseptic action of oxygen in the nascent state.

The author has tested the value of calcium peroxide as an antiseptic in the mouth. This substance cannot be used in the pure state as a tooth powder, because it irritates the mucous membrane and leaves a bad after-taste. In emulsions varying in strength from 2½ to 10 per cent., calcium peroxide makes the teeth whiter, more transparent, and softer, but does not change their structure. The drug disinfects decayed teeth quite rapidly, but, being insoluble, it does not always penetrate sufficiently into the cavities of carious teeth, so that the disinfection is not always complete. The author recommends the use of a tooth powder containing from 20 to 30 per cent. of calcium peroxide.

Attempts to use calcium peroxide as an antidote in poisoning with potassium cyanide have shown that this treatment may be successful when the dose of cyanide but slightly exceeds the fatal dose.

Subcutaneous Injections of Paraffin.—Dr. Ludwig Moskowicz (*Wiener klinische Wochenschrift*, 1901, No. 25) has studied the effects of paraffin injections as recommended by Gersuny. The principle of this method is based upon the fact that paraffin may be introduced into the tissues without danger, and is not absorbed but remains as a foreign body which does not do any harm. According to Moskowicz, paraffin injected under the skin assumes approximately the consistence of cartilage, probably because it becomes encapsulated. In one case this author found that deposits remained intact for two years. Among the thirty cases so treated by the author there were defects of the palate, nasal deformities, defective cicatrices or scars, cases of prolapse of the uterus, etc.

This method may be well used in cosmetic surgery. Dr. Scanes Spicer reported recently in the *Clinical Journal* a case in which he had improved the shape of a defective nose; judging from the photographs presented the result was very satisfactory.

Salicylic Acid in the Treatment of Soft Chancre.—According to E. Szanto (*Wiener medicinische Presse*, No. 37, 1900), the following ointment is useful in the treatment of soft chancre:

℞ Salicylic acid. 15 grains;
 Petrolatum. 1 ounce;
 Tincture of benzoin. 30 grains.
 Mix. Apply externally.

For Lumbago.—The *Practitioner* for April gives the following liniment:

℞ Tincture of opium. 2 drachms;
 Ammonia water. 1 drachm;
 Tincture of cantharides. 3 drachms;
 Soap liniment. 10 “

M.

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THE MARINE-HOSPITAL SERVICE.

Legislation that is uncalled for is always to be deprecated on general principles, as is universally recognized. This being the case, the recent introduction into Congress of a number of bills affecting the Marine-Hospital Service has probably led to some anxiety in the profession lest harm might be done to a branch of the public service that for many years past has furnished one of the most notable examples of creditable work, one of which the physicians of the entire country are justly proud. But this very profusion of proposed legislation naturally leads to a stricter inquiry as to its necessity than a single bill would be likely to give rise to. Such inquiry on our part, among past and present officers of the service, leads us to the conclusion that the organization is not sufficiently backed by statutory law. To a very great extent, we learn, the authorization of the workings of the service consists of nothing more stable than the regulations promulgated by the President and a Cabinet officer, regulations that may at any time be rescinded by themselves or by any one of their successors in office, whereas statutory enactments can be undone only in the light of publicity and by the slow-working machinery of Congressional action. For example, as we understand, there is no statute defining the number of officers that shall constitute the corps, and as a consequence promotion from grade to grade has been indefinite, and there is none declaring that the surgeon-general shall be chosen from among the members of the corps, or even, *mirabile dictu*, that he shall be a medical man, except by implication. It is a fact, we are informed on what seems to us unquestionable authority, that a druggist once sought the appointment, and the corps felt no security that he would not succeed in his attempt. Moreover, the surgeon-general's ten-

ure of office is not specified by law; he may be wholly removed by the President for reasons not connected with his efficiency, without any provision for his return to the corps under his former rank, or he may retain his position indefinitely by suffrance of successive administrations, with manifest detriment to the service and injustice to such of his subordinates as may be well worthy to succeed him. With no expectation of reaching the honors of the corps, stagnation of effort would seem to follow in the upper ranks. This is not natural in a corps governed by military rules and regulations.

These defects in the foundations of their organizations are seriously felt by the officers of the corps, and they are therefore warmly interested in the bills now before Congress. Our information is to the effect that they look with most favor upon the bill entitled A Bill to Establish a Commission of Public Health and Fix the Salaries of the Commissioned Officers of the Marine-Hospital Service, introduced by Senator Cockrell, of Missouri, and published in our issue for April 19, on page 703.

By it a commission of public health consisting of five officers, namely, a commissioner of public health, who is to be selected by the President, by and with the advice of the Senate, from the surgeons of the Marine-Hospital Service, and an advisory board composed of the surgeon-general of the army, the chief of the Bureau of Medicine and Surgery of the Navy, a representative of the Department of Justice versed in international law, and the chief of the Bureau of Animal Industry, is established. It is provided that the commissioner of public health shall hold his office for a term of four years, and at the expiration of this period shall resume the grade, rank and precedence in the service held by him at the date of his appointment as commissioner. We presume this provision is intended to make this office similar in tenure to that of the surgeon-general of the navy, and in line with cognate branches in the army, where the quadrennial term is now being generally adopted.

The commissioner of public health is to discharge the duties now performed by the surgeon-general of the Marine-Hospital Service. It appears from this that the Marine-Hospital corps proper becomes one of the adjuncts of the government in executing health laws of the government without disturbance of its

organization and personnel. Provision is made for a definite number in the corps (108), of whom thirty-five shall be surgeons and the remainder passed assistant and assistant surgeons, with stated salaries and longevity pay. We note an excellent provision in section 5, by which the widow and young children of any commissioned officer of the service who has died of an infectious or contagious disease contracted in the line of duty, shall receive a sum equal to two years' salary and allowances prescribed for the grade of the deceased officer.

Sections 10 and 11 provide for a conference between the commissioner of public health and the State health authorities in substantially the same manner as the other bills covering this matter, and it seems that all contentions of the State health authorities for associating with the national health bureau are amply met in these two sections. Medical and scientific experts not in the regular employ of the government may be appointed, under the provisions of this bill, to inquire into questions affecting the public health, and this seems to be a most excellent and satisfactory plan whereby specialists in any line of medical and scientific work may be temporarily employed when the service does not have such men in its ranks.

SUNLIGHT AND MALARIA.

In the March number, the first one issued, of a new bimonthly entitled the *Washington Medical Annals*, which is the journal of the Medical Society of the District of Columbia, Dr. A. F. A. King brings forward, with uncommon ingenuity of argument, the theory that sunlight is necessary for the sporulation of the *Plasmodium malariae*, and, inferentially, that the development of malarial fever in darkness is so improbable as to be practically impossible. He cites many experienced observers to the effect that malarial paroxysms rarely take place at night, and perhaps it was this observation, certainly not yet explained, so far as we are aware, that first led him to conceive the idea for which he contends.

Dr. King lays down the following propositions: "1. The sporulation of malarial parasites in the blood will be retarded or fail to take place at all in continued darkness. Other things being equal, this sporulation will be the more rapid and complete in direct proportion to the intensity of the sunlight to which the body may be exposed and the duration of

such exposure. 2. To prevent malarial fever (after infection), protect the human body from the light of the sun. 3. To cure malarial fever, protect the human body from the light of the sun, or in some other way prevent the parasites from receiving this light." He concedes that the great array of arguments which he brings to the support of these propositions does not establish them; indeed, he says that they constitute only a "working hypothesis," and he asks that they be put to practical tests. To subject them to such tests would not, apparently, be difficult, and, whatever *a priori* ideas may be entertained concerning them, we hope that they will meet with thorough investigation.

Foregoing the attempt to indicate the entire list of points that Dr. King brings up in support of his contention, we will mention some of those that have seemed to us salient. He accounts for the comparative immunity of the negro by the obstacle to the penetration of light afforded by the pigment in the negro's skin, although he admits that experiments have shown that the skin of some negroes allows of the passage of light as readily as the skin of a white man. He entertains the idea that the blood itself in the negro is "too dark in tropical countries to allow transmission of light to the parasitically infected blood corpuscles," and thinks the question well worth investigating. "Numerous authorities," he says, referring to an article published in the *New Orleans Medical and Surgical Journal* for September, 1851, "affirm that the negro's blood is darker than that of white persons." He mentions "malarial melanosis"—meaning the darkening of the skin that may sometimes be due to malaria—as "a process of conservative adaptation to environment."

But absolute exclusion of light, according to Dr. King, is not required for the prevention or cure of malarial disease; shutting off all but the violet rays will suffice, and so also will fluorescence of the blood, which he thinks is caused by quinine. The author seems to admit that there are some medicinal agents that are capable of darkening the blood, for he says: "Very many of the old remedies employed successfully for intermittent fever were derived from barks, most of which contain tannic acid. This acid, combining with iron in the blood, of course produces tannate of iron, which is the basis of black ink." But it is only fair to add that he couples this with the remark: "Oak bark and powdered nutgalls are re-

ported to have cured ague in some cases when quinine had failed—a statement to be taken *cum grano salis*."

Dr. King's theory may seem fanciful, and it may appear to rest largely on somewhat strained deductions, but it should not be jauntily dismissed; in accordance with the author's desire, it ought to be subjected to careful and unprejudiced investigation. Many a derided idea has eventually met with general adoption, and any suggestion that carries with it but a modicum of the plausibility that unquestionably attaches to his is deserving of serious consideration. At all events, we must applaud his fertility in argumentative resources.

TRANSCENDENTALISM IN MALPRACTICE.

A somewhat extraordinary action for malpractice was recently tried, according to the *British Medical Journal* for April 8th, in the King's Bench Division of the English High Court of Justice. A professional nurse brought suit against a physician "alleging that he had negligently, unnecessarily, and improperly prescribed for her morphine and other drugs with the result that she had become addicted to the morphine habit, and had been in danger of losing both her reason and her life." It appears that the patient, who was the subject of severe spasmodic asthma, and was further possessed of a weak heart, had had hypodermic injections of morphine given her by the physician to lessen the severity of the accesses, and that she contracted the morphine habit thereafter. Medical and other witnesses were called, who testified generally that the use of morphine was an improper treatment in such cases, that it was especially unsuitable in the plaintiff's case, and had, moreover, been given to excess. Such eminent physicians, however, as Dr. Theodore Williams and Sir Richard Douglas Powell supported the defendant's statement that the treatment was proper and that the doses were standard ones, and it transpired that the course of treatment had been adopted after consultation with Dr. Mitchell Bruce. The jury promptly gave a verdict for the defendant, adding the opinion that the case should never have been brought into court, in both of which findings the judge agreed.

This case serves to emphasize two points: First, the direct conflict as to whether a given course certainly sanctioned by professional usage and author-

ity, is or is not good practice in a given morbid condition, would have been far better discussed before a medical commission than before laymen, in accordance with the views published in our issue for April 5th; and, secondly, the length to which evil-disposed persons may go in attempting to hold a physician liable for sequelæ of his treatment, not only far removed and unusual, but even at the beginning, and quite as much a consequence of the patient's contributory negligence as a result of the physician's act, is an urgent call to physicians to support the various defense associations, of which the one recently organized in New York at a meeting of the Academy of Medicine is a worthy specimen.

Malpractice accusations resemble accidents, in that in spite of all our care not to encounter them through any carelessness of our own, we can never eliminate the liability to suffer them at the hands of others. Like accidents, therefore, they should be insured against by the prudent physician.

LADY DOCTORS, WOMEN DOCTORS AND DOCTORS.

One of our monthly contemporaries, in its current number, is greatly exercised because some other medical journal has an editorial headed *The Lady Physician*, which our vexed contemporary calls an "ill-advised expression." It prefers "woman physician." So do we, if it is necessary to tack on a sex epithet to the comprehensive title of physician at all. Is there any reason to fear that Dr. Jane Smith, for instance, might be mistaken for a man?

A RECORD IN VIABLE PREMATURELY BORN INFANTS.

Dr. H. R. Mansell records in the *British Medical Journal* for March 29, 1902, the birth on September 25, 1901, of a six-and-a-half-months female child weighing only eighteen ounces. No incubator was used, but for three months the child was kept swaddled in cotton and cod-liver oil rubbed into the abdomen and chest. At the time of writing the child was strong and healthy, somewhat stunted in growth, with a particularly fine crop of black hair. We are inclined to think that the author is probably correct in thinking this a record case.

THE KANSAS CITY ACADEMY OF MEDICINE AND PERNICIOUS ADVERTISEMENTS.

Dr. John W. Kyger recently read before the Academy a paper in which he called attention anew to the danger of a diminishing birth rate, in large part attributable to the unrestricted publication in otherwise reputable newspapers of advertisements of nos-

trums purporting to prevent conception or cut short gestation. As a consequence, certain preambles and resolutions have been prepared by a committee appointed for the purpose, consisting of Dr. Kyger, Dr. H. C. Crowell, and Dr. B. H. Zwart, calling for a censorship of the press in regard to the matter, for the intervention of the Post Office Department, and for cooperation by State medical societies to endeavor to secure such action. There ought to be no difficulty in obtaining such concerted action as is asked for, and we should be very glad if it proved effective. Our own impression is, however, that a few thousand refusals to buy a newspaper containing such advertisements, the publishers being emphatically given to understand the reason, would have more effect.

RATS AND PLAGUE.

A remarkable instance of the relation between rats and plague is recorded by the Sydney (N. S. W.) correspondent of the *British Medical Journal* in its issue for April 5th. The troopship *Antillian* left Capetown with a clean bill of health on February 1, 1901. She arrived at Albany, West Australia, on February 2d, without a single case of sickness of any kind having occurred on board, and without having touched at any intermediate port. On cleansing the holds after leaving Albany, fifteen dead rats were found, and, on February 27th, one of the deck hands employed in the cleansing fell ill, and on arrival at Sydney, on March 2d, his illness was diagnosed as plague by the city health officer. The patient died next day. Ten more dead rats were subsequently discovered, and were found to be infected with plague, and another case of plague also occurred, on March 12th, in the storekeeper who had removed the stores to a lighter, still more dead rats being found during the removal.

From these facts, as the author points out, two very important considerations ensue: 1. That the length of voyage within the limits common with steamships at present does not preclude infection of clean ports by sea from infected ones. 2. That a ship may become infected at a port that lay under no suspicion of plague at the time she left. Whence it follows that measures, at present aimed only at restricting the export of plague rats, must be widened so as to preclude the interchange of all rats, without reference to plague, and must also be taken universally and at all times, for to wait until plague is declared must in many instances mean until too late for prevention. During the recent epidemic in Sydney, it was found that ships could be kept free from rats by the judicious use of sulphur fumigation. These measures, together with adequate care in mooring regulations, seem to indicate the direction in which lies safety from the spread of plague by sea.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 5th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Medical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, May 6th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City) (annual); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, May 7th.—New York Academy of Medicine; Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y., (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, May 8th.—Society of Medical Jurisprudence and State Medicine; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y. (annual); South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Virginia.

FRIDAY, May 9th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the town of Sauger-ties, N. Y.

SATURDAY, May 10th.—Obstetrical Society of Boston (private).

Hospital Staff Appointments.—Dr. J. Samuel Shaffer, of the graduating class of the Miami Medical College, has been appointed house-physician of the State Insane Asylum at Toledo.

The American Academy of Medicine will meet in Saratoga on June 7th, 8th, and 9th. These three dates immediately precede the annual session of the American Medical Association, which will convene there on June 10th and continue for four days.

Medical Societies Fight for a Name.—The Milwaukee County Medical Society, which was recently organized, has appointed a committee consisting of Dr. L. G. Nolte, Dr. W. F. Malone, and Dr. Charles H. Lemon to engage a legal counsel for the purpose of beginning action against the other Milwaukee County Medical Society to ascertain which body has the right to retain the present name.

Changes of Address.—Dr. Joseph F. Chmelicek Luhan, to 220 East Seventy-second street, New York City; Dr. Kenneth W. Millican, to The Laonia, 400 West 153d street, New York City. Dr. Max Stern, to 141 West Forty-third street, New York; Dr. Samuel Stern, to 141 West Seventy-fourth street, New York; Dr. F. L. Wachenheim, to 105 East Eighteenth street, New York.

Cholera in Manila.—Since the beginning of the outbreak, there are said to have been 411 cases of cholera in Manila, with 319 deaths, and 890 cases in the provinces, with 625 deaths. The U. S. transport *Buford* was compelled to put back into quarantine six hours after sailing from Manila for San Francisco, owing to the appearance of a case of cholera on board.

The Baltimore University School of Medicine.—Degrees were conferred upon thirty-one graduates of the Baltimore University School of Medicine at the conclusion of the commencement-day exercises, on April 15th. Dr. H. H. Biedler announced the names of the graduates, and Professor E. Miller Reid conferred the diplomas. Mr. Solomon Babinowitz, of New York, won the class prize.

A Medical Association of Colored Physicians.—The Tidewater Medical Association, composed of colored physicians from Norfolk, Portsmouth, Suffolk, Yorktown, Gloucester, Hampton, Old Point, and Newport News, Va., was organized at Newport News on April 10th, with Dr. F. R. Granger, of that city, as president, and Dr. P. L. Barber, of Norfolk, as vice-president.

Death of a Sleeping Girl.—Press accounts relate the death, on April 20th, of a fifteen-year-old girl who had been asleep for one hundred and seventy-five hours, without regaining consciousness. Every effort to arouse the girl from her long sleep had been without avail. The case has attracted the attention of the medical profession throughout the State.

The Central of Georgia Railway Surgeons' Association held its annual meeting on April 15th. Dr. Hunter P. Cooper, of Atlanta, presided over the meeting, during which there were several interesting papers read. The election resulted in Dr. J. P. Morgan for president, to succeed Dr. Cooper. Dr. Dabney was elected vice-president, succeeding Dr. B. R. Doster, of Blakely. Dr. Travis was re-elected secretary and treasurer.

The West Park Hospital for Women, Philadelphia.—Application will be made to the State Department for the incorporation of the West Park Hospital for Women, at Philadelphia. This decision was reached at a recent meeting of the directors of the institution. Officers were elected as follows for the ensuing year: President, Rev. Floyd W. Tomkins; vice-president, Rev. S. W. Stevens; secretary and treasurer, Dr. William D. Culin.

The New York Academy of Medicine.—A stated meeting will be held in Hosack Hall on Thursday evening, May 1st, at 8 o'clock, under the auspices of the Section in Genito-urinary paper on Abscess of the Prostate, which was discussed by Dr. Arthur T. Cabot, of Boston; Dr. James Bell, of Montreal; Dr. Bransford Lewis, of St. Louis; Dr. Paul Thorndike, of Boston; Dr. F. Tilden Brown, Dr. Frank Hartley, Dr. Alexander B. Johnson, Dr. George E. Brewer, Dr. B. Farquhar Curtis, Dr. John Van der Poel, and others.

Frog Taken from Woman's Stomach.—A unique and quite surprising operation has taken place in Greater New York, where a live frog was removed from the stomach of a woman. The frog was probably swallowed when it was in egg form or in its infant state, a tadpole. It is believed that it lived in the patient's stomach for five years. The frog lived for several hours after the operation, and is preserved in alcohol in the laboratory of St. Catherine's Hospital, in Brooklyn. Mrs. Charles Burtis, the patient, will take it home with her to Hopewell Junction, N. Y., when she is discharged from the hospital.

The New York State Medical Association.—The Fifth District Branch will meet, under the presidency of Dr. Emil Meyer, at the Academy of Medicine, on Tuesday, May 6, 1902, at 1:30 p. m. The order of business will be Executive session, followed by a Scientific session, the latter beginning at 2:30 P. M. At the Scientific session the following papers will be presented: 1. The Value of X-Rays in Medical and Surgical Diagnosis, by Walter H. Brickner, M. D. 2. Diseases of the Air Passages from the Standpoint of General Medicine, by D. Bryson Delavan, M. D. 3. Affections of the Skin, with Stereopticon Exhibitions, by William S. Gottheil, M. D. The installation of the newly elected officers will follow.

The Society of the Alumni of the Presbyterian Hospital in the City of New York was incorporated under the laws of the State on April 16th. At the annual meeting, held at the Presbyterian Hospital on April 12th, the following officers were elected for the ensuing year: President, Dr. B. van D. Hedges; vice-president, Dr. David Bovaird; secretary, Dr. John Howland. The following board of directors was elected: To serve five years, Dr. Henry L. Shively; to serve four years, Dr. William K. Simpson; to serve three years, Dr. Arthur M. Jacobus; to serve two years, Dr. John A. Hartwell; to serve one year, Dr. Forbes Hawkes. The next meeting of the society will be held at the Arena on Saturday evening, May 17th, at 7:30 p. m. Dr. Charles K. Briddon will address the society on Reminiscences of Half a Century in Medicine and Surgery.

The Mississippi Valley Medical Association.—The chairman of the committee of arrangements for the twenty-eighth annual meeting of the Mississippi Valley Medical Association, Dr. A. H. Cordier, has announced the dates of the next meeting in Kansas City, Mo., as October 15, 16, and 17, 1902. The president, Dr. S. P. Collings, of Hot Springs, Ark., has announced that Dr. C. B. Parker, of Cleveland, O., will deliver the address in Surgery, and Dr. Hugh T. Patrick, of Chicago, the address in Medicine. A cordial invitation is extended every physician in the United States, but especially of the Mississippi Valley to attend this meeting and take part in its proceedings. Titles of papers which are to be presented should be sent the secretary, Dr. Henry Enos Tuley, 111 West Kentucky Street, Louisville, Ky., at as early a date as possible to obtain a favorable place on the programme.

St. Louis Medical Society of Missouri.—At a meeting held on April 26 the following paper was read: "A Study Into Prostatectomy as a Routine Practice," by Dr. G. Wiley Broome. The following paper is announced for the meeting of May 3: "The Bacteriologic Findings in a Fatal Case of Tetanus Complicating Vaccinia," by Dr. R. B. H. Gradwohl.

The Alumnae Association of the New York Medical College and Hospital for Women will hold its nineteenth annual dinner at the Hotel Majestic, Seventy-second Street and Central Park West, at 7.30 o'clock, Thursday evening, May 15th. The price of the tickets will be \$3. The members of the dinner committee are Sophie B. Scheel, Sarah C. Silver-White, and Gertrude G. Mack.

The Clinical Society of the New York School of Physical Therapeutics held a meeting on Friday evening, April 25th. The following papers were presented: The Physiological Action of Static Electricity, by Dr. William Benham Snow, and Practical Modification of Cow's Milk, by Dr. James A. Mitchell. A general discussion of both papers followed.

The Medical Association of the District of Columbia.—At a recent meeting of the Medical Association of the District of Columbia, the following officers were elected: President, Dr. George N. Acker; vice-presidents, Dr. J. R. Wellington and Dr. E. L. Tompkins; secretary, Dr. Morte Griffith; treasurer, Dr. Frank Leech; delegate to meeting of American Medical Association at Saratoga, Dr. George W. Kohler; alternate, Dr. G. Wythe Cook.

United States Civil Service Commission Examination.—The examination for physician in the Indian Service may be taken on June 3, 1892, at the following places in the State of New York: Albany, New York, Elmira, Utica, Rochester, and Plattsburg. Also at the principal cities in all the States, a list of which can be obtained from the United States Civil Service Commissioner, Washington, D. C. The following circular schedules the conditions of examination: No request will be granted for examination on any other date or at any other place. Application blanks may be secured from the secretary of the local board at any of the designated places.

Information relative to the subjects and scope of the examination may be found in sections 128 of the Manual of Examinations, revised to Jan. 1, 1902. Age limit, twenty-five to fifty-five years. From the eligibles resulting from this examination it is expected that certification will be made to the position of physician at the White Earth Agency, Minnesota, at a salary of \$900 per annum, and to other similar vacancies as they may occur. This examination is open to all citizens of the United States who comply with the requirements. Competitors will be rated without regard to any consideration other than the qualifications shown in their examination papers, and eligibles will be certified strictly in accordance with the

civil service law and rules. Persons who desire to compete should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners at the places mentioned in the list of places, for a copy of the Manual of Examinations and application, forms 304 and 375. The application should be properly executed and filed with the commission at Washington prior to the hour of closing on May 23.

The Medical Society of California.—The thirty-second annual meeting of the Medical Society of California was held in Golden Gate Hall, April 15th to 17th, closing with a banquet at the Palace. The convention opened with William J. G. Dawson, the president, in the chair. Rev. W. C. Pond pronounced a blessing and the address of welcome by the chairman of the committee of arrangements followed. Dr. Dawson read his annual address, in which he reviewed the work of the society and also spoke of the new plans of the American Medical Association. The first paper of the afternoon was read by Dr. George A. Hare, of Fresno, whose subject was Hydrotherapy. He gave a short sketch of the history of its development, a brief discussion of its physiological therapeutics, and a report of some experimental work. Dr. Frank L. Adams, of Oakland, read a paper treating Hydrotherapy in Typhoid Fever. Another subject considered was State Hospital Care and Treatment of the Acute and Convalescing Insane. Dr. A. M. Gardner, of Belmont, presented the leading paper. At the evening session the committees on ophthalmology, laryngology, rhinology, and otology presented papers, which were read by Dr. W. F. Southard, Dr. George H. Powers, Dr. W. A. Martin, Dr. Rosamond L. Cox, Dr. W. S. Fowler, of Bakersfield; Dr. H. L. Wagner, Dr. M. W. Frederick and Dr. K. Pischel. The following officers were elected for the ensuing year: President, F. B. Carpenter, San Francisco; First Vice-President, C. C. Wadsworth, San Francisco; Second Vice-President, D. A. Hodghead, San Francisco; Secretary, George W. Evans, San Francisco; Treasurer, E. E. Kelly, San Francisco; Board of Examiners, Dr. Dudley Tait, Dr. David Powell, Dr. D. E. Osborne, Dr. W. S. Thorne and Dr. R. L. Wilbur. The following resolutions were passed relative to the disagreement between the Mayor of San Francisco and the Board of Health:

WHEREAS: The Mayor of the city of San Francisco has seen fit to remove the so-called old Board of Health, and

WHEREAS: The Chief Executive of the city has stated that he has determined after a prolonged personal investigation that bubonic plague has never existed in San Francisco, and

WHEREAS: The position is absolutely unsupported by any competent, unprejudiced physician who has made personal examination of suspects or alleged cases of plague before or after death, or who has examined the bacteriologic evidence presented, and is further in direct conflict with the findings of the Federal Government Experts and Special Commission, therefore be it

RESOLVED: That the Medical Society of the State of California emphatically condemn this action on the part of the Mayor of San Francisco, and at the same time endorse the position always maintained by the old Board of Health in its sanitary defence of the people of the city of San Francisco and of the country at large.

Decrease in City Allowances to Private Charities.—The city comptroller has announced that he favors reducing the amounts donated by the city to private hospitals, etc., and the establishment of a rule that in no case will the city pay more to an institution than is contributed to it from private sources. The comptroller says: "In a brief examination I have found that one Manhattan institution received from all sources last year \$85,000, of which the city gave \$72,000. Another, from its annual report, was entirely supported by the city. In their reports the managers of these hospitals and refuges rarely give the credit to the city of maintaining them, though the names of donors are set out in big type."

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 2, 1902:

DISEASES	Week end'g Apr. 19		Week end'g Apr. 26	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	22	8	26	6
Scarlet fever.....	369	30	134	17
Cerebro-spinal meningitis.....	0	3	0	5
Measles.....	584	24	480	22
Diphtheria and Croup.....	296	42	295	51
Small-pox.....	56	8	56	13
Tuberculosis.....	278	165	248	154

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending April 26, 1902.

Smallpox—United States.

California.....	Los Angeles.....	Apr. 5-12.....	4 cases.	
"	San Francisco.....	Apr. 6-13.....	15 cases.	
Colorado.....	Denver.....	Apr. 5-12.....	9 cases.	
District of Columbia.....	Washington.....	Apr. 12-19.....	1 case.	
Florida.....	Jacksonville.....	Apr. 12-19.....	9 cases.	
Illinois.....	Belleville.....	Apr. 12-19.....	1 case.	
"	Chicago.....	Apr. 12-19.....	14 cases.	
"	Galesburg.....	Apr. 12-19.....	1 case.	
Indiana.....	Evansville.....	Apr. 12-19.....	2 cases.	
"	Indianapolis.....	Apr. 12-19.....	22 cases.	1 death.
Kansas.....	Wichita.....	Apr. 12-19.....	2 cases.	
Kentucky.....	Covington.....	Apr. 13-20.....	10 cases.	
Louisiana.....	Shreveport.....	Apr. 12-19.....	7 cases.	
Maine.....	Portland.....	Apr. 12-19.....	1 case.	1 death.
Massachusetts.....	Boston.....	Apr. 12-19.....	9 cases.	4 deaths.
"	Chelsea.....	Apr. 12-19.....	1 case.	
"	Malden.....	Apr. 12-19.....	2 cases.	
"	Somerville.....	Apr. 12-19.....	1 case.	1 death.
Michigan.....	Detroit.....	Apr. 12-19.....	10 cases.	
"	Grand Rapids.....	Mar. 29-Apr. 19.....	4 cases.	
"	Ludington.....	Apr. 12-19.....	5 cases.	
Nebraska.....	Omaha.....	Apr. 12-19.....	33 cases.	
New Jersey.....	Camden.....	Apr. 12-19.....	1 case.	
"	Newark.....	Apr. 12-19.....	29 cases.	4 deaths.
New York.....	New York.....	Apr. 12-19.....	56 cases.	8 deaths.
Ohio.....	Cincinnati.....	Apr. 11-18.....	17 cases.	
"	Cleveland.....	Apr. 12-19.....	2 cases.	
"	Dayton.....	Apr. 12-19.....	1 case.	
"	Toledo.....	Apr. 12-19.....	2 cases.	
Pennsylvania.....	Altoona.....	Apr. 12-19.....	4 cases.	
"	Columbia.....	Apr. 14-21.....	6 cases.	
"	Erie.....	Apr. 12-19.....	8 cases.	
"	Johnstown.....	Apr. 12-19.....	2 cases.	
"	Philadelphia.....	Apr. 12-19.....	26 cases.	1 death.
"	Pittsburgh.....	Apr. 12-19.....	5 cases.	
Rhode Island.....	Providence.....	Apr. 12-19.....	2 cases.	2 deaths.
S. Carolina.....	Greenville.....	Apr. 5-12.....	2 cases.	
South Dakota.....	Sioux Falls.....	Apr. 12-19.....	1 case.	
Tennessee.....	Memphis.....	Apr. 12-19.....	13 cases.	
"	Nashville.....	Apr. 12-19.....	1 case.	
Vermont.....	Burlington.....	Apr. 5-12.....	1 case.	
Washington.....	Tacoma.....	Apr. 6-13.....	5 deaths.	
West Virginia.....	Wheeling.....	Apr. 5-12.....	1 case.	
Wisconsin.....	Green Bay.....	Apr. 13-20.....	10 cases.	
"	Jamesville.....	Apr. 6-13.....	2 cases.	
"	Milwaukee.....	Apr. 12-19.....	3 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	Mar. 29-Apr. 5.....	5 cases.	1 death.
Belgium.....	Antwerp.....	Mar. 29-Apr. 5.....	9 cases.	3 deaths.
Canada.....	Winnipeg.....	Apr. 5-12.....	6 cases.	
China.....	Hongkong.....	Mar. 1-8.....	4 cases.	2 deaths.
Colombia.....	Cartagena.....	Mar. 29-Apr. 6.....		1 death.
France.....	Marseilles.....	Mar. 1-31.....		2 deaths.
"	Paris.....	Mar. 29-Apr. 5.....		3 deaths.
Great Britain.....	Birmingham.....	Apr. 5-12.....	1 case.	
"	Dundee.....	Mar. 29-Apr. 5.....	4 cases.	
"	Glasgow.....	Apr. 4-11.....	18 cases.	2 deaths.
"	Leeds.....	Mar. 29-Apr. 5.....		2 deaths.
"	Liverpool.....	Mar. 29-Apr. 12.....	7 cases.	
"	London.....	Mar. 29-Apr. 5.....	376 cases.	54 deaths.
"	Plymouth.....	Apr. 5-12.....	1 case.	
India.....	Bombay.....	Mar. 18-25.....		8 deaths.
"	Calcutta.....	Mar. 15-22.....		11 deaths.
"	Karachi.....	Mar. 16-23.....	13 cases.	4 deaths.
Italy.....	Naples.....	Mar. 22-Apr. 5.....	20 cases.	
"	Palermo.....	Mar. 29-Apr. 5.....	6 cases.	2 deaths.
Mexico.....	Mexico.....	Mar. 31-Apr. 6.....	1 case.	1 death.
"	Vera Cruz.....	Mar. 29-Apr. 12.....	4 cases.	3 deaths.
Russia.....	Moscow.....	Mar. 22-29.....	21 cases.	3 deaths.
"	Odessa.....	Mar. 29-Apr. 5.....	5 cases.	1 death.
"	St. Petersburg.....	Mar. 29-Apr. 5.....	8 cases.	2 deaths.
Turkey.....	Smyra.....	Mar. 2-30.....		1 death.

Yellow Fever.

Dutch Guiana.....	Paramaribo.....	To Mar. 1.....	31 cases.	21 deaths.
French Guiana.....	Cayenne.....	Mar. 27.....	1 case.	1 death.
"	Manat.....	Mar. 27.....	1 case.	1 death.
"	St. Laurent.....	Mar. 27.....	32 cases.	21 deaths.
Mexico.....	Vera Cruz.....	Mar. 29-Apr. 12.....	6 cases.	5 deaths.

Plague.

India.....	Bombay.....	Mar. 18-25.....	751 deaths.	
"	Calcutta.....	Mar. 15-22.....	420 deaths.	
"	Karachi.....	Mar. 16-22.....	90 cases.	79 deaths.

Cholera.

China.....	Hongkong.....	Mar. 1-8.....	1 case.	1 death.
India.....	Bombay.....	Mar. 18-25.....		9 deaths.
"	Calcutta.....	Mar. 15-22.....		86 deaths.

Straits Settlements.....	Singapore.....	Mar. 1-8.....		2 deaths.
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Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 26, 1902.

CARPENTER, D. N., Passed-Assistant Surgeon. Detached from the Naval Hospital, Newport, Rhode Island, and ordered to the *Illinois*.

FAUNTLEROY, A. M., Assistant Surgeon. Detached from the *Illinois*, and ordered to the Naval Hospital, Newport.

HUNTINGTON, W. H., Pharmacist. Detached from the *Constellation* and ordered to the Torpedo Station, Newport.

MUNSON, F. M., Assistant Surgeon. Ordered to duty at the Naval Hospital, Norfolk, Virginia.

O'LEARY, C., Pharmacist. Detached from the Torpedo Station, Newport, and ordered home to await orders.

PLUMMER, R. W., Assistant Surgeon. Detached from the *New Orleans*, and ordered home to await orders.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending April 26, 1902.

CORBUSIER, WILLIAM H., Major and Surgeon, is granted leave of absence for fifteen days.

EGAN, PETER R., Major and Surgeon, will proceed to the Philippine Islands on the transport *Crook*.

HENRY, J. N., Major and Surgeon, will remain on duty with the Eleventh Infantry, now at the Presidio of San Francisco, and accompany that organization on its voyage to the Philippine Islands.

HOYT, HENRY F., Major and Surgeon, will proceed to Fort Douglas, Utah, for temporary duty.

JOHNSON, R. W., Major and Surgeon, is granted leave of absence for one month, with permission to apply for an extension of three months.

KEAN, JEFFERSON R., Major and Surgeon, is granted leave of absence for three months, to take effect upon his being relieved from duty on the staff of the military governor of Cuba.

KELLOGG, PRESTON S., Contract Surgeon, is relieved from further duty at Fort Missoula, and will report to the commanding general, Department of Dakota, for duty with troops destined for service in Alaska.

MANLY, CLARENCE J., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

MERRICK, JOHN N., Contract Surgeon, will proceed to Fort Missoula, Montana, for duty.

PETTYJOHN, JOSEPH, Contract Surgeon, will proceed to Vancouver Barracks, Washington, for duty in Alaska.

SMART, ROBERT, First Lieutenant and Assistant Surgeon, will proceed to Fort McDowell, California, for temporary duty, awaiting transportation to the Philippine Islands.

SNYDER, HENRY D., Captain and Assistant Surgeon, is detailed to represent the Medical Department of the Army at the American College of Tuberculosis, to be held in New York City, from May 14 to May 16, 1902.

STEWART, WILLIAM J. S., Captain and Assistant Surgeon, is assigned to duty as surgeon of the transport *Logan*.

WOOD, HALSEY L., Contract Surgeon, is granted leave of absence for fifteen days.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days Ending April 24, 1902.

BANKS, C. E., Surgeon.—Granted extension of leave of absence for two days.

BOGGESE, J. S., Assistant Surgeon.—Relieved from duty at Philadelphia and directed to proceed to Reedy Island Quarantine Station and report to the medical officer in command for duty and assignment to quarters, relieving Assistant Surgeon J. GOLDBERGER.

BURKHALTER, J. T., Assistant Surgeon.—Upon being relieved by Assistant Surgeon S. B. GRUBBS, to report to him for duty and assignment to quarters.

CLARKE, F. M., Acting Assistant Surgeon.—Granted leave of absence for twenty days, from April 14th.

GOLDBERGER, J., Assistant Surgeon.—Upon being relieved at Reedy Island Quarantine Station, to proceed to Tampico, Mexico, for duty in the office of the United States Consul.

GRUBBS, S. B., Assistant Surgeon.—Relieved from duty in the Hygienic Laboratory, and directed to report to Surgeon J. H. WHITE for special temporary duty; then to proceed to the Gulf Quarantine Station, relieving Assistant Surgeon J. T. BURKHALTER.

Granted leave of absence for ten days, from April 23 to April 18, 1902.

HOBBS, W. C., Assistant Surgeon.—To proceed to the Brunswick Quarantine Station and assume temporary command of the service during the absence, on leave, of Acting Assistant Surgeon R. E. L. BURFORD.

LORD, C. E. D., Assistant Surgeon.—Detailed to represent the service at the annual session of the State Medical Association of Texas, which meets at Dallas from May 6th to 9th.

McCORMAC, J. T., Acting Assistant Surgeon.—The Department letter of March 15, 1902, granting Acting Assistant Surgeon McCORMAC fifteen days' leave of absence is amended so that said leave shall be for six days, from March 30th.

STIER, CARL, Junior Pharmacist.—To proceed to Memphis and report to the medical officer in command for temporary duty and assignment to quarters.

STIMPSON, W. G., Passed Assistant Surgeon.—To proceed to Mendocino and Napa, California, for special temporary duty.

VOGEL, C. W., Assistant Surgeon.—Granted leave of absence for fifteen days, from May 12th.

WALKER, R. T., Acting Assistant Surgeon.—Granted leave of absence for eighteen days, from May 1st.

Appointment.

CARL STIER, of Alabama.—Appointed Junior Pharmacist, April 23, 1902.

Births, Marriages, and Deaths.

MARRIED

FARR—WHELEN.—In Philadelphia, on Wednesday, April 23d, Dr. William Wilberforce Farr and Miss Virginia Harbert Whelen.

GRUNWELL—ROBIE.—In Washington, on Wednesday, April 30th, Dr. Alfred Gilbert Grunwell, United States Navy, and Miss Laura Adams Robie.

JACK—HUBBARD.—In Washington, On Tuesday, April 22d, Dr. William Alexander Jack, Jr., and Miss Edith Prevost Hubbard.

McREYNOLDS—CLEBORNE.—In Norfolk, Virginia, on Monday, April 14th, Mr. Frederick Anthony McReynolds and Miss Lucy Cleborne, daughter of Dr. C. J. Cleborne, United States Navy, retired.

PRICE—TRUMBALL.—In Philadelphia, on Tuesday, April 29th, Dr. Henry H. Price and Miss Susan Trumball.

VAN EVERY—BARNES.—In New York, on Wednesday, April 30th, Mr. Ernest Brock Van Every and Miss Frances Pinkerton Barnes.

DIED.

HARRISON.—In New York, on Thursday, April 24th, Dr. George E. Harrison, of Springfield, Long Island, in the forty-fourth year of his age.

HULBERT.—In St. Louis, on Tuesday, April 22d, Dr. George F. Hulbert, in the forty-seventh year of his age.

KIMBALL.—In Onteora Park, Tannersville, N. Y., on Saturday, April 19th, Dr. James P. Kimball, United States Army, retired, in the sixty-second year of his age.

MARIS.—In Baltimore, on Monday, April 21st, Dr. Edward A. Maris, in the eighty-second year of his age.

WALSER.—In New Brighton, N. Y., on Wednesday, April 23d, Dr. Theodore Walser, in the seventy-seventh year of his age.

Obituary.

FREDERICK A. CASTLE, M. D., OF NEW YORK.

Dr. Castle, whose death occurred on Sunday, April 27, was perhaps not widely known, for he had never aimed at display, but those whose privilege it was to know him well held him in high esteem. It was in therapeutics that he most showed his capability, but he was also an excellent editorial writer. Some years ago he was for a considerable period the editor of a therapeutical journal, *The American Druggist*, and he made every issue of it interesting. After that he made occasional contributions to current medical literature, all of them characterized by sterling sense. One of the last of his published articles, if not the very last, appeared in this journal some months ago. In that article he argued forcibly for the conservation of the ethereal elements of alcoholic stimulants in the treatment of the sick, and his arguments met with widespread approval.

Dr. Castle was a graduate of the Bellevue Hospital Medical College, of the class of 1866. Before his graduation he served creditably in the Federal army in the course of the civil war as a medical cadet. For a time he taught therapeutics in Bellevue Hospital Medical College, and he was subsequently one of the physicians to the Presbyterian Hospital. He was a man of artistic taste, as may be witnessed in the building of the Grolier Club, one of the social organizations of which he was a member, and he was an amiable and public-spirited man.

Pith of Current Literature.

Medical News, April 19, 1902.

Compulsory Vaccination Essential. The Example of Puerto Rico. By Dr. Azel Ames.—In October, 1898, small-pox was endemic in Puerto Rico; in December it was epidemic; in January, 1899, it had "honeycombed" the island; by February there were over 3,000 recent cases and the disease was rapidly spreading. In February, systematic compulsory vaccination, carefully and scientifically conducted and recorded, was begun simultaneously, and with pretty equal efficiency, in all parts of the island. It was vigorously prosecuted for four months only, till July 1st, when 860,000 vaccinations had been made in a population of about 960,000. In the two years and a half that have since passed, instead of the former annual average death rate of 621, the mortality from small-pox has been but two per annum in a population of nearly a million. Vaccination alone did it, and will do it effectively wherever compulsory legislation, properly enforced, secures its benefits to all.

Clinical Expression of Chronic Myocarditis. By Dr. J. H. Musser.

The Sanitary Condition of Street Cars in New York. By George A. Soper, Ph. D.

General Anæsthesia in the Plethoric. By Dr. M. L. Maduro.—Plethoric individuals take nitrous oxide very well, but ether rather poorly, unless allowed to switch off to chloroform for a while, when, on resuming ether, they will bear that drug without discomfort. Hence the author advises that, immediately after the nitrous oxide, a few whiffs of ether be given, then chloroform for an average of ten minutes, continuing with ether diluted with a small amount of air for the rest of the operation. No harm can come from such frequent change of narcotics.

A New Method of Approximately Estimating the Number of Blood Corpuscles from Stained Specimens. By Dr. Max Einhorn and Dr. George L. Laporte.

April 26, 1902.

Prostatectomy. By Dr. C. H. Mayo.—An important factor in examination is to find the relative proportion of urine passed during the night as compared with that passed during the day. The danger of uræmia in those who have high-tension arteries, quickly-closing heart valves, contracted kidneys which secrete during two-thirds of the twenty-four hours low-specific-gravity urine at night, is greatly to be feared. A careful review of the general literature of the subject leads the author to conclude that about one half of enlarged prostates can be reached equally well, either from above or below, according to the skill of the operator; that about one fourth can be reached better from above, and one fourth better from below, and from anatomical or pathological conditions the combined operation will be better in certain cases.

The Diagnosis and Operative Treatment of Prostatic Hypertrophy, with Remarks on the Complications Before and After Operation.—

By Dr. Ramon Guitéras.—According to the author, the general practitioner should be educated to palpate the prostate and to use the other simple means of diagnosis employed in determining the shape and size of the organ. In default of previous training in rectal palpation, he should at every opportunity familiarize himself with the feel of a normal prostate, and should thus educate his touch for prostatic diagnosis. In prostatics the care of the bladder before operation is a prime factor. The importance of training such persons to observe the minutiae of catheter life, of making the kidneys as active as possible, and of rendering the urine as nearly normal as possible, before prostatic operations, cannot be overestimated. The successful cases belong most frequently to the class having a small amount of residual urine and a moderate prostatic enlargement. An early diagnosis is, therefore, of the greatest importance. The choice of operation depends on the age, resisting power of the patient, and size and shape of the prostate, with special reference to the seat and extent of the hypertrophy, as well as the condition of the kidneys and bladder. So far as possible, the occurrence of shock should be avoided, and the congestion of the kidneys should be prevented by proper precautions during, and by proper treatment after, the operation.

The Indications for, and Limitations of, the Bottini Operation. By Dr. Louis E. Schmidt.—Good results from the Bottini operation will depend on: First, the careful selection of cases; second, the proper technics of the operation and proper after-care; third, the immediate correction of errors.

Gonorrhœa of the Prostate. By Dr. Ernst R. W. Frank.—The author lays stress upon the importance, especially when there are other bacteria than gonococci present, of directing attention to thorough asepsis of the intestinal canal. It is positively injurious to perform massage when there is an elevation of temperature. In most cases in which the prostate is infected by gonorrhœa, manifold anatomical lesions of the urethral mucosa exist. After the urethra and its annexa have become aseptic, these anatomical lesions must be precisely determined by the aid of the endoscope, the exploratory sound and rectal palpation. Adequate mechanical and chemical treatment must be directed to the cure of these aseptic lesions.

Prostatic Hypertrophy. By Dr. Lewis Schooler.

Philadelphia Medical Journal, April 26, 1902.

The Danger to the Public from the Ambulant Consumptive. By Dr. J. O. Cobb.—The author expects very little good to result from the placing of spittoons and cuspidors in public places. He advocates the carrying of individual sputum flasks. Beer halls and similar places should not be allowed to cover the floors with sawdust, which seems to invite the careless to spit on the floor. We must strive to educate the public against the habit, and we should try to reach the public by tracts and timely articles in the daily press, which will reach and appeal to the intelligent.

A Bronchial Cyst, the Wall of Which Contained a Hæmangioma. By Dr. W. M. L. Coplin.

A Case of Adiposis Dolorosa. By Dr. John B. Roberts.

Diseases of the Lacrymal Apparatus; Lecture Delivered at the Polyclinic Hospital, Philadelphia. By Dr. William Campbell Posey.

Report of Several Cases of Corneal Complications in Conjunctivitis Due to the Koch-Weeks Bacillus. By Dr. Edward A. Shumway.—The Koch-Weeks bacillus conjunctivitis is apparently becoming more common in Philadelphia than has been hitherto observed. It may present itself in a particularly severe form, and be complicated by phlyctenules, and even by corneal ulceration. These cases are especially contagious, and extra precautions should be taken to prevent their spreading, particularly among the school children. As a rule, they are controlled by the use of mild astringent lotions, and applications of two per cent. lotions of nitrate of silver.

A Case of Diaphragmatic Hernia. By Dr. W. Moser.—The author is inclined to believe that cases of this kind may be due to a slight traumatism or heavy lifting, and that a congenital, easily dilatable opening or malformation preexists.

Medical Record, April 26, 1902.

Abdominal Echinococcus Cysts. By Dr. Frank Hartley.—The author points out that the infrequency with which echinococcus cysts of the abdomen are reported is not surprising when we consider that cysts not affected by disease or injury, not large or accessible to palpation, easily escape the observation of both patient and physician, unless their location disturbs the function of a neighboring organ or of the organ in which they are located. The author reports four cases, three involving the liver, and one situated in the recto-vesical cul-de-sac. Delbet's method of "*Capitonnage*," consisting in emptying the contents of the sac; removing its chitin membrane and incising as much as possible of the sac wall, is of great value, as is also the process of enucleation.

Treatment of Pneumonia. By Dr. Stephen Smith Burt.—The author's article indicates, in brief, that pneumonia primarily owes its shortness and self-limitation to the perishability of its micro-parasite; the type of the disease depends upon the condition of the individual; pneumonia, simply as pneumonia, requires no intervention; diplococci thrive best at the normal temperature; fever inhibits the growth of the parasite, and is, therefore, beneficial; high fever indicates extensive infection, meantime varying degree of reactive ability; low fever, either inability to react or else moderate infection; specific medication is unnecessary, if not pernicious; it is imperative to disinfect dejecta and expectoration; aconite and its congeners are injurious; bleeding is seldom required; opium, checking renal activity, in large doses is contraindicated; oxygen is useful, but not indispensable; alcohol is valuable as a food, and because it conserves energy; strychnine, ammonia, alcohol and nitroglycerin, in large doses as stimulants, should be reserved for emergencies; subcutaneous infusion of physiological saline solution is invaluable for renal elimination of poisonous accumulations; *prevention* is the *desideratum*.

Questions of Priority in the Surgical Treatment of Chronic Bright's Disease. By Dr. George M. Edebohls.—The author's priority-claims in rela-

tion to the surgical treatment of chronic Bright's disease are summarized in the statements that he was the first—One, to observe and publish the curative effects of nephropexy upon kidneys affected with chronic Bright's disease; second, to undertake an operation upon the kidneys with the deliberate object in view of bringing about a cure of a previously diagnosed Bright's disease; third, to propose to treat chronic Bright's disease *as such* by operation upon the kidneys; fourth, to propose, perform and report renal decapsulation for chronic Bright's disease; fifth, to publish a large number of operations upon kidneys undertaken for the purpose of bringing about a cure of chronic Bright's disease.

The Modification of Breast Milk by Maternal Diet and Hygiene. By Dr. Thomas S. Southworth.

The Boston Medical and Surgical Journal, April 24, 1902.

The Serum Test for Blood. By Dr. E. S. Wood.—This test, as described by the author, consists in "humanizing" a rabbit by injecting into the peritoneal cavity about ten cubic centimetres of human blood serum, at intervals of two or three days until the animal has received six or eight injections. The rabbit should then rest for a week. Blood should then be abstracted from the animal; allowed to coagulate in a cool place, and the serum should be used for preparing the test. The blood to be tested, if fresh, should be diluted about 1-100 with normal salt solution. If the blood is in a dry state a little of it may be scraped into a watch glass, or a few threads of bloody cloth may be transferred to a watch glass and treated with a few drops of distilled water. The clear fluid thus obtained is then tested by adding to it a few drops of blood serum obtained from the humanized rabbit. If the solution contains human blood there will occur an immediate cloudiness, which gradually increases, so that there is a distinct precipitation within half an hour after the addition of the serum from the humanized rabbit. This author has recently applied this serum test in a murder case which is now being tried in New Hampshire.

Notes on the Production of the Test Serum in Rabbits. By Dr. W. F. Whitney.—While the operations and reactions are so simple that they can be performed by anyone, they require care and exactness, and considerable previous practice must be obtained before one is qualified to testify in a capital case. The author suggests that in every case of death by violence, where murder is suspected, a strip of filter paper should be soaked in the blood of the individual at the autopsy. This should be sent to the expert who makes the examination of the suspected blood stain in order that any doubt as to this individual's blood giving a serum reaction can be set at rest.

Notes on X-Light: Vacuum Tube Regulators for X-Light Tubes. By William Rollins.

Osteosarcoma of the Elbow. By Dr. Robert B. Osgood.

An Unusual Family History of Tuberculosis. By A. B. Williams.

A Case to Illustrate the Advantages of the Correction of the Deformity of Pott's Disease. By Dr. H. S. Warren.

Excision of the Hip for Congenital Dislocation. By Dr. W. E. Blodgett.

American Medicine, April 26, 1902.

Pneumonia: An Acute Self-Limited Systemic Infection. By Dr. Stephen Smith Burt.—The author summarizes his article with the general statement that pneumonia is an acute, self-limited systemic infection, whereof the concomitants, though various, are chiefly pulmonary; it is endemic, occasionally pandemic, in many countries, and it occurs everywhere sporadically. Regarding the lung tissue, the affection seems more in the nature of an exudation than of an inflammation; the frequency of detection of the diplococcus in living blood in pneumonia suggests that by improved technics it will be found, like the plasmodium, in malaria invariably. Infection of the heart muscles with resulting degeneration has more to do with heart failure than mechanical obstruction. The exact significance of pathological leucocytosis requires further elucidation. Preexisting fertility, as to the condition, determines the degree of the infection, rather than the number of microbes, which are in quality unchangeable. Although neglect of personal hygiene and of sanitation predisposes to pneumonia, unqualified good health, on the other hand, is a protection therefrom.

Marrow and Spleen Cells, Considered in Their Relation to the Blood Cells. By Dr. Edward T. Williams.—The presence of so many nucleated and developmental forms forces the author to the obvious conclusion that the red blood corpuscles are elaborated by the spleen. The author lays stress on the fact that, although the production of red corpuscles in the red marrow rests on much slenderer elements, it is universally admitted. Why, then, the reiterated assertion by so many authors that there is no proof of the formation of red corpuscles in the spleen? The spleen seems to have a less important agency in the production of leucocytes than the marrow and lymph glands. It probably does contribute, however, a few of the large uninuclear leucocytes designated by Virchow as splenocytes.

Principles of Hydrotherapy. By Dr. Otto Lerch.

A New Method of Bisecting the Uterus. By Dr. Charles H. Richardson.—While it is true that infection does not often take place when the uterus is bisected in the median line, yet exposing the pelvic cavity to the chances of infection from the endometrium of the uterine cavity has been the principal objection, so far, to this most valuable procedure. In the author's method, instead of making the incision in the median line, it is made on either side, beginning near the horn of the uterus, and is carried down through the tissues of the wall of the uterus and cervix; so, when completed, one section contains practically the whole body of the uterus with its cavity, and the other only a narrow strip of the wall.

Anomalous Position of Cæcum and Colon from Failure of Rotation. By Dr. W. L. Grant.—Left-sided cæcum is very rare; in this case there was not

only a left-sided cæcum, but a whole left-sided colon as well. The cæcum evidently became early attached, and as the colon developed in length it dropped toward the pelvis, forming a loop, the two limbs of which took the place of the ascending and transverse colon in the normal development.

A Case of Extreme Gastropstosis. By Dr. E. T. Rulison.

The Serum Treatment of Pneumonia. By Dr. Joseph Eichberg.

The Examination of the Blood in Relation to Surgery of Scientific, but Often of no Practical, Value, and May Misguide the Surgeon. By Dr. J. M. Baldy.

The Journal of the American Medical Association, April 26, 1902.

The Nature of Prostatic Hypertrophy. By Dr. Robert Holmes Greene, and Dr. Harlow Brooks.—The authors' conclusions, briefly, are as follows: First, prostatic hypertrophy of the aged is the result of chronic inflammation of the prostate; second, it most frequently arises from chronic inflammation of the posterior urethra, due to whatever cause; third, true neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy; fourth, carcinoma is likely to occur in the hypertrophied prostate as a result of the chronic inflammatory process.

Sarcoma of the Uterus. By Dr. D. S. Fairchild.—The development of a diffuse sarcoma of the uterus after the menopause, is much less frequent than carcinoma; but that it does occur late in life is well established. It has been observed to occur as the result of degenerative changes in fibro-myomata, which have, no doubt, remained stationary for a long time. When these growths, which appear to give no serious trouble and make no advancement, begin to take on a new growth attended with pain, loss of weight, and anæmia they may be looked upon with great suspicion if the change occurs after the menopause. The author questions whether the risk of letting these growths alone is not greater than the risk to life in their removal.

The Relationship of Antistreptococcus Serum to the Treatment of Puerperal Sepsis. By Dr. George E. Ranney.—The admitted virtues of antiphtheritic serum may, and the author believes have, stimulated the over-credulous and enthusiastic to use a variety of serums of more than doubtful utility, if not absolutely harmful, as was demonstrated in the case of the Koch lymph for tuberculosis, and, the author believes, in that of the serum in puerperal streptococcal poisoning in the puerperium.

Surgery of the Liver. By Dr. Carl Beck.—The author believes that portions of liver-tissue of considerable size may be safely removed by previously rendering anæmic the part which it is intended to remove. For the support of the ligatures, living tissue from the same animal, preferably the fascia and peritonæum from the abdominal wall, is best suited. The intraperitoneal or the intraparietal method is preferable to the external method.

A Case of Infantile Cerebral Palsy with Autopsy Findings. By Dr. L. Pierce Clark and Dr.

T. P. Prout.—The authors record a very pronounced case of infantile cerebral palsy, beginning at two years of age, and later resulting in severe epilepsy. Mental impairment was not marked; speech and the special senses were intact and normal. The cerebral lesions were probably produced by venous thrombosis of surface veins and secondary hæmorrhage resulted. This in turn caused more or less complete but asymmetrical atrophy of the entire left hemisphere. Secondly, the cerebral lesion caused maldevelopment of the whole right cerebellar lobe and extreme atrophy of the left thalamus and inferior olive. The cranial fossæ at the base also participated in the pathological condition most remarkably for an extra-uterine lesion. Their arrested development corresponded in location and extent with the brain masses which each contained.

Management of the Umbilical Cord. By Dr. C. S. Bacon.

Some Observations on Resection of the Ribs in Empyema. By Dr. Andrew Stewart Sobin-gier.—Cases for operation must be selected with much care and judgment and without delay for repeated or too frequent aspirations. Progressive tuberculous involvement in young subjects is a contra-indication for anything more radical than simple thoracotomy and drainage. Cases long delayed, until the organic pleura is dense and contracted, require free resection, and are likely to be attended by greater deformity and loss of lung tissue than those resected earlier. The periosteum must be removed completely and the U-shaped flap affords the best covering for this, as it does for the lung in the true Schede technics. Irrigation is not at any time to be employed.

Case of Right Cæcal Hernia, Complicated by Hydrocele and Suppurative Appendicitis. By Dr. Raymond Custer Turck.

A Method of Suturing the Gall; Bladder to the morrhoids Under Local Anæsthesia. By Dr. Thomas Charles Martin.

A Method of Suturing the Gall-Bladder to the Parietes in Gall-Bladder Operations. By Dr. William Watkyns Seymour.

Glimpses of the Practice of Medicine and Surgery in British and Spanish Honduras. By Dr. N. Senn.

A Case of Atropia Poisoning with High Temperature and Recovery. By Dr. L. L. Bechler.

Lancet, April 19, 1902.

Some Abnormal Psychical Conditions in Children. By Dr. G. F. Still.—(The second of the Goulstonian lectures). The most conclusive evidence of the morbid character of deficiency of moral control in cases where it is not associated with general impairment of intellect, is to be found in its close relation to physical disease. The author cites a number of cases of cerebral tumor, hemiplegia, meningitis, epilepsy, typhoid fever, diphtheria, rheumatism, etc., in each of which there was a definite loss of moral control. Morbid failure of moral control may also occur in children without any general impairment of intellect and without physical disease. These latter cases fall into two groups: First, cases

in which there is a morbid failure of the development of moral control; and second, cases in which there is loss of already acquired moral control.

The Comprehensive Study of Thoracic Phthisis. By Dr. F. T. Roberts.—(The third of the Lumleian lectures). The clinical study of thoracic phthisis presents itself under the three divisions of: A mode of onset or manifestation; B, personal clinical investigation; and C, course and terminations.

A—Mode of Onset or Manifestation: 1. With a sudden, more or less grave, symptom or lesion, hæmoptysis and pneumothorax are the important events to be noted under this head. 2. As an acute or subacute illness definitely associated with the chest, though not always entirely confined to this region. Cases coming under this head are by no means uncommon and may be indicated as follows: (a) general acute miliary tuberculosis; (b) acute miliary tuberculosis limited to the lungs; (c) ordinary pneumonic cases involving a lobe or an entire lung. A certain proportion of the cases of fatal acute pneumonia are really tuberculous; (d) cases of a catarrhal pneumonic or broncho-pneumonic type, combined with more or less diffuse tubercle. These cases form most of those known as "galloping consumption;" (e) pleurisy with, or without, effusion; (f) cases of a mixed type, in which both lung and pleura are involved in various degrees, the pulmonary lesions being pneumonic, tuberculous, or both. 3. As a primary and independent chronic disease of the lung and adjacent pleura, in the large majority of cases beginning near the apex on one or both sides, and tending to progress in a downward direction. 4. As a primary laryngeal tuberculosis with prominent local symptoms and objective manifestations, followed by implication of the lungs. 5. As a complication upon some previous morbid conditions affecting the chest, which have been known to exist and are not uncommonly pronounced; chronic bronchitis, empysema, lung syphilis, aneurysm, etc. 6. As a primary glandular affection in the mediastinum. 7. As a secondary manifestation of tuberculous disease, either acute or chronic. 8. As a complication in diabetes.

B—Personal Clinical Investigation: 1. Symptomatology. Symptoms may be primarily grouped under the following heads: First, local, associated with the chest and upper air-passages; second, general or constitutional; third, digestive symptoms; fourth, symptoms resulting from tuberculosis of other structures remote from the chest; fifth, those due to some general or local disease to which the phthysical condition is secondary; sixth, symptoms related by various non-tuberculous complications; and seventh, mental symptoms. 2. Physical Examination. The purposes which physical examination of the chest has in view may be thus summarized: First, to recognize the mere presence of pulmonary tuberculosis, especially in its earlier stages; second, to determine the extent of the mischief in the lungs; third, to find out if other structures are involved; fourth, to make out as definitely as possible the actual conditions present; and fifth, to watch the progress of the disease in the lungs.

Particular attention should first be paid to the superficial structures, especially to determine whether there is wasting or not. One should endeavor to

make out the original state of the thorax as regards conformation and capacity, independent of changes due to actual phthisis. Any preceding deformity must be duly noted; the slightest malformations, such as pigeon-breast and rickety chest, are often overlooked. The degree of mobility of the thoracic framework must be determined; the chest may be absolutely rigid and fixed. Abnormal physical conditions associated with the pleuræ should always be sought for. The changes to be noted in the lungs are practically of four kinds: First, primary consolidation; second, softening and breaking down; third, cavities or vomica; and fourth, fibrosis. There is an erroneous tendency to expect signs of consolidation in the early stages of phthisis, to ignore the significance of apparently adventitious sounds or râles, and to expect the typical signs of a cavity or cavities in the lung before coming to a diagnosis that such a lesion exists. It should be a rule in cases of thoracic phthisis always to examine the heart, pericardium, great vessels, and mediastinum.

In the author's experience elaborate apparatus of any kind is quite uncalled for, and cannot be relied on to afford any really useful information. In all cases of definite thoracic phthisis it is desirable to inspect the throat, as morbid conditions here often aggravate cough. The author has had no experience with the inoculation of tuberculin to bring out Koch's reaction test, nor with the Röntgen rays.

C—Course and Terminations: 1. The natural tendency of phthisis is to be progressive. 2. There is no foundation whatever for the supposed "three stages" of the complaint, from a clinical point of view, corresponding to the pathological stages of consolidation, softening, and cavity. 3. In many cases the progress of thoracic phthisis is insidious, with no prominent local symptoms. 4. It is remarkable how some acute cases may be arrested or even apparently cured. 5. The more chronic the case, the greater the chance of recovery.

Phthisical cases are always liable to variations in their progress, improvement or even apparent arrest of the disease taking place, followed by exacerbation and further activity.

Organo-Therapy. By Dr. A. T. Davies.—In the Hunterian oration on this subject, the author gives a full historical review of his subject, enumerating the various animal extracts, their physiological effects, and the purposes for which they are used. The article contains nothing original.

A Case of Purulent Peritonitis Associated with Empyema; Recovery. By Dr. H. Ashby.

Two Cases of Paralysis Agitans in the Same Family, in Which Improvement Followed the Administration of Hyoscine. By Dr. J. S. Bury.—In the two cases here reported the chief points of interest are: First, the presence of typical symptoms of paralysis agitans in a brother and sister; second, the onset of the symptoms at a comparatively early age (eighteen years in the woman); and third, the improvement which followed the administration of hyoscine during each of the two periods when it was given. The beginning dose was one one-hundred-and-fiftieth of a grain twice daily, gradually increased to one ninety-sixth of a grain. It diminished or arrested the tremor, checked the restlessness, and relieved the hot flushes.

On Cardiac Inadequacy. By Dr. A. Morison.

Pyrexia of Gastro-Intestinal Origin During the Puerperium. By Dr. E. M. N. Williams.

Primary Carcinoma of the Ampulla of Vater. By Dr. F. De H. Hall.

British Medical Journal, April 19, 1902.

A Series of Cases of External Operations on the Larynx. By A. M. Sheild, F. R. C. S.—The author reports a series of nine cases, which illustrate the excellent results which are to be obtained by thyrotomy and other external operations upon the air passages. The usual method of operation is carefully described, the author's only innovation being the recommendation of one long incision for both the preliminary tracheotomy and the division of the thyroid cartilage.

Some Observations on Thirtiy-five Cases of Chronic Suppuration of the Maxillary Antrum. By Dr. H. Tilley.—This article is based upon thirty-five cases of chronic antral suppuration seen by the author in private practice. Empyema of the maxillary antrum is of greater frequency than is usually supposed, and it will frequently account for symptoms which apparently have no connection therewith. While it was formerly maintained that antral suppuration was almost invariably due to infection from a carious tooth, it is now almost universally agreed that some cases are infected by way of the nasal cavities, and that the majority of these are met with as complications of one of the acute specific diseases (influenza, scarlet fever, typhoid, pneumonia and diphtheria). But dental caries is by far the most frequent cause of chronic antral empyema. Diseased teeth were present in every one of the cases upon which this article is based. Although the crown of a tooth may appear perfectly healthy, a condition of pyorrhœa alveolaris may extend the whole length of one or more of the roots and thus carry infection to the antrum. Four of the cases are of interest in that the frontal, ethmoidal and sphenoidal sinuses were also in a state of chronic suppuration. A straightforward case of antral suppuration manifests itself by a purulent nasal discharge, the patient alone being cognizant of any unpleasant smell. Headache and neuralgia may be so distressing that no mention is made of any nasal trouble. The headache may alternate with a free discharge of pus from the nose. Some of the patients complained of loss of appetite and various forms of indigestion. Cough is a not uncommon symptom of antral empyema; it is often worse in the morning owing to inspissation of pus which flows during the night into the pharynx and larynx. If antral suppuration is uncomplicated by similar disease in the ethmoidal or frontal sinuses, by nasal polypi, or by such gross lesions as carious areas of the bony walls of the sinus, the prognosis as regards relief of symptoms is good, but one must speak with reservation when a "cure" or total cessation of discharge is being considered. In forming a prognosis the following points must be weighed: 1. Source of original infection. Pure dental cases would seem to be more amenable to treatment than those of intranasal origin. 2. The length of time which has elapsed before treatment is undertaken. The longer the time, the more advanced will be the degenerative

changes in the antral mucosa. 3. The general health of the patient. 4. The persistence and regularity with which the patient will follow the prescribed treatment. If, in conjunction with the symptoms already noted, a purulent discharge is present in the middle meatus, which reaccumulates when the head is held so that the maxillary ostium becomes the lowest point of the antral cavity, then it may be presumed that the pus comes from the antral cavity. These suspicions would be strengthened if on transillumination the suspected antrum was less translucent than its fellow. The condition is treated: First, by drainage and irrigation through the alveolus, which is kept patent by a silver tube; and second, by a radical operation, the antrum being opened through an incision along the gingivo-labial fold, and its whole interior thoroughly curetted. This last operation is almost never necessary. The method of alveolar drainage was followed in thirty-four of the cases. In thirteen the tube was removed within three months; in nine the discharge has practically ceased, but the patient prefers to keep the tube in; in eight cases the results of treatment could not be ascertained. One patient was unimproved.

The Treatment by Asch's Operation of Deviations of the Nasal Sæptum. By Dr. E. S. Yonge.

The Influence of Nasal and Naso-Pharyngeal Obstruction Upon the Development of the Teeth and Palate. By A. L. Whitehead, M. B.

Foreign Body in the Oesophagus. By J. McKenzie, M. B.

The Causation of Death During the Administration of Chloroform. By Dr. E. H. Embley.—The author summarizes his conclusions as follows: 1. Heart muscle is very sensitive to the poisonous effects of chloroform. 2. Chloroform raises the excitability of the vagus mechanism, particularly in the early part of the administration. The inhibitory action of the vagus is more intense and fatal in its effects from being exercised upon a heart whose spontaneous excitability is diminished by the action of chloroform upon it. The recovery of vagus function after the depression resulting from the induction of chloroform anæsthesia, is slow; transient recovery followed by reinduction does not represent the conditions of a primary induction. Vagus inhibition is, in dogs, the great factor in the causation of sudden death under chloroform. 3. The central medullary rasomotor system is stimulated, at any rate for a time, by chloroform. 4. Failure of respiration in inhalation experiments is mainly due to fall of blood pressure. The chances of dangerous inhibition in chloroform administration are greatly increased by imperfect respiration. Respiration fails when the blood pressure falls greatly from cardiac inhibition or other causes.

Journal des Praticiens, March 22, 1902.

Circumuterine Suppurative Processes.—M. J. Lucas.—Championnière says that the suppurative processes which require complete ablation of the organs are: First, salpingo-oöphoritis involving both the tube and the ovary; second, ovarian abscess; third, pyosalpax. The first are the most frequent, but the tube and ovary may not be equally affected. As to the origin of these suppurations,

they may proceed from the intestine, in which case the bacteriological examination will show that it is not of uterine origin. Prognosis is variable, spontaneous cure sometimes taking place. When the author removes such infected organs, he employs drainage by means of iodoform gauze, which is left in place for five or six days.

Melanoderma of Tuberculous Origin. By M. Paul Fabre.

Spinal Cocainization.—M. Guinard has found that the injection of sterilized water into the arachnoid sac accomplishes the same anæsthesia, but is apt to cause the same accident as the subarachnoid injection of cocaine in the treatment of sciatica. He therefore advises that for subarachnoid use, aqueous solutions of cocaine be not diluted with water, and that after the injection, patients be kept in bed for from two to three days.

Centralblatt für Gynäkologie, March 15, 1902.

Vaginal Myomectomy and the Relation Between Enucleation and Total Extirpation.—Dr. W. Thorn contributes an interesting study on the conserving of the uterus, when possible, in the presence of fibroid tumors. He is in favor of enucleating the growths, when possible, by the vaginal route, even though but a fragment of the uterus is left. This does not apply to all cases, total extirpation being carried out by Thorn in many instances in which technical reasons, the character of the growths or the fear of their recurrence, seemed to indicate the latter operation. [The paper is somewhat technical, but is a splendid review of the subject, and should be read in its entirety by those interested.]

Münchener Medizinische Wochenschrift, March 11, 1902.

Principles of Treatment of Abortion.—Prof. Hugo Sellheim. This article contains nothing new. The emptying of the uterus, either with dull instruments or with the finger, is advised in incomplete abortions. Septic cases require a thorough cleansing of the uterus, and an accidental perforation of the organ demands an immediate laparotomy.

Albuminuria and Egg Albumen.—Dr. M. Ascoli shows that the administration of small doses of egg albumen to healthy persons cause no albuminuria, although its presence can be detected chemically in the circulating blood. In persons with renal disease, however, it may pass through the kidneys, and it may even pass into the urine of healthy persons who eat an excessive number of raw eggs. The subcutaneous administration of egg albumen in small quantities does not cause albuminuria; but, in larger quantities, it appears promptly in the urine and can be distinguished from serum albumin by biological reactions.

Danysz's Bacillus. By Dr. E. Wiener.

Bactericidal Influence of the Röntgen Rays.—Professor H. Rieder has experimented with various cultures of bacteria and the influence upon them of the Röntgen rays. He concludes that after even several hours of exposure to the rays no death or inhibition of growth of the germs could be observed. He believes that the beneficial reaction of the rays

on some forms of skin disease is due to the "tissue reaction" or the "reactive inflammation of the skin," and not to the bactericidal influence of the rays.

Centre for the Reflex Contraction of the Pupil.

By Professor K. Baas.

Voluntary Dislocation of the Humerus.—By Dr. J. Rildinger.

Gazzetta degli Ospedali e delle Cliniche, March 2, 1902.

A Contribution to the Modern Indications of Abortion. Abortion in Tuberculosis. By Dr. Giuseppe Zanoni.—The author calls attention to the fact that the production of an artificial labor represents, not only a curative element of great value, but also a factor of great importance in social prophylaxis. It is well known to-day that pregnancy has a deleterious influence on the course of tuberculosis. This influence may be noted both during the pregnancy and after the labor. It is the duty of the physician to determine the condition of the tuberculous pregnant woman, so as to be able to judge whether it is necessary to induce labor in order to save the patient's life. The indications for the induction of artificial labor in such cases should be: 1. The period of pregnancy. 2. The condition of the pulmonary lesion. 3. The general condition of the patient. The labor should be induced within the first three months of pregnancy, if possible. In the fourth month it should be induced only under exceptionally favorable circumstances, while after the fifth month it should not be induced unless there are other indications such as hold good in non-tuberculous women. The abortion should be produced rapidly. A bougie should be introduced in the evening and allowed to remain over night. If the labor does not come on then, rapid dilatation, without anæsthesia, should be practised. The pulmonary lesion should be circumscribed and not ulcerative, and the tuberculous infection should be recent, *i. e.*, from four to six months old. Abortion is practised with difficulty on women who have already passed through a pregnancy. A large number and a virulent character of the tubercle bacilli do not contraindicate abortion, nor does a predominating toxicity of the case. When the case is evidently one of mixed infection with regular rise of temperature, an abortion should not be risked. The general condition of the patient should be good in order to warrant the operation; the temperature should not exceed the normal and the pulse should not be more than 100, while the digestive powers should not be impaired too greatly. A case of tuberculosis in a woman aged twenty-two years was considerably improved by abortion.

A Contribution to the Histology of Primary Renal Tumors. By Dr. A. M. Luzzato.—A number of cases are briefly reported. A renal sarcoma became noticeable by the diffuse infiltration of the whole organ and by the presence of hard, rounded, cutaneous metastases, which gave rise during life to the suspicion that a sarcoma was present. In another case there was an endothelioma, originating from the lining of the capillaries or the lymphatics, or both, which gave rise to new growths that were markedly dissimilar, and to accumulations of cells which resembled the tubules of an adenoma or the cell-nests of a cancer of the canaliculi, which may be found quite frequently in the fibro-adipose capsule of the kidney in the fœtus. This case constitutes

the first actual demonstration of the theory advanced by Albarran, to the effect that renal tumors may also develop from these aberrant circumrenal cell aggregations. Four cases of tumors derived from remains of the suprarenal capsule included in the kidney were also reported. In one of these new growths the structure was almost identical with that of the suprarenal capsule.

Scarlatinaform Erythema in the Infectious Diseases. By Dr. Sigismondo Pascoletti.—Eruptions resembling that of scarlatina may occur in puerperal or other septic fevers, in diphtheria, especially in the grave septic types, and occasionally in the beginning of measles. The diagnosis in the last class of cases should be based on the comparatively rapid course of the disease, without prodromata and with mild fever; on the fact that no epidemic of scarlet fever is present; and on the absence of concomitant symptoms. Nephritis, lymphatic involvement, and marked hyperpyrexia are rarely absent in a scarlet fever epidemic. The author does not think that so much importance should be attributed to desquamation as a sign of scarlatina as is usually done, for in the instances recorded it was also observed, though the presence of scarlatina was excluded. Desquamation may, therefore, occur, not only in scarlatina, but in the eruptions of influenza, of septicæmia, of diphtheria, and of measles.

Contribution to the Treatment of Blepharitis. By Dr. Raimondo Ferro.—A series of experiments conducted by the author in a number of cases of blepharitis for the last three years show that a great many remedies which are recommended for this affection are of no particular value. Among these he mentions local applications of solutions of iodine and potassium iodide; of silver nitrate; of concentrated solution of pyocyanine, etc. Finally, he tried an ointment containing ichthyol and copper sulphate in white vaseline. The ichthyol in this preparation acts as an antiseptic and as a stimulant to healing, while the copper sulphate is an astringent and caustic, reducing the congested sebaceous glands of the eyelid. The ointment used by the author did not affect the cornea or the conjunctiva, and had the following composition:

R Ichthyol, } of each. 7½ grains;
Copper sulphate, }
White vaseline. 1 ounce.

The use of this remedy in a number of cases convinced the author that this ointment might be considered as a specific in blepharitis; that it might be used in all the forms of this affection with the probability of complete success, and that it was preferable to all the other ointments recommended in the treatment of this disease.

A Contribution to the Rare Forms of Tertiary Syphilis. By Dr. Emilio Domenici.—The author reports a case of tertiary syphilis with localizations in the stomach. It is very rare to find tertiary lesions in the œsophagus, the stomach, or the intestines. The patient was a woman, aged thirty-two years, who at first denied all possible manifestations of syphilis. A year and a half before admission dyspeptic disturbances were noted, followed later on by pains in the stomach without vomiting or hæmatemesis. On examination, the epigastric region was slightly prominent; somewhat sensitive on pressure; the stomach somewhat enlarged; the liver was nor-

mal. The pains occurred after meals and sometimes between meals, and were transmitted upward and backward toward the right scapula. The stomach contents were slightly deficient in hydrochloric acid. The usual treatment for chronic gastritis was tried without success, and after close questioning the patient confessed that she had noticed a general macular eruption some years before. The mixed treatment was then prescribed with surprisingly prompt effects, so that there was no doubt as to the specific nature of the affection.

Histological Changes in the Thyreoid Glands of Syphilitic Fœtuses. By Dr. G. G. Perrando.

How Should Organotherapy be Practised. By Dr. G. Zanoni.—The safest and quickest way of employing organotherapeutic substances is by using the glycerin extracts hypodermically. In order to judge with certainty the therapeutic effect of these preparations, one must be sure that the extract has been properly prepared. The color of the extract must be observed, for they are not completely colorless but have tints which are peculiar to each particular extract, so that they may be recognized by this characteristic alone. An important point is the transparency of the extract, and it must be noted that when an extract becomes turbid it loses its activity. The strength of the extract may be tested in a general way by measuring the amount of albuminous substances it contains, by precipitating the latter by means of absolute alcohol or by the ordinary reactions for albumin.

Chirurgia, February, 1902.

On a New Method of Applying Cutaneous Sutures. By Dr. A. B. Arapoff.—The author advocates the use of Michel's method of suture, consisting in hooking the edges of the cutaneous incision together by means of two metallic plates. These plates are made of nickel and are 1 centimetre long and 2.5 millimetres wide; their ends are turned up in the form of loops, and on the inner side of these loops there is a pointed projection. Each of these projections is placed on the skin one at either side of the wound, and the plate bridges over the gap. The plate is now bent by means of special forceps so that the sharp hooks on its inner side enter the skin, thus grasping the edges of the wound, raising the latter at the same time in the middle, in the bend of the plate. A row of these "serrefines," as these plates are called for want of a better name, is applied along the wound, wherever necessary. Some skill and practice is required to apply these plates rapidly. They are removed by simply pulling the arms of the plate apart by wire hooks introduced into the loops at the ends of the plate, thus pulling the bent plates into a straight line and liberating the hooks grappling the skin. Such sutures should be removed two or three days before the ordinary silk sutures would be taken off. These serrefines are easily applied, easily sterilized, and do not involve the introduction of a foreign body into the wound. They are inconvenient when there is much bleeding, or when the edges of the wound cannot be united in one plate.

The Influence of Intracranial Pressure upon the Development of Epileptic Convulsions. By Dr. S. P. Fedoroff.—Clinical and experimental evidence, according to the author, shows that increase or variations in the intracranial pressure cannot in

themselves evoke an epileptic attack. In fact, the intracranial pressure is increased as a result, and not as a cause, of the attack. He would not be surprised to hear that the increase in intracranial pressure arrested epileptic attacks, instead of producing them, if the theory of Bier, that Kocher's operation is followed by hyperæmia of the brain, is true. The author concludes that an operation is indicated: (1) In every case of epilepsy in which the attacks are markedly localized, and are not amenable to medical treatment. (2) In the great majority of cases when the symptoms are not strictly localized, but when a local lesion can be assumed to exist, a temporary extensive craniotomy which may be properly termed a tentative one is indicated. (3) Finally, in rare cases operations may be indicated in the so-called idiopathic epilepsy, particularly when symptoms of functional degeneration of the brain, such as idiocy, weak-mindedness, etc., are present. In the first class of cases, the nature of the conditions found will dictate the character of the operation, and the formation of a flap or "valve" is of no value. In the second and third categories, Kocher's operation is indicated besides the ordinary trephining, as the former evokes somewhat more marked changes in the nutrition and circulation of the brain. But, inasmuch as the formation of a valve, according to Kocher, is no guarantee for a cure of epilepsy, it is useless to make large openings in the skull, especially as epileptics do not willingly bear various artificial appliances which are needed to cover the cranial defects.

A Case of Craniectomy. By Dr. I. I. Vystavkine.—The patient was a boy, aged fourteen years. At the age of five he received a blow on the head from a horse's hoof, which was not followed by any serious consequences. A month before admission, he was thrown from a horse and dragged for a considerable distance along the ground with one foot in the stirrup. He was found unconscious, with several wounds in the head, and for four days he did not regain his senses. On his return to consciousness he was very much depressed, gloomy and sulky, and had lost his memory completely. On examination he had the expression of dementia, and a well-marked depression of the skull was noticed in the left temporal region, including about 14 square centimetres of the anterior portion of the temporal bone. The diagnosis of a healed fracture of the temporal bone was made. The operation consisted of the excision of the flap of tissue down to the bone, including the periosteum. Four openings were then drilled into the skull, one at each corner of the depression, and the intervening bone was sawed from within outward through these openings. The depressed piece of bone was removed, the dura exposed, and found covered with a layer of blood-clot. The dura was incised and about two teaspoonfuls of clear yellow fluid escaped. The skin-periosteal flap was replaced and sutured. The recovery was uneventful, and gradually the boy regained his lost mentality.

On the Question of the Treatment of Prolapse of the Rectum. By Dr. P. I. Venglovsky.

Laparotomy Performed Three Times in the same Case; Recovery. By Dr. V. V. Schelekhoff.

The Operative Treatment of Recto-urethral Fistula. By Professor I. A. Praxin.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

XII.—How do you treat a person who has swallowed a poisonous amount of carbolic acid? (Answers due not later than May 10, 1902.)

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

XIV.—How do you treat chronic ulcers of the leg? (Answers due not later than July 10, 1902.)

XV.—How do you treat rhus poisoning? (Answers due not later than August 11, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Henry L. Shively, of New York, whose paper appears on page 743.

"WATCH AND WAIT."

Dr. Joseph Baum, of New York, says, in part:

The pneumonic process, having once started, cannot be aborted; the physician must watch and wait, ever alert and ready to use the most active measures to combat any serious symptoms which may arise. He must treat the patient and not the disease, remembering that meddlesome therapeutics has killed more children in the treatment of pneumonia than meddlesome midwifery has in the practice of obstetrics. "Watch and wait" should be our motto; the chief aim should be to remove from the child's surroundings all sources of worry and irritation, to nourish the patient as well as possible, with the least possible disturbance of the functions of the stomach and bowels, and to remember that, from day to day, the most important symptoms to be watched and noted are the pulse, the respiration, the cough, and the decline or prominence of any attending symptom of gastric or intestinal disturbance. The temperature and physical signs are often misleading and give no proper index of the child's condition. All treatment by drugs should be subsidiary, and while we meet any emergency that arises by active treatment, we cease our drugging as soon as the indication for it disappears.

Of great importance is a competent nurse, one who is cheerful and fond of children, with tact enough to allay the parents' solicitude and patience enough to obtain thorough mental control of her young charge. It is advisable to start treatment with small doses of calomel, repeated at intervals of half an hour, until the bowels are moving freely. Let me hasten to add that if possible we should follow the text-book regulations as to a large, light, well-ventilated room, with an equable moist temperature of 72° F., a southern exposure, an open fire, avoidance of draughts, and so on, but in the strenuous existence of the modern flat dweller, such considerations cannot be adequately fulfilled.

A "pneumonia jacket" of cotton batting and oiled silk protects the chest from atmospheric changes, and generally seems to add to the comfort of the patient; all importunities of parents and relatives as to the use of flaxseed poultices or any other soggy, moist external applications should be frowned on and throttled at once. Light, easily digested, nourishing food, such as milk, broths, and similar preparations, should be given at intervals of two hours in small quantities. The child should not be awakened for nourishment. It is extremely important that the patient's digestion be not interfered with by over scientific drugging.

For the accompanying bronchitis, which is often the most troublesome symptom, it may be said, although not too dogmatically, that opium in any form should be avoided; it tends to obtund the respiratory centre, and may increase the dyspnoea. A mixture containing syrup of squill and syrup of senega, with perhaps some ammonium chloride, tends to promote expectoration and to prevent lung collapse.

Ipecac, while of undoubted benefit in some cases, often causes so much nausea, and even emesis, that it must be used guardedly. Its use should be reserved until the necessity arises of emptying the lungs of accumulated mucus which obstructs respiration, by vigorous emesis. The constant boiling of water in the room moistens the atmosphere and seems to have a sedative effect upon the cough and lessens the viscosity of the bronchial mucus.

Some liniment or other counter-irritant should be rubbed daily on the patient's chest; one containing turpentine and some fragrant oil, such as oil of wintergreen, is useful and not obnoxious on account of its odor.

A small, compressible pulse is a danger signal; the rapidity of a child's pulse is not of much significance, but the quality of it is of serious import. A rapid, compressible pulse demands active stimulation. The amount of whiskey a child can take is indefinite; the exact quantity must be determined by each individual case. Champagne does not agree with children so well as whiskey or brandy. The use of the

various cardiac stimulants, such as digitalis, caffeine, and strychnine, cannot be recommended. Whiskey, boldly pushed, by the mouth or under the skin, will do as well. Children vary widely in their capacity for bearing high temperatures without discomfort; so watch the patient, and not the thermometer. Have the temperature taken every three hours; whenever it is over 102.5° F., give a ten-minute sponge bath of water and alcohol, at a temperature of 80° F.; this allays the child's nervousness and restlessness, tends to overcome sleeplessness, and reduces the temperature. Cold compresses to the head are also of assistance. The coal-tar antipyretics are not so useful in children as hydropathic remedies. A dose of whiskey before and after the bath should not be omitted, and if slight collapse occurs after the bath, external heat and whiskey by the mouth or subcutaneously are of great service.

A serious condition confronts us when the chest seems full of râles, the respirations rapid and superficial, and the lips blue and livid, as if the blood were not sufficiently aerated—a condition of true asphyxia—and the thermometer may show a low temperature. This is true collapse, and the most urgent measures must be persisted in to sustain the vital powers: Heat to the extremities, cloths wrung out of hot water placed over the præcordium, a hot mustard bath, alternate hot and cold spinal douches, and hypodermic injections of whiskey or ether or strychnine. Hot saline rectal injections are also of great service. Although the child may seem in a very precarious condition, our efforts must be persisted in, for it is wonderful how low the vitality of a child may ebb, and then a sudden change for the better ensue.

When convalescence starts in, increase the amount of nourishment daily; assist the action of the bowels by enemata of clear water, if necessary. Of tonics, cod-liver oil seems of most benefit during the cooler months of the year. The tonic preparations of iron and arsenic are also indicated. For the cough, which often persists, syrup of hydriodic acid is of benefit, but better than all medicinal tonics are the open air and sunshine. As soon as conditions permit, get the child outdoors.

THE OCCASIONAL USEFULNESS OF BLOODLETTING.

Dr. Moses Keschner, of New York, says:

It is impossible to lay down uniform rules for the treatment of a disease in which so much depends upon the extent and nature of the pathological condition and upon the resistance of the patient. Two thirds of the pneumonias in children are catarrhal, one third croupous, and a limited number interstitial.

No matter what the pathological condition may be, in the absence of a specific the treatment must be

entirely symptomatic. There are, however, certain general rules which are applicable to, and must be enforced in, every case. These are: Absolute rest, fresh air, a large room with a temperature of between 65° and 70° F., liquid food, milk, gruel, light broths (all of these in small quantity, but frequently given), and plenty of water or lemonade. The bowels must be regulated with minute doses of calomel and sodium bicarbonate. We must pay attention to the mouth and skin, and see that the little patient's posture is frequently changed.

Uncomplicated cases will terminate favorably with attention only to the above-named hygienic rules, but the majority of cases will at one time or another require treatment for one or for all of the following symptoms: Fever, cough, pain, dyspnoea, prostration, heart failure, and cerebral symptoms.

To treat fever rationally, one must first determine the effect of the high temperature upon the individual child. One child will bear a temperature of 103° or 104° F. without any cerebral manifestation, while another will be thrown into a state of high nervous irritability or even into convulsions by a temperature of 101° or 102° F. Should treatment of this symptom be indicated, it is best to absolutely disregard the use of antipyretics even for only a transitory rise of temperature, and to resort to the external application of cold. I prefer "chest compresses" at 70° F., renewed every hour or two; they rouse the heart, cause the cyanosis to disappear, and reduce the temperature. These applications are best begun at 100° F. and gradually reduced to 70° F. When the first effect of the compress has passed off, the application acts like a poultice and relieves the pain. Cold sponging, with or without alcohol, in a very high temperature, is of doubtful value. The cold compress, with an ice bag to the head and an occasional dose of fresh milk, of asafoetida, chloral, or bromides, *per rectum*, will control the cerebral symptoms.

Small doses of codeine phosphate relieve the hacking cough and allay the sleeplessness and restlessness. Inhalation of moist air, medicated with compound tincture of benzoin, will also be beneficial, particularly in the stage of resolution.

For the pleural pain, we employ gentle strapping of the chest and sinapisms, kept on for a few minutes, and repeated from time to time. Dry cupping of the chest, in front and behind, will relieve the pain and dyspnoea, if they are due to a severe complicating bronchitis.

The treatment of heart failure is its prevention. I do not mean by this that it is necessary to stimulate the heart at the outset, but that it is necessary to watch the circulation, so that stimulation may be resorted to just at the proper time. If at any time during an attack of pneumonia the pulse becomes ir-

regular and rapid, I administer a large dose of digitalis, one or two grains, for a child a year old, continued in smaller doses. If the stomach is rebellious, tincture of strophanthus, in drop doses, will also restore a badly working heart. Whenever the peripheral circulation becomes insufficient, the digitalis or strophanthus should be combined with nitroglycerin in doses of $\frac{1}{500}$ of a grain every two hours, till the pulse becomes of better quality. When, however, in spite of this treatment, the right side of the heart begins to fail, as evidenced by intense dyspnoea, a small and weak radial pulse, accentuation of the second pulmonic sound, cyanosis, and distended jugular veins, we must add to the strophanthus whiskey, twenty drops every hour, and strychnine, $\frac{1}{100}$ of a grain every two hours. If the reaction then is not prompt, we resort to inhalations of oxygen, hot mustard baths, and the subcutaneous injection of the more diffusible stimulants, such as camphor (in oil), ammonia, and ether. Alternate hot and cold affusions to the chest are also very beneficial. In very desperate cases, from two to three ounces of blood may be abstracted by venesection or by the application of one or two leeches over the sternum.

In cases with marked bronchitis, when expectoration is insufficient, I employ the following mixture with good results:

R Ammonium chloride. 20 grains;
Sodium bicarbonate. $\frac{1}{2}$ drachm;
Syrup of ipecac. $\frac{1}{2}$ ounce;
Syrup of squill. 3 drachms;
Syrup of licorice. $\frac{1}{2}$ ounce;
Syrup of wild cherry, enough to make 4 ounces.

M. Sig. A teaspoonful every two hours, for a child two years old.

In cases in which the heart is weak and the stomach will not tolerate anything, champagne in teaspoonful doses every half-hour, with nutritive enemata every four hours, will tide over a critical period. In grave asthenic cases, tincture of musk in large doses may be tried.

Where nephritis is a complication, sparteine and nitroglycerin must be substituted for digitalis and whiskey; hot packs, high saline enemata, and cupping over the region of the kidneys must be resorted to.

Otitis media must be prevented by keeping the nasopharynx clean from the beginning of the disease.

When slight fever persists, a careful examination should be made for a possible pyothorax. As soon as the temperature is normal, and the physical signs have abated, the little patients must be sent into the open air, preferably to the seaside, or at least to where they can get pure country air, and unusual precautions taken to prevent that most dreaded sequel to pneumonia—pulmonary tuberculosis.

Letters to the Editor.

HUMAN AND BOVINE TUBERCULOSIS.

100 STATE STREET,
CHICAGO, April 19, 1902.

To the Editor of the New York Medical Journal:

Sir: I would like to have the observation of your readers upon the question of bovine and human tuberculosis. Has any physician known of a case where a cow became tuberculous from a consumptive attendant? Have any of your readers positive proof that a child or adult became infected from a known case of tuberculous cow? I know that it has been taken for granted that bovine and human tuberculosis are identical, but doubt has been thrown upon this idea by the positive assertion of Professor Koch that they are not the same. Can you give me the address of any party trying to solve this problem?

T. C. DUNCAN, M. D.

Book Notices.

An Introduction to Chemical Analysis for Students of Medicine, Pharmacy, and Dentistry. By ELBERT W. ROCKWOOD, M. A., M. D., Professor of Chemistry and Toxicology in the College of Medicine, University of Iowa, etc. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. vii-9 to 255. [Price, \$1.50.]

The author, occupying chairs in the colleges of medicine, dentistry, and pharmacy in the University of Iowa, has well combined in this little work material of use to his classes in these various departments. There is considerable individuality displayed in the arrangement of the work, each chapter closing with questions upon the subject matter contained therein. The book, as a whole, deals but superficially with the wide scope of this subject, and represents one of that large number of contributions classed under the heading of "compends," so universally found, which every teacher finds most useful as an aid to imparting knowledge to his students. The presswork and illustrations are clean and well executed.

Peru History of Coca. "The Divine Plant" of the Incas. With an Introductory Account of the Incas and of the Andean Indians of to-day. By W. GOLDEN MORTIMER, M. D., Fellow of the New York Academy of Medicine, etc. With One Hundred and Seventy-eight Illustrations. New York: J. H. Vail & Company, 1901. Pp. xxi-576.

The scope of this work can perhaps best be gathered from the titles of the chapters in the table of contents: An Introduction to the History of Coca; The Story of the Incas; The Rites and Acts of the Incas; The Conquest of the Means; The Physical Aspect of Peru; The History of Coca; The Present Indians of Peru; The Botany of Coca; In the Coca Region of Peru; The Products of the Coca Leaf; The Production of Alkaloids in Plants; Influence of Coca upon Muscular Energy; Action of Coca upon the Nervous System; The Physiological Action of

Coca; Adaptation of Coca to Voice Production; The Dietetic Influence of Coca; A Collective Investigation upon the Physiological Action and Therapeutic Application of Coca; etc. There is appended an exhaustive bibliography of nearly 600 titles, with an index and glossary occupying thirty-two pages. Among the authorities to whom the author expresses his indebtedness "for courtesies and assistance" are the librarian of the Lenox Library for suggestions in historical research; the president of the American Museum of Natural History; Dr. Franz Boaz, for advice in archæological matters; Mr. Marshall H. Savile and Mr. Herbert Tweddle, for access to Peruvian relics; Professor Stockman, of Glasgow University, and Professor A. B. Lyons for details of their special work on coca; Captain Zalinski, U. S. army (retired), and Mr. Samuel Mathewson Scott, of London, for accounts of their personal experiences in Peru; many commercial firms for trade details, and the Bureau of American Ethnology, Washington, D. C., for ethnological information. The work contains many interesting illustrations, especially of Peruvian antiquities. Johnson says: "Survey mankind from China to Peru." The author, seemingly, has started at the Peru end of the survey, and has found enough to interest him without proceeding on his journey.

Studies of the Internal Anatomy of the Face. By M. H. CRYER, M. D., D. D. S., Professor of Oral Surgery, Department of Dentistry, University of Pennsylvania. Philadelphia: The S. S. White Dental Manufacturing Company, 1901. Pp. xii-176.

These systematic dissections have let in a flood of light upon the darkest cavities of the skull. The efforts of the author conclusively show that the normal skull and its accessory sinuses vary so greatly that only by keeping in mind the constancy of these variations can we speak of the skull conforming to a type. The main significance of these studies, however, is that they were pursued with an eye to the eminently practical, tending to reduce the percentage of failures of operations based on the faulty current anatomical descriptions.

Some of the salient features brought out are worthy of note. In the description of the lower jaw attention is drawn to the fact that the inferior dental canal is in reality a cribriform tube, which courses tortuously in two different planes. This is of importance in resection of the inferior dental nerve. The consideration of the upper maxilla is general, and shows the differences existing in the infantile and adult skulls and the variation of each in the Caucasian and negro races. The most telling and original chapters on the nasal fossa and the maxillary sinus are elucidated by numerous excellent illustrations of sections executed in various planes. These vividly show how incomplete was our teaching as laid down in the stereotyped narrative of textbooks. A chapter is devoted to impacted teeth and the value of the x rays in detecting these. With the exception of an article on hypertrophy of the gums, the remaining contents are of anthropological interest. This finer anatomy ought to better our understanding of operations on the antrum and accessory nasal sinuses and widen the field of operative inter-

ference. For these pertinent reasons, this original treatise should commend itself to the progressive surgeon, the rhinologist, and the dentist.

The Century Book for Mothers. A Practical Guide in the Rearing of Healthy Children. By LEROY MILTON YALE, M. D., formerly Lecturer on the Diseases of Children at Bellevue Hospital Medical College, and GUSTAV POLLAK, Editor of *Babyhood*. New York: The Century Company, 1901. Pp. xvi-3 to 461.

It would save the patient many a visit from the doctor and the doctor many a weary and wearying trip, if all mothers would read, study, and digest this excellent book. It is eminently sound, practical, and thorough. There is no conflict between domestic and professional medicine outlined in its pages, the directions for the care of well and sick children are proper and thorough, and the book contains none of the maudlin stuff with which we have been deluged in recent years.

Much attention is given to the minor ailments of infants, and this, in our opinion, rightly. Serious troubles are always under the direction and care of a physician, but it is the little troubles, the colics, the occasional vomiting, the constipation, the dressing of the baby, the care of the nursery, the diet during nursing, and the thousand and one other little things that harass a young mother, that are satisfactorily answered in this book, and answered in a way far better, as a rule, than the family doctor can answer them. The whole subject of infant feeding is discussed in a thoroughly scientific manner, as well as in a lucid way, so that it stands out as an easily comprehensible subject.

The second part of the book is devoted to questions and answers, in which typical questions are given explanation and elucidation. It is this part, more perhaps than the general part of the work, which will especially appeal to the lay public, because it is, above all else, practical and full of common sense.

We commend this book to physicians as well as to young mothers and nurses; it is full of meat. The book is not illustrated, and perhaps this is an advantage; for of what use is a picture of a nipple, of a rubber bath-tub, or of a nurse feeding a baby from a bottle? In this respect, as in his text, the author has shown discretion.

The paper and type are above reproach.

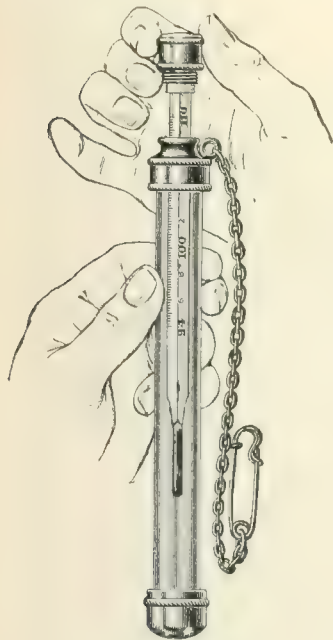


A Suit against Examiners in Lunacy Lost.—Mrs. Julia H. Egan brought suit against Dr. Allan Fitch, Dr. Austin Flint, and Dr. O. J. Wilsey, superintendent of the Long Island Home at Amityville, L. I., to recover \$100,000 damages for having caused her incarceration in the asylum as an insane person. The case was tried before Justice Leventritt, of the Supreme Court, who decided in favor of the defendants. In dismissing the suit Justice Leventritt held that there was no proof to show that the physicians were actuated by malice or improper motives. Justice Leventritt granted to each of the defendants an allowance of \$500 for costs.

New Inventions.

AN ASEPTIC THERMOMETER CASE.

The medical profession, as a class, recognizes the necessity for absolute asepsis in all medical and surgical procedures, the carrying out of which may subject a patient to a possibility of becoming infected. This danger is quite as imminent in the use of clinical thermometers as with surgical instruments, for a thermometer being used with several patients in quick succession and without



being properly cleansed and disinfected after each application may transmit disease from one to another.

The simple device manufactured by the Norwich Pharmacal Co. and pictured here provides a ready means to this end, and does away with much of the trouble attending the sterilization and disinfection of the thermometer by the user.

The illustration gives a fair idea of its simplicity. It measures complete about five inches in length, and the di-

ameter is so slightly increased over that of ordinary holders as to make it scarcely noticeable in the vest pocket. The lower part, which holds the antiseptic solution, is a tube made of heavy glass of best quality especially annealed to withstand hard knocks.

The bottom of this tube is closed by a metal screw-cap, which hermetically seals the end and protects it against breakage. The upper end of the tube is closed by a diaphragm held in position by a metal neck-band to which is attached a safety chain for fastening the case securely to the vest. This diaphragm is so constructed as to admit of inserting the thermometer into the antiseptic solution, where it may be carried without danger of leakage. The thermometer is secured by rubber packing to a metal cap, which screws into the neck band, making the apparatus complete.

In using this appliance the glass tube is nearly filled with an antiseptic solution, such as corrosive sublimate, 1-500. This is done by inverting the case and unscrewing the bottom cap, when the solution may be introduced without disturbing the thermometer, and the cap may then be replaced. It may then be safely carried in the pocket, since the toughness of the glass insures it against breakage and the diaphragm prevents leakage.

To remove the thermometer from the case, it is only necessary to unscrew the cap, as shown in the cut. On withdrawal of the thermometer the

diaphragm completely closes so that the antiseptic solution cannot run out, even though the case be inverted. The thermometer is returned to the case with equal ease.

In its improved form this case is all that could be desired and admirably accomplishes its purpose.

Miscellany.

The Urinary Symptoms of Angina Pectoris.—

Robinson (*American Journal of the Medical Sciences*, February) says that a phenomenon which is somewhat curious is the fact of an intense desire to urinate during the period of an attack, even though the effort is vain, simply because the bladder is frequently entirely empty. This statement may not invariably be true. He has known many a time emotional excitement to prevent absolutely for a while the contractile power of the bladder being exerted, and where, as was proved later, the bladder contained a considerable quantity of urine. It requires a very slight degree of annoyance or mental disturbance in men past middle life to prevent frequently their power to void their urine. Of course, the contrary of this is true, especially among women of a neurotic type, and who are still relatively young. The quality of urine of low specific gravity passed by them at times, in a very brief period, is often very great. In the diagnosis between true angina and pseudo-angina, this point should be borne in mind.

Who Laughs?—Dr. W. C. Johnston has sent us the following:

"The world is all wrong!" the Osteopath sighed;
"Its skeletal frame is sadly 'aslant.'
But my hand is a cure," he cheerfully cried,
"So henceforth forever abandon your cant."

"If your floating rib chances to wander 'awry,'
Or your cervical vertebræ happen to 'slip,'
Pray don't be X-rayed till you've given a try
To my velvety five-dollar, never-fail grip."

"There's nothing in medicine, in surgery less;
Pathology, born of cadaverish stew,
And bacteriology's germinal mess
Before Osteopathy pass out of view."

Our Mark, he of personal-liberty fame,
The lawmakers told in his soul-stirring tones,
An Osteo should add an M. D. to his name
As a learned exponent of many "cross bones."

But all to no use, for the bill is now dead,
'And Osteopaths simple *masseurs* remain;
For somehow a vertebra "slipped," it is said,
And now the M. D.'s have the laugh on the
TWIN.

Tetanus and Vaccination; an Analytical Study of Ninety-five Cases of the Complication.—Dr. Joseph McFarland, professor of pathology and bacteriology in the Medico-Chirurgical College of Philadelphia, recently read a paper on this subject, in which it was first shown that tetanus was not a recognized or frequent complication of vaccination, there having thus far appeared in the literature of

medicine a total sum of but fourteen cases. In addition to these there had been collected forty cases with complete details, thirteen cases with incomplete details, and twenty-eight cases without details; the total number of cases of the complication thus reaching ninety-five. Sixty-one cases terminated fatally, twenty-four in recovery; twenty-five occurred in adults, forty-five in children; thirty-eight were in males, twenty-nine in females. The conclusions brought out by the paper were as follows:

1. Tetanus is not a frequent complication of vaccination, a total of ninety-five cases being collected.
2. The number of cases recently observed is out of all proportion to what have been observed heretofore.
3. The cases are chiefly American and occur scattered throughout the Eastern United States and Canada.
4. They have nothing to do with atmospheric, telluric, or seasonal conditions.
5. They occur in small numbers after the use of various vaccine viruses.
6. An overwhelming proportion occurs after the use of a certain virus.
7. The tetanus organism is in the virus in small numbers, being derived from the manure and hay.
8. Through carelessness or accident the number of bacilli present become greater than usual.
9. The future avoidance of the complication is to be sought for in the preparation of the vaccine virus.

Some interesting statistics were shown regarding the chronological occurrence of the cases, as is shown by the following table:

Chron-

ology. Cases. Rumors.

1854..	1		
1878..	1		
1882..	3		
1886..	1		
1889..	1		
1891..	1		
1892..	0	6 (Alexander's)	toms of tetanus.
1893..	1		
1897..	1		
1898..	3	2 (Groff's)	
1899..	3		
1900..	1		
1901..	45	18 = 63	
1902..	5	1	
Unknown	0	1	
	67	28	
	28	67	
	—	—	
	95	95	
			63

The usual explanations that tetanus depends upon accidental, secondary infection of the wound, upon the local prevalence of the tetanus germs, upon the carelessness in the subsequent treatment of the vaccination sore, and upon the use of shields, were considered and eliminated as important factors in the aetiology of the complication.

The relation of the tetanus cases to the viruses used is shown by the following table, in which it appears that a certain virus called E has, following its employment, three times as many cases of tetanus as all the other viruses put together. This seems to prove some defect on the part of the virus, and, by referring to the chronological table, in which it ap-

pears that the great majority of the cases of tetanus succeeding the use of this virus occurred during November, 1901, the inference to be made is that some accident happened to this virus about that time.

		<i>Glycerinized Virus.</i>	
<i>Dry Virus. Points.</i>		<i>Tubes.</i>	
E.	3	10	17 = 30
A.	2		= 2
M.	0		3 = 3
W.	0	I	= 1
S.	0		2 = 2
M. I.	1		= 1
G.	1		= 1
	7	11	22 40

The table at first makes it appear as if there existed a great disproportion between the dry and the glycerinized virus, the proportion being seven to thirty-three, but, when the cases depending upon virus E are thrown out of consideration and only those cases succeeding other viruses contemplated, we find a proportion of four to six, this being about right, when we consider the present popularity of the glycerinized virus, and thus removing the probability that the glycerinized virus is itself at fault.

The occurrence of cases in groups is also a point of importance. Four cases have occurred within a short period at Cleveland, Ohio, eleven cases in Camden, N. J., five cases at Atlantic City, N. J., and twenty-five cases in the vicinity of Philadelphia at nearly the same time. In all of these, virus E was almost exclusively implicated. The most interesting group of cases occurred in the Men's Insane Department of the Philadelphia Hospital. Because of a threatened epidemic of small-pox the entire Philadelphia Hospital and Almshouse, with nearly four thousand five hundred inmates, had to be protected by vaccination. The staff of resident physicians went through the institution vaccinating well and sick with viruses of various makes. The supply of material ran out when the men's insane wards were reached, and the inmates of this department were obliged to wait the arrival of a new consignment of virus. They were then vaccinated. The only cases of tetanus that developed in the institution were in the men's insane wards, where five typical cases of trismus and opisthotonos developed. In four of these death resulted. Fearing lest other cases should occur all suspicious wounds were excised and treated antiseptically. In spite of this, it is said that in eleven other cases trismus was developed, but recovery occurred under the use of large doses of antitoxine. No cases of traumatic tetanus are known to have occurred in the Insane Department of the Philadelphia Hospital during the last twelve years.

The incubation period in all cases following vaccination was prolonged. The cases usually develop, on an average, on the twenty-second day, thus differing from ordinary traumatic tetanus, of which the greatest number of cases appear on the seventh day. This is thought, not to indicate that the bacillus enters the wound subsequent to vaccination, but that, having been implanted with the virus, its development is delayed until other conditions favorable to it arise, in consequence of the vaccination lesion itself.

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Original Communications.

A NEW STUDY OF MITRAL OBSTRUCTION, WITH ILLUSTRATIVE CASES.

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Some of our medical journals seem to be willing enough to give space to certain topics, even if they merely air individual views based on personal experiences in narrow fields, and add little if anything to present uncertainties. One of these topics is the application of surgery to appendicitis. Another is the diagnosis of mitral obstruction.

Certainly the progress towards a solution of these problems has of late been so inconsiderable that the profession has become weary of discussions as to the proper time and indications for operative interference in appendicitis; at the same time it looks with suspicion on any new set of rules for the diagnosis of mitral obstruction.

As a matter of fact, we have not yet accumulated the kind of data necessary for decisive opinions on either of these two vexed problems. On the other hand, I am disposed to think that the practical solution of them would be much hastened if we were only to utilize the material that is already in existence.

It is to be hoped that the presentation of the following facts, figures, and illustrative cases bearing on mitral obstruction may both be of value to the profession and may serve to indicate how we can further enhance accuracy in our diagnosis. I should fail to present this subject clearly if I did not state here that a great deal in print on this subject has been based on clinical data unsupported by pathological, and that this is the real source of most of the errors committed by writers, many of whose names are quite familiar to us.

As opposed to this method, the value of this paper, whatever it may have, is derived from the fact that it is based substantially on pathological records supplemented in each case by clinical data, presumably of trustworthy character. The illustrative instances are taken from my hospital records. A few preliminary statements will facilitate an understanding of this perplexing subject.

Our conceptions of mitral obstruction originated with Corvisart, Napoleon's able physician, and

Laennec's teacher, for, according to the latter, Corvisart in 1819 first called attention to the "purring thrill" of mitral obstruction described as a "particular sensation, which in some cases is perceptible to the hand when this is applied to the region of the heart," and is a "sign of the ossification of the valves and particularly of the mitral valve. Indeed, this phenomenon is observed in almost every case in which there is some contraction of the auricle of the heart." Leaving out of consideration Laennec's erroneous views about "ossification," he clearly associates the discovery of the "purring thrill" with his distinguished teacher.

And he is also equally emphatic in attributing the discovery of a diastolic bruit in mitral obstruction to his cotemporary, Bertin, but the masterly description of it is all his own. Alluding to one of his personal cases he uses these words:¹ "The contraction of the auricle, which was extremely prolonged, was performed with a dull but strong sound, precisely resembling that produced by filing wood. This was accompanied by a vibration sensible to the ear, and is evidently the same as is felt by the hand. At the close of the contraction one could distinguish by a louder sound accompanied by an impulse and perfectly isochronous with the pulse, the contraction of the ventricle, which was three-fourths shorter." Three cases of this kind, he tells us, had been described by Bertin, and were verified by autopsies.

Twenty-four years later Fauvel first called attention to that subvariety of the diastolic bruit now known as the presystolic, which he defined as a "loud rasping bruit" preceding the first sound or murmur and ending with it. In English circles W. T. Gairdner,² of Edinburgh, is usually credited with defining it, which he did under the name "auricular systolic bruit." According to Gairdner, it was a murmur preceding the first sound, running sharply up to it, then coming abruptly to a stop.

Obstruction at the left auriculoventricular orifice, which for convenience sake rather than because it is the best term, has been called mitral stenosis, is not a very uncommon lesion. Walsh³ puts it fourth in his list, which is:

1. Mitral insufficiency.
2. Aortic stenosis (obstruction).
3. Aortic insufficiency.

¹ *Mediate auscultation*, London, 1846, pp. 555 and 617.

² *Clin. Med.*, 1862, p. 598.

³ *Diseases of the Heart*, London, 1873, p. 105.

4. Mitral stenosis (obstruction).
5. Tricuspid insufficiency.
6. Pulmonary insufficiency.
7. Pulmonary stenosis (obstruction).

And it occupies the same position in my published list of sixty-five cases of endocardiopathies, verified by autopsies, which is as follows:

1. Aortic insufficiency, 49 times.
2. Aortic stenosis, or obstruction, 39 times.
3. Mitral insufficiency, 38 times.
4. Mitral stenosis (obstruction), 33 times.
5. Tricuspid insufficiency, 8 times.
6. Tricuspid stenosis (obstruction), 4 times.
7. Pulmonary insufficiency, 4 times.

One hundred and seventy-five times in 65 cases.

And in fifty cases taken from my clinic by myself or assistant (not verified, of course, by autopsies), the incidence as to mitral obstruction was the same, being:

1. Mitral insufficiency.
2. Aortic insufficiency.
3. Aortic obstruction (stenosis).
4. Mitral obstruction (stenosis).
5. Tricuspid insufficiency.
6. Pulmonary insufficiency.⁴

It may be laid down as a fact that mitral obstruction in general implies regurgitation, though the mitral regurgitant murmur is apt to be absent in the later stages of obstruction. In the sixty-five cases alluded to, they coexisted in 45 or 70 per cent. In fact, advanced obstruction seems to be almost impossible without regurgitation; certainly in stenosis where the orifice or the leaflets or their attachments are rigid.

On the other hand, regurgitation not infrequently occurs without obstruction, as for example in the early stages of organic insufficiency and in all cases of relative insufficiency. The relation of obstruction to regurgitation is sometimes close, according to my figures, and yet it is variable. But there is a sequential relation between the two, regurgitation being often preliminary to obstruction and subsequently its associate. So far from the standpoint of pathological anatomy.

Clinically there is also a close relation between the two, but the interest of the physician turns chiefly on the determination of which is the predominating disease. On this point hangs the prognosis. For mitral regurgitation is generally thought to have a rather favorable outlook. Mitral obstruction seriously modifies the expectation of life.

However, well marked mitral obstruction is somewhat rare. In seventy-one instances complete as to clinical histories and autopsies taken by myself from French, English, and American authors (not including my own), advanced obstruction occurred

in only thirty-eight, or about 53 per cent. In twenty-nine of my personal cases the severe ones were nine, or only 31 per cent. The larger ratio in the foreign cases is perhaps because rheumatic affections are more common abroad, especially in Great Britain, than in this country. So that on the whole the severe cases average somewhat less than one-half the total. But it is in this class that we encounter the greatest difficulty in diagnosis, because in them the diastolic murmurs are apt to be faint or inaudible. How great this difficulty has been may be judged from the records of the Massachusetts General Hospital, where, as late as 1900, in forty-eight cases of mitral obstruction, as proved by autopsies, but twenty-three, or 48 per cent., were recognized during life. (Cabot, *Phys. Diag.*, New York, 1900, p. 163.)

Another reason for failure in diagnosis (other than the one given) is, as was intimated at the outset, that the data on which to base rules for diagnosis have been defective. An instance is well shown by Fagge,⁵ who tells us that previous to 1871 there were but twenty-eight cases on record where pre-systolic murmurs had been found on post-mortem examination to have been associated with mitral obstruction. And yet this sub-variety of the diastolic murmur had been known for upwards of thirty years, in fact since 1843.

Speaking broadly, there is a wide difference between the general effect on the heart and system at large, between chronic obstruction and chronic insufficiency. In the former (to recapitulate what is generally known) the systolic contraction of the left ventricle fails to force a requisite quantity of blood into the aorta, because part of it escapes through the leak in the mitral valve. To overcome this difficulty the left ventricle hypertrophies and remains hypertrophied so long as the leak is considerable; but as chronic insufficiency passes over into chronic stenosis, so the hypertrophied left ventricle synchronously finds its task more easy until at length, if the patient survive, the orifice is so reduced as to represent nothing but a chink or cleft, the leak is no longer considerable. But now the blood is delayed in its passage from the left auricle, and an undue quantity is detained there. Dilatation and hypertrophy of the left auricle naturally ensue, for greater force must be used by the auricle to expel the blood during a diastolic interval.

Assuming, then, that chronic insufficiency of the mitral preceded chronic obstruction, this change in the walls of the left auricle is the second of the series. The third is the arrest in the hypertrophy of the left ventricle, or even an atrophy, due to the fact that the insufficiency has been succeeded by stenosis (obstruction).

⁴Endocardiopathies. *Proc. Soc. Exper. Med. & Biol.*, April 26, 1904.

⁵*Gen. & Human Diseases*, 31, Ser. 3, 16, 1871.

The accumulation of blood, however, in the left auricle and the consequent backing of the venous blood into the lungs produce in turn hypertrophy of the right ventricle, because more work is thrown on it. If, however, this ventricle finds itself incompetent for the task and dilates, the tricuspid valves will also stretch and hypertrophy, and dilatation of the right auricle will follow. The vicious circle is then complete.

At and beyond a certain grade of obstruction, therefore, the insufficiency is relieved. Unfortunately a substitution of the one for the other does not improve the expectation of life. But it emphasizes the importance of combating the systemic disease at an early period by treatment directed to preventing continued infiltration of the valves and their attachments, because there appears to be no controlling influence in nature to counteract it. I believe I may say that the profession is hardly willing to seriously consider Balfour's suggestion of opening the heart and cutting the constriction. Even supposing this procedure were practicable, it could not arrest the constitutional process which has produced the stenosis.

The following cases, taken from my records, illustrate some of the points I wish to make.

CASE I.— —, aged thirty-one, admitted to hospital October 23, 1885. The patient complained simply of dyspnoea and rheumatic pains. On examination the heart's action was found to be rapid and irregular. There was a systolic murmur at the apex conveyed to the left. Death took place after fourteen hours' stay in the hospital. At the autopsy the heart was found to weigh 18 oz. The mitral was dilated and the tendinous chords and margins of the valves were covered with vegetations. Mitral orifice dilated so as to admit three fingers (two fingers being the ordinary size of the opening). Aortic valves thickened and the seat of vegetations, but sufficient. Pericardial sac contained 4 oz. of serum. Left ventricle hypertrophied and dilated. Right ventricle not hypertrophied. Lungs oedematous. Kidneys of the large white variety. Infarctions of spleen.

Now, such a case as this I hold to be in a stage preliminary to obstruction (stenosis), though as a matter of fact the orifice was really dilated. But given a mass of vegetations about any valve, let them continue to develop, and the patient will surely have stenosis if he lives long enough and the disease continues. In this case the aortic disease appears to have been insignificant as compared with the mitral, the aortic being classed as sufficient; so that the hypertrophy of the left ventricle may be fairly charged to the mitral insufficiency.

On the other hand, the following case, No. II., may be regarded as one of tolerably advanced obstruction in which the regurgitant element was supplanted by the obstructive. We observe that the heart in this case was small as compared to No. I.

There was no hypertrophy of the left ventricle, but the dilatation of both the right auricle and right ventricle indicated that the anatomical changes had shifted over from the left to the right side, as was to be expected in this particular case of valvular lesion.

CASE II.— —, aged thirty-eight, teacher, was admitted to hospital Nov. 19, 1891. About a month before admission she was taken with dyspnoea, weakness, dyspepsia and epigastric pain. On examination, a gallop bruit preceding the first sound was heard at the apex, and it was thought it was propagated to the middle of the axilla. At any rate, a correct diagnosis of mitral regurgitation and stenosis was made, the latter the more prominent. About a week after admission, she was taken with spitting of blood and râles with cogwheel respiration heard at the base of the right lung. On November 29th the patient's mind became affected. Pulse moderately strong, but irregular. Delirium ensued and death. At the post-mortem examination, 20 oz. of fluid were found in the peritoneal cavity. There were hæmorrhagic infarctions in both lungs. Weight of heart 8 oz. Right ventricle dilated. Tendinous chords contracted. Mitral did not admit a single finger. No hypertrophy of left ventricle. Aortic normal. Pulmonary valve a little thickened and dilated. Right auricle dilated. Nutmeg liver. This case is a good example of the changes that may be in the heart and system at large in the middle period of mitral obstruction after compensation has been established, but has been temporarily embarrassed.

It is astonishing how small the orifice may become. I have frequently seen it so small as not to admit the tip of one finger. The following case shows this:

CASE III.— —, aged twenty-six, painter. Was admitted to the hospital Sept. 18, 1880. Twelve years previously he had suffered from acute rheumatism and for about a year from palpitation and indigestion. On examination a murmur with the first sound was heard at the apex, but not behind or in the axilla. Radial pulse is not synchronous. Hypertrophy of the heart, which was irregular in action. An intermission every 6 or 8 beats. Marked epigastric pulsation. A week later the murmur had disappeared, and a gallop rhythm had taken its place. Two weeks after, there was pulmonary oedema and after ten days pulsation of the veins in the neck, a thrill in the fifth left space, one-half inch below the nipple, with recession of soft parts. On November 10th, he died in a convulsion. At the autopsy general anasarca was found. Pericardium contained 8 oz. of fluid. Mitral only admitted the tip of a finger. Valve calcareous. Festoons on the free borders of the aortic and pulmonary valve. Tricuspid dilated, admitting four fingers. Right ventricle thick, left ventricle thin. Weight of heart 16 oz. Nutmeg liver. Oedematous lungs. This case may be regarded as one of well developed stenosis in the last stage.

During the first period where there is hypertrophy of the left ventricle, the apex is carried out to or perhaps beyond the nipple, but as this ventricle contracts the apex recedes within the nipple line, usually remaining within it during the course of the disease

unless there is some complication such as the common one, aortic disease.

When in a subsequent stage the right ventricle is enlarged and begins to labor, it thumps against the wall of the chest and its increased breadth is recognized by percussion. Or it may extend as much as two inches beyond the right sternal border. In the final stage the enlarged right auricle will extend to a similar distance from the sternal one. But with all these changes the heart is seldom much enlarged, for in uncomplicated cases it will average in weight from 15 to 18 oz. only.

In Dyce Duckworth's cases (*St. Bartholomew's Hospital Reports*, 13, 263), 264 in number (though in many the ante-mortem diagnosis was not verified by autopsies), the average age was thirty-five. In my first series of 100 cases I found the limit of age seventeen and seventy-eight, but 68 per cent. of them died under forty, and at the average age of thirty-five. In the second series the average age was thirty-three. Sansom (*Allbutt's System*, p. 908, Vol. 6) found the average age of death 32.7 years.

There has been a disposition among English writers, particularly, to state that the female sex is most often affected. In Broadbent's fifty-three autopsies there were thirty-eight females to fifteen males, according to Sansom. In a series of seventy cases, however, I have found that the preponderance of females was not noteworthy (thirty-six to thirty-four), and Sansom's seventeen autopsies have given the proportion of only ten females to seven males.

The value of the pulse by itself as a diagnostic factor is small. Walshe, already quoted, speaks of it as regular. James Andrew (*St. Bartholomew's Hospital Reports*, 13, 1877) makes it small, rapid, and irregular. As a matter of fact, it will be irregular until compensation is well established, but regular during well-sustained compensation, and irregular again with failing compensation. But in all stages it is apt to be small and feeble at the last, becoming intermittent with irregular rhythm, which is often in marked contrast to the strong or heaving cardiac impulse.

The characteristic presystolic murmur associated in our minds with mitral obstruction has various qualities. It is sometimes spoken of as rumbling or rolling, but in my experience it is more often loud, rasping, or sawing, though it may have other qualities and be faint or even inaudible. It is contemporaneous with the thrill, if there be any, and indicates the passage of the blood from the auricle into the left ventricle at the last part of the diastolic interval. The murmur, however, may occupy the whole of this interval or any part of it. In fact, there may be a double diastolic murmur. Though properly speaking all diastolic murmurs are presystolic, the term presystolic by common experience is limited to those

at the extreme end of diastole. This murmur may come or go. When the patient is weak or the orifice small, it may be inaudible. Other murmurs may mask it. In twenty-seven of my own cases, proved by autopsies, I found the presystolic murmur

audible in	4 = 15 per cent.
inaudible in	19 = 17 "
falsely interpreted in	4 = 15 "
	<hr/>
	27 = 100 "

In Fagge's series of forty-seven cases the presystolic murmur was noted in only seven, or 15 per cent., which tallies fairly well with my experience. On the other hand, Samways, in 156 cases as proved by post-mortems at St. Bartholomew's Hospital (*British Med. Jour.*, 1898, i, p. 36), found the presystolic murmur audible in about 60 per cent., and in Hayden's fifteen autopsies it was noted in twelve, or 80 per cent. However, in his eighty-one cases, sixty-six were not confirmed by autopsies. In eight of Fagge's twenty-eight cases there was a double murmur, diastolic in character. In other words, there was a diastolic murmur in 28 per cent. apart from the presystolic, which was 15 per cent., so that the total of his murmurs in the diastolic interval was 43 per cent. In a series of twenty cases I found

a simple mitral	
presystolic murmur in	3 = 15 per cent.
simple systolic in	4 = 20 "
presystolic and systolic in	5 = 25 "
no murmurs in	8 = 40 "
	<hr/>
	20 = 100

From my figures, therefore, it appears that the simple presystolic murmur was noted in only 15 per cent., the systolic in 20 per cent., the double murmur in 25 per cent., or a total of diastolic murmurs equaling 40 per cent. My figures agreeing pretty nearly therefore, with those of Fagge.

In one of my twenty-seven cases the presystolic murmur, it was stated, was carried to the left of the nipple, in another to the axilla, in two it was heard as high as the second rib; usually it is about at the apex. Perhaps in the case where it was said to have been carried to the axilla it was confounded with a systolic murmur. In one instance it was confounded with a Flint murmur carried down from the aorta to the apex, and in this particular case the aortic leaflets were so distorted as to make the explanation of Sir Walter Foster apply, namely, that the sound was caused by the aortic stream impinging on a stiff mitral leaflet. But there may be no murmur, as I have indicated, and as the following case shows:

CASE IV. — Aged thirty-two, domestic, was admitted to hospital Jan. 22, 1877. She was the mother of eight children. About a week before admission her urine became scanty and there was swelling of the abdomen. She had orthopnea, an-

asarca, uræmia, and cyanosis. Pulse weak and intermittent, heart sounds faint and irregular. No murmurs. On March 31st she was discharged improved, but was readmitted on May 22d with a return of symptoms. She died two days later, of erysipelas. At the post-mortem examination the right ventricle and auricle were found dilated and thin. Stenosis (obstruction) of mitral with extensive calcareous deposits. Aortic thickened but not rough. Pulmonary and tricuspid normal. Weight of heart, 19 oz. Lungs œdematous. Kidneys granular and pigmented.

The absence of murmurs when examination was made is comprehensible when we consider her weak condition and that she was in the final stages of mitral obstruction.

From my two series of cases I gather that a purring thrill exists in from 10 to 35 per cent. Samways, in 196 cases, found the thrill in less than 33 per cent. It is usually noted in the fourth left space, sometimes in the fifth or sixth, again in the fifth, sixth, and seventh. The thrill may denote stenosis of the mitral or implication of some other valve, usually the aortic. So far as the mitral is concerned, it means that the opening is small. The thrill continues through the period of effectual compensation; indeed, a strong thrill means good compensation, and loss of thrill, heart weakness. The accentuation of the second sound over the pulmonary is a very important sign. It indicates that the left auricle is over-filled, the extreme back pressure from the blood in the auricle against the pulmonary valve causing the accentuation of the second pulmonary sound. Epigastric pulsation is a late symptom. It is usually associated with a large, tender and pulsating liver, and is an unfavorable sign, indicating that compensation is failing, the right side of the heart being involved, so that dropsical effusions are not far off.

Embolism is a special feature of mitral obstruction, as Cases V. and VI. show.

CASE V.— —, aged twenty-eight, widow, was admitted to hospital Dec. 20, 1877. She had suffered from cough for five years, and seven years from heart trouble. Eight years previously had an attack of inflammatory rheumatism. The patient was found on admission to be much emaciated and anæmic. Breathing short and rapid, cough with frothy expectoration, pulse 120, temperature 101.25°. On examination, she was found to be in the third stage of phthisis. Heart's action weak, but not out of proportion to her general debility. No heart lesion discovered. Patient developed uræmia suddenly and died Dec. 22d. At the autopsy the heart was found to weigh 14 oz. and was stated to be normal except as to the mitral, which had a button-hole opening three-quarters of an inch in its largest diameter. The lungs were the seat of embolic pneumonia. Liver atrophic and nutmeg. Cause of death, embolic pneumonia.

But cerebral embolism may also cause death, as in the following case:

CASE VI.— —, aged fifty, clerk, was admitted to hospital Dec. 12, 1883. He had suffered previously from many attacks of inflammatory rheumatism. In 1882 there appeared symptoms of slight cerebral embolism shown by aphonia which lasted two days. On entering the hospital he was found to have dyspnœa and abdominal pain with consolidation at right apex. There were also murmurs at the apex with first sound, and at the base with the second sound. Albumin and granular casts. Pulse strong and regular, later becoming weak and irregular, during an intercurrent attack of rheumatism with uræmia and pulmonary œdema. At post-mortem examination the heart was found to weigh 27½ oz. Hypertrophy of both ventricles. The mitral had a button-hole opening and was insufficient. Œdema and brown induration of the lungs. Chronic diffuse nephritis. Enlarged and pigmented liver.

In 18 per cent. of my first series of 100 cases the rhythm was irregular. In 20 per cent. of my second series it was also irregular. In one there was a double rhythm; in one a quadruple rhythm. In several there was galop rhythm. The cardiac impulse may be ill defined or diffuse, heaving or strong, and the impulse may be carried to the epigastrium. In well established compensation the heaving is due to hypertrophy of the right ventricle. A noteworthy sign of mitral obstruction to which little attention has been given is the pretty constant relation of a strong cardiac impulse to a weak radial pulse.

There has been some effort to divide mitral obstruction into three stages based on auscultatory signs (Broadbent, 3rd edition, 1900), though as these signs are not closely associated with the stages, it is a difficult task. It is more in accord with present methods to divide this affection into stages on an anatomical basis. However, this matter is premature, though I have endeavored somewhat roughly in the cases used for illustration to indicate that there may be a prestenotic stage, and early, middle, and late stages.

In fact, I have already described the anatomical changes that take place in the evolution of a case of uncomplicated mitral obstruction. According to this view we have at first simply the signs of mitral insufficiency. Then when the signs of regurgitation give way to those of obstruction the right ventricle becomes hypertrophied and the impulse is "thumping" or strong. In a certain proportion of cases there is a thrill and a diastolic murmur, perhaps a presystolic, and a sharp, "tapping" first sound at the apex. In the last stage, when compensation fails, the presystolic murmur disappears, because the auricle has no longer strength to drive its column into the left ventricle. The right auricle becomes dilated through giving way of the tricuspid, causing pulsation in the veins of the neck. Dyspnœa, dropsy, and pulmonary apoplexy will then supervene. This last stage is well shown in the following case:

CASE VII. — —, aged thirty-seven, plasterer, was admitted to the hospital May 20, 1879. Three weeks before admission his feet began to swell. General anasarca followed with debility, scanty urine and pulmonary œdema. The heart was hypertrophied, but no signs were noted except those of mitral insufficiency. No second sound was audible. Pulse 40. Under appropriate treatment he improved, and was discharged. But in less than a month was readmitted with a recurrence of the symptoms, culminating in suppression, of which he died. At the post-mortem examination there was found general anasarca, with 12 oz. of fluid in the pericardial tract. Heart hypertrophied, weighing 22 oz. Aortic and pulmonary valves free. Mitral a mass of atheroma, with a small button-hole opening, causing both obstruction and insufficiency. Lungs œdematous. Kidneys enlarged, and congested. Liver atrophic, but pigmented.

In mitral obstruction there is great danger of embolism, not so much from the diseased valves as from clots that become entangled in the interstices between the tendinous chords and papillary muscles during imperfect cardiac action.

The following points appear from my tables:

1. Mitral obstruction is usually fatal before the age of forty is reached.
2. Females are little more prone to it than males.
3. There is apt to be a marked contrast between a strong cardiac impulse and a feeble radial pulse.
4. The true presystolic murmur occurred in 15 per cent. of my cases. It comes and goes, but is usually inaudible in the last stage.
5. It is apt to have a loud rasping or sawing quality, but may be "gushing" or "whirring." It may also be faint or inaudible.
6. In about 40 per cent. there is some sort of diastolic murmur.
7. These murmurs are best heard over a rather limited area, somewhat oval in form, having for its centre an area between the fourth left space, inside the nipple and the apex, and extending an inch or so to the right or the left. Occasionally this murmur is heard best as low as the fifth, sixth or even seventh left space; more rarely it is heard as high as the second left rib.
8. In 10 to 35 per cent. there was a thrill over this area.
9. The first sound at the apex is short and abrupt.
10. The second pulmonary sound at the base is usually intensified.
11. Occasionally a murmur with the second sound at the base is heard over the left auricular appendix.
12. At first there is hypertrophy of the left ventricle. Then atrophy of it, with hypertrophy of the left auricle; then follow dilatation and hypertrophy of the right heart.
13. Mitral insufficiency must to some extent accompany mitral obstruction.
14. In distinguishing the presystolic murmur of

mitral obstruction from the Flint murmur of aortic insufficiency, we should rely on the "long heart" and the strong impulse, or the "Corrigan" of insufficiency, rather than auscultatory signs. In case there is both aortic insufficiency and mitral obstruction a differential diagnosis is impossible, with the means we have now at our command.

TOXIC DOSAGE IN THE TREATMENT OF SOME NERVOUS DISORDERS.*

By WILLIAM C. KRAUSS, M. D.

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The unfavorable results generally obtained by the profession at large in the treatment of many nervous disorders I believe to be due to the inadequate administration of drugs and chemicals of known poisonous character. Minimum doses have been resorted to instead of the maximum, and the results are in direct ratio to the dosage employed. Consequently the treatment of nervous diseases is one chapter of neurology which has fallen far behind those especially on pathology and symptomatology. The general practitioner is apt to hold the neurologist more as a diagnostician, or neuropathologist, than a therapist, and only in extreme cases or very late in the course of a disease is he called into the case for consultation. It is well known that the success of many of the younger surgeons is due to their boldness and daring in difficult and dangerous conditions, and, although he sometimes treads where angels fear to follow, he many times snatches a life from an almost open grave.

If there is any opportunity for a bold therapist, it is in the domain of neurology, and his success will in many cases depend upon how closely he can hold his patient to the toxic line until the pathological process is dominated. I have been repeatedly called in consultation, found that the case had been correctly diagnosed, proper treatment administered, but the patient either at a standstill or losing ground because of inadequacy of treatment, minimum dosage instead of maximum, or toxic, dosage being the cause of the retrogression. Pushing the same remedies to their full limit, sometimes to the dismay and consternation of the attending physician, would invariably produce results favorable to the patient and prove to be the turning point in the course of the disease. Especially has this been true in some cases of brain syphilis, perhaps cerebral gummata, where the symptoms of pressure would vanish quickly under the action of enormous doses of biniodide of mercury.

By toxic dosage I mean enough of any drug or chemical to produce distinct signs of intoxication;

* Read before the Medical Society of the State of New York at its annual meeting, January 28, 1887.

in other words, impregnating the system until it begins to rebel, such dosage to be eventually reached by a slow gradual process. Were such quantities to be prescribed abruptly, acute poisoning would follow, in most cases showing alarming symptoms or else terminating in death. To treat cases in this manner they must necessarily be watched very carefully, and the toxic symptoms of the drug prescribed be accurately known and instantly recognized. Each case being a law unto itself, no guide can be followed, no text book consulted, the patient's vulnerability to the agent in question being the only index. The drugs to which I particularly have reference are mercury, arsenic, nux vomica, hyoscine, atropine, and nitroglycerin—perhaps the most important agents in our special *materia medica*.

The dosage of *hydrargyri chloridum corrosivum* is given by many authors as from 1-20 to 1-10 of a grain; the maximum dose, 1-10 grain, has no perceptible effect in advanced brain syphilis, gummata or meningo-encephalitis, and must be regarded as totally inefficient in these cases. Hypodermic injection of one to two grains daily of the corrosive sublimate may produce toxic symptoms, but the gummata melt away quickly in many cases under such medication. A case calling for unusual quantities of mercury before treatment was efficacious, will be reported at the end of this paper. Although hypodermic injections of mercury have been losing in favor, I still believe that it is the only way to introduce mercury into the system when the nervous organization is affected. It acts more promptly, the danger of irritation to the skin and underlying nerves, as is often the rule with inunctions, is absent, and the degree of ptialism seems to be more moderate than when given *per os*.

Fowler's solution of arsenic in the treatment of chorea is still the favorite with the great mass of physicians. Text books on *materia medica* give the dose of *liquor potassii arsenitis* as one to ten minims. One of our ablest authorities in speaking of the treatment of chorea says: "As specific remedies, arsenic heads the list. It should be given in doses of MV of Fowler's solution t. i. d., increased by one or two drops daily to fifteen or twenty drops, or even more. I have carried some of these obstinate choreics along until they were taking from thirty to sixty minims t. i. d.—one patient going so far as to neglect counting the drops and simply filling the teaspoon, after each meal, with results, not toxic, but abortive. I have thus far failed to find the newer preparations of arsenic superior to the old.

Nux vomica is universally conceded to be one of the most valuable drugs in the treatment of lowered nerve vitality, such as is so commonly present in neurasthenia. Its physiological action adapts it nicely for the many diverse disturbances met with in

this disease, and yet in the majority of cases, prescribed according to official dosage, its effects are slow and uncertain on coming. Ten drops t. i. d. before or after meals, increased gradually to thirty or even more, t. i. d., will render far better service than the traditional ten drops t. i. d. In the treatment of neuralgic and neuritic troubles, no drug has been so satisfactory in my hands as nitroglycerin. In a paper read before this society in 1896 I reported a series of cases of sciatica successfully treated with nitroglycerin. I still continue using this drug in every case, and begin treatment by prescribing 1-100 of a grain t. i. d., gradually increasing, if the pain does not subside, until the patient is receiving thirty to fifty tablets daily, or until the pain does cease. The only effects thus far encountered are a throbbing headache, easily and quickly counteracted by the bromides, and increase in size of varicose veins about the legs. I have never seen varicose veins develop under this treatment, and when further dilatation of the veins begins treatment should be cut down or else discontinued.

Tolerance to nitroglycerin is easily acquired by some patients. Thus, Stewart¹ reports a case of chronic nephritis where, six months after the initial dose, the patient was taking fifty minims of a ten-per-cent. solution (five minims of pure nitroglycerin), four times daily, with less effect on the vascular tension than the initial dose of 1-100 of a grain.

Reading² narrates the case of a woman fifty-seven years old, suffering with chronic interstitial nephritis, who, less than one year after the initial dose of nitroglycerin, was taking one teaspoonful of the ten-per-cent. solution at each dose, this being equal to six grains of the pure drug.

My dosage compared to these two is insignificant, and the moral to be drawn is to increase the dose until the physiological effects are produced, even if enormous doses must be administered.

Aside from its antineuralgic qualities, it is a tonic, and it is reported that girls working in nitroglycerin factories become plump and rosy and are the pictures of health.

Atropine and hyoscine are two drugs of much repute in the treatment of spasmodic disorders of pure nerve origin. The tics about the face, spasmodic torticollis and other localized convulsive seizures at times succumb quickly to one or another of these two drugs. Some cases, however, are more obstinate and will not yield to the usually prescribed dosage and require heroic treatment. I have seen severe cases of chronic torticollis relieved by hourly administration alternately of atropine sulphate, gr. 1-100, and hyoscine hydrobromide, gr. 1-200, con-

¹*Therapeutic Gazette*, September 15, 1893.

²*Therapeutic Gazette*, May 15, 1893, p. 597.

tinued for weeks and even months without producing any of the ill effects so commonly met with. Some of these spasmodic disorders are practically incurable, not even yielding to surgical interference, but before being declared as such, should be subjected to heroic dosage. Any improvement in the severity of the spasm or intermittency of the attacks must be regarded as improvement and due to the efficacy of the drugs.

The following case of brain syphilis has been under observation for the past five years, without exhibiting any recent cerebral outbreak, and is a typical example of the effects of toxic or heroic dosage.

Annie C., aged twenty-five years; height, 5 ft. 4 in.; weight, 120 pounds; complexion, dark; constitution, rather frail. Father and mother are living and healthy; grandparents lived to old age. There is no history of syphilis, tuberculosis, or cancer obtainable. Never had any of the diseases of infancy and was always in the best of health. In 1891 she committed an indiscretion, ran away from home, and lived for four years in a sporting house. In September, 1891, she acquired syphilis and was treated for primary and secondary symptoms.

In September, 1895, she first began to have pains in the head, sharp, shooting and continuous, beginning at the vertex and radiating downward in all directions. The head was tender and sensitive and felt as if "something were growing inside of it." She complained much of nausea and vomited occasionally. Bowels were loose; sleep much disturbed. Her physician prescribed mercurial preparations and potassium iodide. The headaches not diminishing, I was called in consultation by Dr. Biggs, of Buffalo, November 10, 1895, and found a thin, pale, emaciated young woman, whose body and extremities were covered with the characteristic roseola of syphilis, suffering with excruciating pains "all over the head." She and her husband claim that the eruption followed the administration of mercury. The head was very sensitive on pressure, and very tender and sore over the nucha. Temperature was normal; pulse was 80. I advised mercurial inunctions and the protoiodide of mercury, $\frac{1}{2}$ grain, three times daily. After the fourth inunction, salivation appeared, and immediately the head pains began to diminish, so that in three days the head was entirely free from pain and she was able to be about attending to her duties. The inunctions were discontinued, but the protoiodide pills were taken regularly. She was practically in good health for six weeks; when, as the rash began to disappear, the headaches reappeared with greater intensity than ever before. They were accompanied by dizziness, tendency to fall to the right, nausea, vomiting, and photophobia. She could not see to read or write and complained of pain in the eyeballs. On January 3, 1896, I was again called to see her and found her more emaciated and debilitated than at my first visit. As on the previous visit, she complained of the head pains, nausea and vomiting, unable to keep even water on her stomach, while vision was markedly diminished, and the room was heavily curtained on account of the photophobia. The acme of pain she referred to the left side of the

head, over the frontal and parietal regions, with sensitiveness to percussion over this area. She has of late been misapplying words, calling for a spoon when she wanted a toothbrush, "cigarette" for a glass of water, would call the nurse by the wrong name, and at times would not be able to make herself understood at all. The lower part of the face is slightly paretic. The eyes: ocular muscles not affected, as the orbits are freely movable in all directions; the pupils are widely dilated, with some difference between the two sides. The fundus shows an acute papillitis (choked disc) on both sides. Audition, olfaction, gustation, and sensibility of the face are unimpaired. Tongue protrudes, slightly deviated to the right. Extremities: there exists a paresis of the whole right side of the body, face, tongue, arm and leg. Dynamometer test: March 2nd, right 24, left 29; March 6th, right 27.2, left 32; March 8th, right 30, left 34; March 15th, right 26, left 30; March 31st, right 31, left 35; April 10th, right 32, left 42. No disturbance of the general sensibility. Tendon reflexes are present, not exaggerated and without any perceptible difference between the two sides.

On March 3rd, while on a couch, she complained of the right hand becoming numb and found she had no power over it; hand was cold and finger nails were blue. On attempting to eat some bread and milk shortly afterward she found she could not swallow; it would choke and strangle her. On attempting to place her in bed, the right leg was also paretic and for some minutes she lost all power of speech, but was conscious and heard what the nurse was telling her. The whole attack lasted no longer than five minutes. Says the hand and leg felt drawn down forcibly.

March 4th. she had a similar attack of paresis, affecting the right arm and leg, lasting only a minute. During the day and night the right arm and leg would contract forcibly, the arm flexed at elbow and wrist joints and adducted at shoulder; the knee joint would be flexed and leg flexed on thigh. Her husband states that these spells occurred very often during the night and on two occasions awakened her.

March 8th.—She is thoroughly salivated so that she can hardly speak. Saliva flows from her mouth. Is fed by enemata, and has been for four weeks.

March 25th.—The pains are very much better; there is no longer nausea; appetite is good; bowels are regular. Examination of the fundus shows the papillitis receding. The salivation still continues.

March 31st.—The headaches are growing less in severity and are confined to the right side of the head. Vision is improving and the photophobia has disappeared. Has not vomited since March 21st; appetite is good and bowels are regular.

She has been receiving one-half grain of morphia and one-sixth grain bichloride of mercury, hyperdermically, daily, since Feb. 1, along with tonics, enemata, and a mouth wash.

She continued to improve daily, and on April 30th I ceased to see her daily, having asked her to come to my office once weekly for three months. The protoiodides were continued during this time, but not with much regularity. She was in the best of health, rode a bicycle and thoroughly enjoyed herself.

On September 1, 1896, not having seen her for three weeks, was called to see her and found the old trouble lighted up again. Headaches, nausea, vomit-

ing, mental dulness, prostration, and papillitis were again present. I determined to salivate her as speedily as possible, and injected fifteen minims of a solution of bichloride of mercury, one-third grain to ten minims, night and morning, along with inunctions of the yellow oxide ointment to the elbow and knee joints.

On September 10th salivation appeared and improvement began, which has continued until she is in fairly good health. As soon as the cerebral symptoms disappeared and her usual good health was expected to return, she began to complain of weakness of the hands and arms, tiredness in walking, and of pains in the elbow and knee joints. These persisted in spite of all manner of treatment. Examining the joints, there was found no tenderness in the joints themselves, no pain on rubbing the joint surfaces together, no swelling, redness, or increased temperature.

Assuming, therefore, that the pain was not articular or rheumatic, it occurred to me that a neuritic process might be present, due to the mercury, since the joints implicated were the ones which received the inunctions.

This proved to be the case, inasmuch as there existed great tenderness over the nerve points in the upper and lower extremities, marked weakness of the hands and a slight degree of leg drop. She complained of giving way of the hands, would let dishes fall to the floor, had difficulty in buttoning her clothes, and would stumble and trip while walking. The tendon reflexes were markedly diminished, the patellar reflexes hardly responding to the stimulus. Sensation was little if any affected. Trophic disturbances were also wanting. Electrical examination of the arm muscles showed quantitative changes only, the peroneal muscles acting in a similar manner.

The treatment directed toward the neuritis consisted of withdrawal of the mercurials, rest, galvanism, the administration of tonics and the iodides. Under this treatment the painful spots began to disappear and the muscle power slowly returned.

Analysis of this case shows it to be a specific meningo-encephalitis affecting the frontal and parietal lobes of the left side, followed by a toxic neuritis. That it was not a gummatous tumor may be explained by the large extent of territory which it covered, reaching from the longitudinal fissure to the inferior frontal convolution, and perhaps extending to the base of the brain partly. The paresis of the right leg, arm, and face, with aphasia and paraphasia; the history of several attacks of Jacksonian epilepsy, limited to the right side; the absence of disturbances of the cranial nerves, all point to the left cortical region as the seat of the disease. That the pathological process had not interfered permanently with the functions of the cortex is proved by the absence of all symptoms denoting brain destruction and the return of those which were but temporarily affected; as such may be mentioned the aphasia, the hemiparesis and the optic neuritis. These symptoms as presented plainly showed some lesion to the brain cortex, affecting the superficial layers only, either

through pressure or, as is most probable, by a superficial inflammatory process of a specific nature.

The amount of mercury administered is almost incredible. Hypodermic injections into the buttocks of about $1\frac{1}{3}$ grain of the bichloride daily would be a toxic quantity even to the majority of syphilitics, but this amount injected daily for ten days shows to what extent mercury is tolerated by some of these cases. Along with these injections, during the first attack the hair was shaven closely over the left parietal region and inunctions of the yellow oxide ointment were made daily. During the second attack, these inunctions were made to the elbow and knee joints, inner surfaces, and here the toxic neuritis started.

Regarding the case as a desperate one on September 1st, 1896, it was either heroic action or loss of the patient, and informing the husband of the results of mercurializations, I started with the injections as before mentioned. The iodides were not tolerated, even in very small doses, and their cessation was quickly determined upon. The ptyalism was not as severe and protracted during the second attack as the first, and quickly subsided on withdrawal of the mercury and a mouth wash consisting mainly of tincture of myrrh.

TECHNICS OF THE OPERATION AND RESULTS OF TENDON TRANSPLANTATION AT THE HOSPITAL FOR THE RUPTURED AND CRIPPLED.*

By V. P. GIBNEY, M. D.,
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The first operation recorded at the Hospital for the Ruptured and Crippled was on the 7th of July, 1896. The patient was a girl, ten years of age, whose poliomyelitis developed when she was one year of age, and who entered the hospital for the relief of equinovalgus with complete paralysis of the tibialis anticus. The tibialis anticus was exposed along with the superficial tendons on the dorsum of the foot, the tendon at its insertion was divided and passed through slits in the extensor proprius hallucis and over and under the division of the extensor longus digitorum. It was sutured to these by means of silk, the wound was closed with catgut, sterile dressings were applied, and the foot was put up in moderate calcaneovalgus after division of the tendo Achillis subcutaneously. The last record we have of the case was about six months after the operation, when there was still a little valgus. The muscles on which the operation was done acted fairly well, yet were weak, and there was no limp. A flat-

*Contributed to a "Symposium" on Tendon Transplantation, at the Academy of Medicine, Section on Orthopaedic Surgery, March 20, 1902.

foot plate was worn in the shoe, but no brace. We have made diligent search for this patient within the last few weeks, and I regret to say without finding her. From that time to the present there have been ninety-two operations done for the transplantation, or transference, as some call it, of tendons and muscles.

Without going into the different methods of operating, I shall content myself with simply describing the details of the operative technics followed at the hospital. Indeed, the procedures here differ very little with those employed elsewhere except in this particular—the skin incisions are along the vertical axis of the limb instead of the transverse or oblique, so that in presenting this phase of the subject I can easily include the details generally observed.

It is needless to emphasize the importance of a thorough preparation from twenty-four to forty-eight hours before the operation, because in this aseptic day no cutting operation is to be considered without these preliminary steps. The instruments prepared for operation should be at least two scalpels, a blunt tenotome or two, a fascia knife, sharp and blunt retractors, tenacula, a good assortment of thumb forceps, directors, scissors, straight and curved needles, and a few hæmostats. In addition to these, there should be a needle-holder, silk, kangaroo-tendon, silkworm gut and catgut as well as an Esmarch bandage. After the application of the Esmarch some distance above the site of operation, a longitudinal incision should be made over the site of the tendons requiring transference. While it is well to have a long incision in order to properly handle the tendons, it is not advisable from a surgical standpoint to have an incision longer than is absolutely necessary. There have been cases where keloid has developed, and hence this precaution. It is better to make two or more incisions and tunnel between these for the passage of the tendons to be transferred, than to make a long incision and extensive subcutaneous dissection.

After the incision has been made down to the sheath of the tendons, the sheath itself should be divided longitudinally, and where possible, at the conclusion of the transference, this sheath should be closed again with fine catgut. It goes without saying that primary union is essential to the success of the operation from a functional point of view, and without going into a discussion of whether to wear gloves or not (we are strong advocates of rubber gloves), whether to employ chemicals or not, it is at least safer in my judgment to avoid touching the tendons throughout the entire operation. Lest one may infer from this that thumb forceps and artery clamps should

be used for the handling of tendons, let me forthwith disabuse such a one of this idea by stating that bits of gauze can be passed under the tendons for the purpose of examination or section, that fine needles with silk can be passed through the ends and these covered with sterilized gauze until ready for transplantation. The pinching of tendons with artery clamps or thumb forceps or even strong pressure against them with curved scissors, directors, or hooks should under no circumstances be permitted, because of the damage done to a tissue from which we expect an important function.

It has been maintained by some of our operators that an incision should be made over the bodies of the muscles in order to determine the condition of these. If, for example, the muscle is yellowish or has atrophied, then the tendon is of very little use and its transference to parts on which some strain is needed would be of little value. Again, others contend that these incisions are unnecessary, as a pretty fair knowledge can be had before the operation of the strength of the muscles. This leads me to dwell for a moment on a very important detail of technics, that is, a thorough anatomical knowledge of the tendons, their points of insertion, their relations one to another, and their action. This would enable one to work expeditiously and to avoid unnecessary handling of the parts.

Statistics do not as yet show which is better, grafting or transplantation of one tendon into another tendon or into bone or periosteum. It is never desirable to transplant a lifeless tendon into a live one, but the live tendon should be transplanted into the lifeless one near its point of attachment. The mere suturing of tendons together is not always sufficient, but where it is possible to pass the end of one tendon through a buttonhole of another and even then spread the end out and employ a quilt suture for still stronger contact, this should be done. After the tendons have been transferred, after the lengthened tendons have been shortened either by looping and suturing, or by section and overlapping, then a test should be made as to the position of the foot before the wound is closed. As for the material for suturing the tendons, our rule has been to use silk. In the earlier operations kangaroo-tendon was freely used. It was thought, however, that the size of even the smaller threads of this material was too great for these smaller tendons, and we fell into the habit of using silk. Some operators recommend silkworm gut, but on one or two occasions we have been obliged to remove this through a fistulous tract several weeks later.

It is unnecessary in the judgment of the opera-

tors at the hospital to employ any drainage, although where extensive dissections are made it is not an uncommon procedure to introduce a small drain to be left for about forty-eight hours. The parts are dressed aseptically. The hand or foot is put into a position of over-correction and this position is maintained by means of a plaster-of-Paris bandage. The parts are not disturbed for at least a fortnight, and even if the healing is *per primam*, the position is still maintained for some weeks longer. It has been found necessary to maintain the position of the limb in apparatus in the majority of cases for many months subsequent to the operation.

In presenting the results obtained I have not included in the analysis cases of which the record is not known at least three months after operation. The operations have been by Dr. W. R. Townsend, Dr. Royal Whitman, Dr. Henry Ling Taylor, Dr. Joel E. Goldthwait, of Boston, ex-members of the house staff; Dr. Preston Satterwhite, Dr. J. Wilbert Stone, Dr. Edward J. Parrish, Dr. Henry C. Williamson, and the author of this paper. There were twenty-four operations done for equinovalgus, thirteen for calcaneovalgus, five for valgus, nineteen for equinovarus, twelve for equinus, three for calcaneus, ten for hemiplegic drop-wrist, five for dangle-leg, and one for congenital deformity of the thumb. I have endeavored to ascertain the muscles in a given case palsied so as to present the reasons for operative procedure, but I find the hospital records in many instances incomplete, and hence I have omitted in classification special groups palsied. The deformities themselves will enable one to name pretty accurately the muscles at fault. The column which has afforded the most difficult problem is that for the operation. With so many operators, at all times exercising the greatest liberty, naturally combinations of tendons would suggest themselves and the operator proceed according to the suggestions the case presents at times of operation. The aim, however, always has been to correct deformity, to place tendons where deformity may not easily recur, and where the best functional results may be expected.

The operations done for correcting drop-foot and valgus have varied; for example, a very common one is to make an incision about an inch and a half in length along the dorsum of the foot, beginning at the tibiotarsal joint and extending downward, separate the skin beyond the extremity of the incision down to the tibialis anticus, divide the tendon here, separate carefully from the underlying parts, pass it through a buttonhole and about the middle of the extensor proprius hallucis, and let it terminate among the divisions of the

extensor longus digitorum. This operation is often supplemented by subcutaneous division of the tendo Achillis. Where one is desirous of raising the outer border of the foot, either the whole or part of the tendon of the tibialis anticus is extended to the peroneus tertius and brevis. An operation frequently done where there is marked valgus and where the tibialis anticus is completely palsied is this: A part of the extensor proprius hallucis is passed through the tendon of the tibialis anticus and sutured into the posterior tibial at its insertion. Through this same incision the tendons of the extensor longus digitorum may be shortened by overlapping and suturing. This is frequently done even where tendon transplantation is necessary, as the strain is lessened very much and better results may be expected.

In some instances where all the tendons of the four superficial muscles on the anterior surface of the foot are palsied, scarification has been resorted to and these tendons sewed to each other, the bunch being tied with silk or kangaroo-tendon with very good immediate results; the later results, however, show a little stretching and diminution of power, especially if the foot is not properly supported for a long period of time by apparatus.

The results in the operations which have just been described are as follows: Thirty-six cases have been treated, and in twelve, thirty-three per cent. showed good results, a fair result was obtained in fifty-three per cent., while a negative result was obtained in fourteen per cent. The terms good, fair and negative have been employed rather than the use of the terms perfect or improved. By good results in these cases, we mean that the tendons operated upon have acted as was intended, that they have not broken loose from their attachments, and that the foot is maintained in normal position. Many of these patients at the end of a year are able to dispense with apparatus, but a few at the end of two years and a half are wearing what is known as a flat-foot spring under advice, because we believe that the rough usage of a foot in a growing child would be too much for these transplanted tendons. By the term fair is meant that the result is not so good as was expected, but it is at least a help in the management of the case. The apparatus required to maintain the good position is not so elaborate, can be lighter, and while the tendons act feebly we feel they are still capable of greater improvement. The term negative is used where the condition is *in statu quo ante*. In no single instance has it been observed that the foot or limb is in a worse condition than before the operation. So that the term negative is used rather than the word failure.

TABLE I. Tendon Transplantation.

NUMBER.	AGE AT (ONSET)	DISEASE.	MUSCLE GROUP.	OPERATION.	OPERATOR.	CONDITION AT SUBSEQUENT PERIODS.	PRESENT CONDITION.	FINAL RESULT.
1	10	1	Eq. Valg.	Tib. ant. post. tibial peronei paralysed; tend. Ach. short.	Proximal end t. ant. quilted into ext. prop. half, and ext. long. dig. Achillotomy.	W.	Three weeks, primary union good. Six wks. flat foot brace, slight valgus, muscles slightly weak; no limp.	Good.
2	15	2 1/2	Drop Wrist	Drop wrist extensors.	Shortening by splicing extensor com. digitorum.	G.	At 4 wks. (2), 5 mos., negative.	Negative.
3	5	2	Eq. Valg.	Peronei, dig. ext. long. dig.	Achillotomy; 4 weeks later splitting of t. ant., inner portion sutured to the flex. brev. hal., outer port. to flex. l. dig.	W.	Four wks., good, prim. union, no valgus; 3 mos., good dorsal flex., no abduction.	4 yrs., good, no apparatus, no def. flex. to t. ant. on dorsal flex. valgus produced.
4	11	8 1/2	Dang. Leg.	Quilted ten.	Sartorius quilted into tendon of quad. fem.	G.	Three mos. extends leg over 30° or 40°; 7 mos., power increased perceptibly, no app. power to ext. extend. over small arc.	4 yrs., negative, no power to ext.
5	7	7 mos	Dang. Leg.	Quilted ten.	Sartorius quilted into tendon of quad. fem.	G.	Two mos., primary union. One year, slight power to ext. extend. over small arc.	3 1/2 yrs., no power to extend leg.
6	1	2	Eq. Valg.	Tib. ant. and per. ter. quilted, one into other under ext. dig. and sewed with silk into per. brev. and surrounding tissue.	Tib. ant. and per. ter. quilted, one into other under ext. dig. and sewed with silk into per. brev. and surrounding tissue.	W.	Six wks., good power in add. and sup. Prim. union, a mass dorsal, flex. and ext. fair, wearing shoe raised.	Fair.
7	7	1	Spastic Eq. Varus.	Peroneals.	F. ant. to per. ter. at distal end; 3 deep sutures of silk.	W.	One and one-quarter yr., no imp., oper. re. moved with cuneiform osteot. of astrag. and os calcis.	3 1/2 yrs., still varius; very slight imp.
8	12	5 mos	Calcaneus.	Per. to tendo Ach. and t. post. Cuneif. ost. of os calc.	Per. to tendo Ach. and t. post. Cuneif. ost. of os calc.	W.	Two mos., ext. slight and varius, 8 mos., fair result.	Fair.
9	8	7 mos	Eq. Var.	Ant. tib. group.	Eq. sutured to t. ant. and ext. p. hal. Achillotomy.	W.	Seven mos., fair power; 9 mos., slight power, 3 1/2 yrs., no det., but no val. flex. of foot.	3 1/2 yrs., no det., but no val. flex. of foot.
10	5	1 1/2	Eq. Var.	Peroneals and ext. long. dig.	Per. ter. and ext. prop. hal. sutured together, Achillotomy.	W.	Three and one-half yrs., vol. power in dors. flex. 100°, brace worn 3 yrs.	Good.
11	10	1 1/2	Eq. Valg.	Ant. and post.	One half of tendo Achill. lengthened by splicing.	G.	Three wks., suppuration; 5 wks., healed.	5 mos., good dorsal flex. and ext. of foot; no det.
12	11	2	Calc. Valg.	Post. tib.	Per. ter. cut, brot. across and sutured to t. ant., and ext. prop. hal.; all the ext. tendons scarified, sewed together and sutured to t. ant.	W.	One mo., healed and foot in varius.	2 yrs., foot in var.; no calc., very little power in dors. flex.; still wears brace.
13	7	Left Eq. Varus. Right Eq. Valg. and atrophies.	Peroneal, ext. long. dig., tib. ant. and ext. prop. hal.	Left, per. brev. carried under ends of ext. p. dig. and sutured to t. ant.; all ext. tendons sutured together. Right, per. l. cut brot. under ext. l. dig. and sutured to ext. prop. hal. and t. ant.	Left, per. brev. carried under ends of ext. p. dig. and sutured to t. ant.; all ext. tendons sutured together. Right, per. l. cut brot. under ext. l. dig. and sutured to ext. prop. hal. and t. ant.	G.	Three mos., muscles act well in dors. flex. 5 mos., power not so good.	3 yrs., negative.
14	5	3	Eq. Var.	Ant. tib., ext. long. dig.	Grouping of all ant. tend. and tying together with kang. tendons.	G.	Three wks., slight power.	Fair.
15	14	4	Dang. Leg.	Quad. fem.	Sar. into tend. at quad. fem. and vastus int.	G.	Three mos., slight power in ext., 6 mos., slight power.	3 yrs., no power in ext.; ankylosis in ankle from arthrodysplasia done Aug. 16, 1898.
16	10	2	D. Eq. Var.	Ant. tib.	Ext. l. dig. freshened along edges, one or two brot. over and sutured to t. post., passing under the t. ant. and ext. prop. hal.; all sutured together with kangaroo tendons.	G.	Six wks., good union and function though weak.	3 yrs., no braces, no power in l. foot; wears shoes built up.
17	6 1/2	1 1/2	Equinus	All ant. muscles, also quad. ext. left thigh	Ext. l. dig. cut and brot. over to t. ant.	T.	Two mos., good union and function, 4 mos., fair good union and function.	Fair.

18	3	Spastic Eq.	Post. tib.	Tend. of ext. l. dig. and ext. prop. hal. cut at insertion, sewn together and transfixed into t. post. all having passed under t. ant. hal.	S.	Three mos., good union and feet in varus, despite chickenpox and measles and sojourn on N. Brothers Island.
19	6	9-12 Eq.	Valg	Post. tib. and T. ant.	G.	Three wks., fair union.
20	5	3 Eq.	Valg	Post. tib.	G.	Two mos., healed and all muscles acting as one.
21	9	1½ Dangle	Lev	Quad. fem.	G.	Three mos., no power to extend.
22	9	1½ Cale	Valg	Gastroc. and tib. post.	W.	Two mos., prim. union, foot held in eq. and slight var., good position; 6 mos., foot at r. angle, eq. not pronounced.
23	6	3 L.	Eq. Var	L. ant. and ext. l. dig. and ext. l. dig. tied together after scarifying edges	L.	Three mos., slight power, can raise foot to 100°.
24	9	3 Eq.	Valg	Ext. long. dig., peroneals	T.	Two mos., good power in dors. flex.; 3 mos., power not so good, but very fair can flex. to 90°, still slight varus.
25	6	4 Eq.	Valg	Ext. prop. hall. and tib. ant. ant.	W.	One mo., slight dorso flex., prim. union
26	4	2 Eq.	Valg	L. ant.	W.	Six mos., good power in operated muscles
27	5	3 Eq.	Var	Peroneal group	W.	Four mos., fair power.
28	4	3½ Eq.	Valg	L. ant.	W.	Three mos., fair power
29	4	3 Eq.	Valg	L. ant.	W.	Six wks., prim. union good, good eversion of foot and dorsal flex.
30	5	4 12 Eq.	Var	Peroneals and ext. long. dig.	W.	Five wks., prim. union good, good plant. flex. with eq.; dorsal flexion, 3 mos.; pl. flex. not good, foot goes off into valgus when plant. flex. attempted
31	6	2 Cale	Valg	L. post., gastrocnemius and post. tal.	E G	Three mos., slight power, brace required
32	10	12 12 Eq.	L. ant.	T. ant. cut, shortened, per. ter. at its insertion cut, prox. end passed under ext. prop. hal. and ext. l. dig. and sutured into t. ant.	W.	Three mos., varus less, slight power in operated tendons; brace
33	7	2 Eq.	Var	L. ant., ext. long. dig. and peroneals.	G.	Three mos., slightly increased power, not fair enough to fully extend; brace.
34	7	1½ Drop	Wrist	Extension of wrist.	T	Two mos., slight power to extend.
35	8	¾ Drop	Wrist	Shortening and overlapping of com. ext. of wrist.	G.	Six mos., good power in dorso flex., normal ext. and flex.
36	18	1½ Eq.	Var	Peroneals and ext. long. dig.; also, limbricals	G.	No power to extend.

NUMBER	AGE	ANAL. (ONSET)	DEFECTS	MUSCLES INVOLVED	OPERATION.	OPERATOR	CONDITION AT SUBSEQUENT PERIODS	PRESENT CONDITION	FINAL RESULT
									<div>GOOD.</div> <div>FAIR.</div> <div>NEGATIVE.</div>
40	5		Cong. Eq. Var.	Per. ter. absent.	T. ant. split, outer half cut and passed under ant. tendons and sutured into per. brev. and aponeurosis of leg; ext. l. dig. sutured to t. ant. after being wound around tendon. The per. ter. was absent.	W.		Can flex to 90°, but in doing so foot drawn in, slight valgus, n. eq., improved.	
41	11		L. Eq. Valg.	l. ant. and post. touch.	Incis. above annular lig. t. ant. shortened 2 in., ext. prop. hal. sutured to this as well as part of tend. of ext. l. dig.; all sutured with silk.	W.	One mo., can flex to 90°, extend well.	Reacts both feet, can flex, l. foot to 90°.	
42	17		Equinus	T. ant.	T. ant. (yellow in color showing atrophy) shortened. To this sutured the ext. l. hal. and l. dig., the fascia sewn over all this.	W.	Dorso flex slightly improved.	Can dorso flex, and ext. l. free vol. motion at ankle, no det., brace.	
43	13		St. arch Eq.	Ant. muscles foot.	P. peronei sutured to t. post., having been brought under ant. tendons.	G.	Three mos., slight imp.	Foot	
44	7		L. Eq. Var.	Ant. group	T. ant. split and outer half cut at insertion, sutured to peronei thro' buttonholes after passing under the ext. l. dig.	G.	Two mos., not quite healed, can extend and can flex, no dorso flex and motion in all directions fair, no deformity, brace.	Can flex, no dorso flex, no det., brace.	
45	6		L. Calc. Valg.	Post. group partially.	Ant. and post. incisions the t. ant. split and one half passed thro' a tunnel under skin to the tend. A., into which, thro' lotion hole, it is sutured aft. T. ant. was short and ended.	G.	Two mos., foot in good position.	Foot at rest, slight limp in walking dorso flex, no valgus, no det., good vol. of ant. l. foot, ant. foot in ext., wearing brace.	
46	17		Dangle Leg	Obad. ext.	Short head of biceps fem. div. at m. and passed under vast. ext. thro' a tunnel, buttonholed into tend. of quad. fem.	G.	Three wks., slight power in quads and biceps at rest, no power in ext. leg.	At rest, no power in ext. leg.	
47	17		L. Eq. Valg.	l. post. and ext.	P. eq. brev. cut at insertion, passed under long tendons and sutured into t. ant. The adjoining edges scarried and all sutured to ext. prop. hal.	G.	Not tested.	At rest, foot held in perfect position.	
48	11		Eq. Valg.	Ant. leg muscles	T. ant. scarried and sutured to ext. prop. hal. Achillotomy.	T.	One mo., no power in foot and valgus.	At rest, no power in foot and valgus.	
49	14		Eq. Valg.	Post. tib. &c.	Ext. prop. hal. div. at insertion, passed under t. ant. and sutured to t. post.	G.	One mo., arch improved, slight power in muscles.	At rest, no power in foot, no power in dorso flex and ext. of foot, no valgus.	
50	16		R. Eq. Valg.	l. ant. and per.	T. ant. cut and dissected up to the muscle, the end passed thro' tunnel under the skin and sutured thro' buttonhole to tend. A.	W. S.	Three mos., slight improvement, braces necessary.	At rest, good dorso and plant flex., fair power of abduction, none of adduction, can walk without brace; r. foot held in valgus.	
51	7		Eq. Var.	Ext. long dig.	Tendo. A. split, outer one half, cut at insertion carried above ext. mal., and sutured thro' buttonhole into ext. l. dig.	T.	Three mos., det. very slight, foot in good fair position.	At rest, det. very slight, foot in good fair position.	
52	12		Eq. Valg. and Flat Foot	l. ant. and post.	Per. ter. cut and passed under long tendons, sutured to t. ant., after this has been shortened.	W.	Position much improved, remains at rest, Good decided action in transplanted muscles.	Position much improved, remains at rest, Good decided action in transplanted muscles.	
53	7		Eq. Var.	l. long dig. and per.	Curved incision in case operated on 2 years ago. Silk found in position in outer one half of t. ant. Now t. ant. sutured to per. ter. and also to ext. l. dig.	W.	l. ant. mus. power overcome, still slight ext. 7 mos., still wears brace, slight valgus, plant flex. fair, dorso flex. much improved.	l. ant. mus. power overcome, still slight ext. 7 mos., still wears brace, slight valgus, plant flex. fair, dorso flex. much improved.	

51	11	12	12	Ed	Val	.....	I, ant	T. ant. cut overlapped and shortened, ext. prop. hal. divided; one-half sewn to t. ant., the other to ext. I. dig.	W	6 mos., walks without apparatus square on heel; orig. val. overcome; dorso. flex. slight.	/
52	12	1	1	F	Val	.....	T. ant. and post.	T. ant. shortened by overlapping with silk 1½ in. Ext. prop. hal. made into loop and sutured to t. ant., above and below overlapped portion.	P.	6 mos., position of foot improved, operated muscles act fairly.	/
53	7	2	2	Ed	Val	.....	I, ant., all post. group of calf.	Per. I. cut and passed thro buttonhole of post. tib., sutured; tend. A. cut obliquely and shortened, sliding process, per. brev., sutured to shortened tend. A.	W.	(One mo., goes home, wearing plaster paris.	/
54	12	1	1	Wrist	.....	Ext. of wrist, abduction thumb ext. fingers	Two incisions, one on either side of forearm; lower third flex. carpi. ul. cut and prox. end sutured to ext. carpi. ul. after section distal end, the same for the flex. carpi. rad., except that the ext. carpi. rad. was shortened; the ext. I. hal. and ext. brev. pol. shortened in same way by overlapping.	W.	Three mos., recurrence of deformity, in plaster paris.	6 mos., ext. to 180° flex. to 150° finger hyper-extended; adduction of thumb not strong.	/
55	14	2	2	Wrist	.....	Ext. wrist with finger thumb, &c.	Two incisions; ext. carpi. ul. shortened and flex. carpi. ul. after section sewn to this; ext. carpi. rad. long. and brev. shortened and flex. carpi. rad. transplanted beneath the supinator to these tendons.	W.	Two wks., tendons holding; child became insane and sent to insane pavilion.		/
56	14	1	1	Ed	Val	.....	All calf group and post. tib.	Ant. and post. incision, the two outer divisions of the ext. I. dig. cut off and passed above the malleolus to the peroneus about the os calcis and sutured still further to tendo Achil.	G	1 mo. mos., good plant flex	/
57	16	1	1	Ed	Val	.....	Calf group and plant flexors.	Thro a post. incision over tendo. A. the tendons of per. I. and brev. cut and passed thro two buttonholes in an overlapped and shortened tendo. Ach. and from other side post. It was drawn thro these openings and all sutured together. Attempt made to sheathe this mass.	P	3 mos., good active result promised perfect; brace to protect, but action good; died of pneumonia after measles.	/
58	17	1	1	Ed	Val	.....	All back of leg, including post. tib.	Curved incision around ext. mall. astragalotomy shaving off of all articular surfaces, the peronei sewn to tendo. A.	W.	2 mos., no action of operated muscles	/
59	14	2	2	R	Ed	Val	Ant. and post. tib. and extensors	Overlapping and shortening of ext. I. dig., ext. prop. hal., edges freshened and sewn together. The per. ter. cut and sewn to ext. prop. hal.	T	6 mos., position of foot improved; slight action in operated muscles.	/
60	14	1	1	Ed	Val	.....	I, ant and post.	Incision around each mall., per. brev. cut and distal end passed under tendo. A. and sutured to post. tib thro buttonhole.	W	3 mos., dorso. and plant. flex. fair; inversion fair; no brace, and walks without assistance.	/
61	14	1	1	Ed	Val	.....	I, ant and post.	Numerous small incisions; ext. prop. hal. cut of incision and end passed thro hole drilled thro scaphoid and turned back and sutured to ant. tib., which was shortened 1 inch. Per. brev. cut and end passed under tendo A., sutured to t. post. Achil.otomy.	W.	5 wks., good position; wearing brace; operated; tendons active.	/
62	12	1	1	Ed	Val	.....	I, ant. and post.	Ext. I. dig. (inner div. of) cut at its insertion, passed under ext. prop. hal. and attached to peroneus of first metatarsal, the tendon sheaths closed with cut gut. The distal end of cut tendon sutured to other tendons not cut.	G.	2 mos., good action in oper muscles.	/
63	12	1	1	Ed	Val	.....	Internal div. of ext. I. dig. sutured to t. HLT after scarification.	Internal div. of ext. I. dig. sutured to t. HLT after scarification.	HLT	2 mos., good action.	/

NUMBER	AGE	ANIMAL	DISEASE	MUSCLES INVOLVED	OPERATION	(OPERATOR)	CONDITION AT SUBSEQUENT PERIODS	FINAL RESULT	
								GOOD	FAIR
64	3	1	Calf	L. Valg.	All calf.	W.	Six mos., eq. var., slight power in dorso. flex.	Vol. dors. flex. normal, plant. flex. to 100°; no deformity.	
65	2	1	Calf	L. Valg., Epilep.	Per. l. and brev. cut below level of mal., sutured to tendo Ach. thro two button-holes 1½ in. apart.	W.		4 mos., good, car. vol. flex. and ex. tend.	
66	1	1	Cong. Angl.	R. All muscles on dorsum of foot	Prelim. oper. Celluloid in Interosseus, space followed three weeks later by prox. ends of cut flexors sutured to ext. com. dig.	G		Good	
67	3	1	Equine Valgus	Tib. post., tib. ant., short tendo Achillis.	Tend. of ext. longus, dig. and extensor, prop. hal. buttonholed into tib. post. and tib. ant. Achillotomies.	G.	Two mos., slight power to dorso. flex. where there was none.	16 mos., good dorso. flex.; no deformity	

W stands for Whitman; T, for Townsend; H. L. T., Henry Ling Taylor; J. E. G., Goldthwait; S. Satterwhite; J. W. S., Stone; P. Parish. Statistics corrected to April 12, 1902. (G.)

TABLE II.—Astragalectomy, Arthrodesis, and Tendon Transplantation.

NUMBER	AGE	ANIMAL	DISEASE	MUSCLES INVOLVED	OPERATION	OPERATOR	CONDITION AT SUBSEQUENT PERIODS	FINAL RESULT	
								GOOD RESULT	FAIR RESULT
1	1	1	Calf	Valg	Calf muscles paralyzed. Astragalus removed; per, brev. buttonholed into tendo Ach.	W.	Good condition in equinus, slight vol, no motion, 15° of dors. and plant. flex., pain on foot in equinus.	Wearing brace; foot in good condition; when without brace holds foot in equinus.	
2	4	1	Calf	Post. group par., no power in calf group.	Astragalus removed, portion of tendo A. cut and sutured to 2 per. muscles.	W.	Wound healed; good power of ext. and flex. of foot; foot held in slight eq. var.	Four power of flexion; foot held in slight eq. var.; brace worn.	
3	2	1	Calf	Ext. and quad., no power below knee except in tetanus.	Astragalus removed, Cuneo section of os. calcis; cuboid curetted surfaces, P.P. foot at 90 deg.; thigh and knee at 100° flex.	W.	Def. corrected; wound infected.	15 mos., foot in very good position.	
4	1	1	Calf	Valg	Ant. tib. and calf group. Astragalus rem., tend. per. cut and sutured to tendo A., foot displaced backward and put in pp.	W	Foot held at r. a. and very tender incision not fully healed.	4 mos., no motion at ankle, wearing brace	
12	1	1	Eq.	Val	Ant. group, calf group, tendo A.	W	Incision healed, foot in eq.	3 mos., foot held at r. a., 15° ankle motion; discharged wearing brace.	
6	6	1	Eq.	Val	Flexors and calf muscles.	W	Foot at r. a., slight motion; plaster paris applied.	2 mos., foot inverted; med. tarsj; wearing brace.	
7	9	1	Calf	Val	Tendo A. cut sections of per l. and brev. grafted into tendo A. in equinus.	G.	2 yrs., good condition; foot straight; brace applied.		

One patient from Fort Monroe writes me that the braces served to straighten the foot and hold it so, and that with a little counter in the shoes he has been able to dispense with all apparatus. There was one case traced where there was no tendon transplantation, but simply this shortening above mentioned, and the result at the end of five months was negative.

Two cases presented feet with muscles so much paralyzed that the following operation was done: Through the anterior vertical incision tendons along the front of the foot were shortened and sewed firmly to the annular ligament so as to limit the motion. The result in one at the end of a year and a half was fair; that is, the patient could make voluntary flexion to 90° without abducting the foot. Flexion beyond this point was accompanied by a little abduction. In the other case the result was negative.

Two cases were subjected to the operation of transplanting tendons into periosteum. One of these at the end of four months showed an excellent result, and is marked "good." The other was "fair" at the end of about the same period. Many years ago the writer of this paper presented statistics showing results of shortening of the tendo Achillis. This operation was done for calcaneus, and the overlapped tendon was sutured to flaps of the wound on closing. There was no tendon transplantation in these cases, but in the list now analyzed there were thirteen operations done for limiting the range of motion in the foot and for correcting this same deformity of calcaneus. Through the anterior and posterior incisions, with tunnelling of the skin on either side of the lower portion of the leg, anterior and posterior tendons were sutured one to another. For instance, where the tendo Achillis was weak the tibialis anticus or a portion of it, in some instances one or more divisions of the extensor longus digitorum, were sutured to the tendo Achillis. In other instances, where the anterior muscles were weak, the stronger but still elongated tendo Achillis was passed through these same tunnels and sutured to the muscles on the anterior aspect of the foot, the extensor proprius hallucis or the tibialis anticus. Of twelve traced, six were good, four fair, and two negative.

One case of calcaneo-valgus with complete paralysis of all the posterior muscles was subjected to the following operation, which is interesting as showing a very fair result. A curved incision was made around the outer side of the foot, the tendo Achillis was split like a buttonhole, the peroneus brevis was detached from its insertion, the peroneus longus was cut near the muscular attachment and the distal end pulled up and passed

through this buttonhole in the tendo Achillis, where it was securely sutured. The proximal ends were also sutured to the tendo Achillis. All these procedures followed enucleation of the astragalus through this same opening. Primary union occurred, and at the end of six months the foot was held at right angles in moderate equinus. A brace was employed to avoid overstretching.

One of the patients shown this evening had an operation like the following: A straight incision was made under the external malleolus, the astragalus was removed *en bloc*, the peroneus brevis was cut at its insertion and passed through the joint and inserted to the periosteum of the scaphoid, and to the tibialis posticus at its insertion. The tendon of the peroneus longus was cut at its insertion and taken out of the groove and passed through a hole drilled through the os calcis and finally sutured to a portion of a muscle so as to make a kind of checkrein on the posterior portion of the foot. The result at the end of a year is very good. The patient has very fair flexion and extension of the foot, practically no calcaneus, and but for a paralysis of the thigh muscles he would be able to walk without apparatus. The foregoing gives a very fair idea of the technics employed in operations about the ankle for drop-foot, known as equinus, equino-varus, equino-valgus, valgus and calcaneus.

The operations for dangle-leg have been five in number. These consist of an incision over the outer and lower third of the femur extending down the tibia, so that the insertion of the sartorius and short head of the biceps may be exposed. The attachments are dissected out quite carefully and the distal ends passed through a buttonhole in the tendinous portion of the quadriceps femoris, sometimes passed through one or two and sutured to the muscles on the inner or outer side. In the five cases the immediate results were fair, that is, the sartorius or biceps seemed to aid the quadriceps, but later results were negative. There were five cases traced.

The operation for the relief of drop-wrist promises even better results than our records show, because the technic of the operation is yet incomplete. The procedures thus far employed are lateral incisions, one over the radial border and one over the ulnar border, with detachment of the flexor tendons and the insertion of the same into the extensor tendons. Again, the anterior and posterior incision about the middle and lower third of the forearm dissection through the interosseous space, so that the flexor tendons may be transmitted to the extensor tendons. There have been six cases, with one good result, three fair, and two negative. It would seem as if the distal ends of the sutured tendons might be attached to other

muscles and thus give a better functional result. In some instances this has been done. The adductor pollicis offers a great obstacle, and this ought to be managed more satisfactorily in future operations. In some of our earlier operations there was apparent cicatrization in the interosseous space between the tissues in this locality and the tendons passing through became adherent.

In two instances we attempted to meet this difficulty, and in one case, that of a boy seven years of age, with hemiplegic drop-wrist, we implanted a scroll of celluloid, sterile, in the interosseous space, removing it at the end of four weeks to find the tissues growing into the ends of the celluloid scroll. The operation for passing the flexor carpi radialis and the flexor carpi ulnaris through this space was done, but the opening was not large enough.

One of the patients presented this evening, a girl, twelve years of age, had such deformity that the hand was held rigidly at right angles with the forearm. There was implanted a bit of solid celluloid, one inch in length by half an inch in thickness, cylindrical in shape, into the interosseous space. At the end of three weeks it was removed after reopening the incision, to find a perfectly patulous opening. The proximal ends of the flexors were passed through this opening and sutured into the extensor communis digitorum. The final operation was done on March 28, 1900, and the result to-day may be classed as good; that is, she does not require any apparatus, has not worn any for eighteen months, and the muscles under the stimulus of massage and electricity are gaining in power.

I succeeded in getting satisfactory results in a very interesting class of cases done by one of our staff presenting a paper this evening, and he will surely report on them later. This consists in the removal of the astragalus, the removal of the cartilage from all the articular surfaces, and sewing the peronei and the posterior tibials sometimes to the tendo Achillis. Of the fourteen cases, only six were traced, and of these six the term good can be used.

As a résumé, then, of the results, ninety-two patients were operated upon. We succeeded in tracing and getting final results in sixty-seven. Good results were obtained in thirty-four per cent., fair in forty-five per cent., negative in twenty-one per cent. Taking, now, the deformities for which the operations were done, we have the following: Equino-varus, sixteen; good four, fair nine, negative three. Equinus, five cases; good one, fair four. Equino-valgus, twenty-two; good ten, fair nine, negative three. Calcane-ovalgus, ten cases; good six, fair three, negative one. Pure valgus, two

cases; good one, fair one. Calcaneus, one case; fair result. Dangle-leg, five cases; negative five. Drop-wrist, six cases; good one, fair three, negative two.

NEUROLOGICAL QUESTIONS IN THE OPERATION OF TENDON TRANSPLANTATION.*

By JOSEPH COLLINS, M. D.,

NEW YORK,

CONSULTING NEUROLOGIST TO THE HOSPITAL FOR THE RUPTURED
AND CRIPPLED.

The neurological questions that come up for debate in the discussion of the operation of tendon transplantation for function transference, although few in number, are of very considerable interest. That these questions cannot be answered satisfactorily is due to our ignorance of neuro-physiology and neuro-dynamics. Before touching upon the more important of these questions I shall avail myself of the opportunity to make a few remarks on the treatment of infantile palsies, spinal and cerebral, the sequelæ of these being the principal conditions that offer a field for this operation. It is but a trite repetition of what has often been stated to say that the treatment of anterior poliomyelitis is a sad and forlorn chapter in therapeutics. But the prognosis in many cases of the disease is not so desperate in reality as many physicians seem to believe. This optimistic note does not arise from contemplation of the possibilities of the operation of tendon transplantation; it is a reflection of experience with the disease. The truth of the matter is that there is too much of the *laissez aller* attitude about the treatment of anterior poliomyelitis. The feeling is too general that the case is hopeless anyway, and the incentive for treatment is therefore lacking. Except in the instances in which an entire extremity is reduced to a state of flaccid atrophy, such an attitude is unwarrantable. I regret to say that, in a large percentage of the cases that I see in my clinic long after the acute process has subsided, parents volunteer the statement that they had been told that the child would grow out of it, or that treatment would be of no use. The number of cases that are allowed to go on to wretched deformity for the need of appropriate mechanical treatment is enormous.

When a voluntary muscle is cut off from its nerve supply, as in anterior poliomyelitis, it retains its irritability for a long time. It can be made to retain it longer by certain treatment, such as the hypodermic injection of strychnine and the use of gal-

*Contributed to the "Symposium" on Tendon Transplantation, at the Academy of Medicine, Section on Orthopaedic Surgery, March 20.

vanic electricity. During this time the inflammatory process in the gray matter of the spinal cord constituting the basis of the disease having had time to subside, it may be found that some neuraxones have been saved and can take up their function in a small way. If the peripheral parts have been kept in condition for such nerve service, the little that the lame nerve can offer is of great importance compared with none at all. It is really in such cases in which some slight motility is preserved that the operation for tendon transplantation is of service. Therefore treatment by the physician may be of sufficient help in maintaining the mechanical irritability of the muscle, so that a tendon of a healthy or only partially impaired muscle may be transplanted into it with the result of marked functional restoration.

send impulses to it to make it work. The cause of the rigidity and forced positions is perverted innervation of the muscles, *i. e.*, a loss of the delicate co-ordinating or tonico-antagonistic impulses. One of the principles upon which the operation of tendon transplantation is essayed in these cases is to conduct the excess of innervation going to the muscles that are spastic to the functional antagonists that are not, and so to not only overcome the deformity which the former is producing, but to add to the voluntary mobility of the part as well.

The operation of tendon transplantation for deformities resulting from anterior poliomyelitis provokes questions that are easier to answer satisfactorily than those of cerebral palsies. How a flexor muscle imbedded in the tendon of an extensor muscle can cause extension of the hand or the foot, for

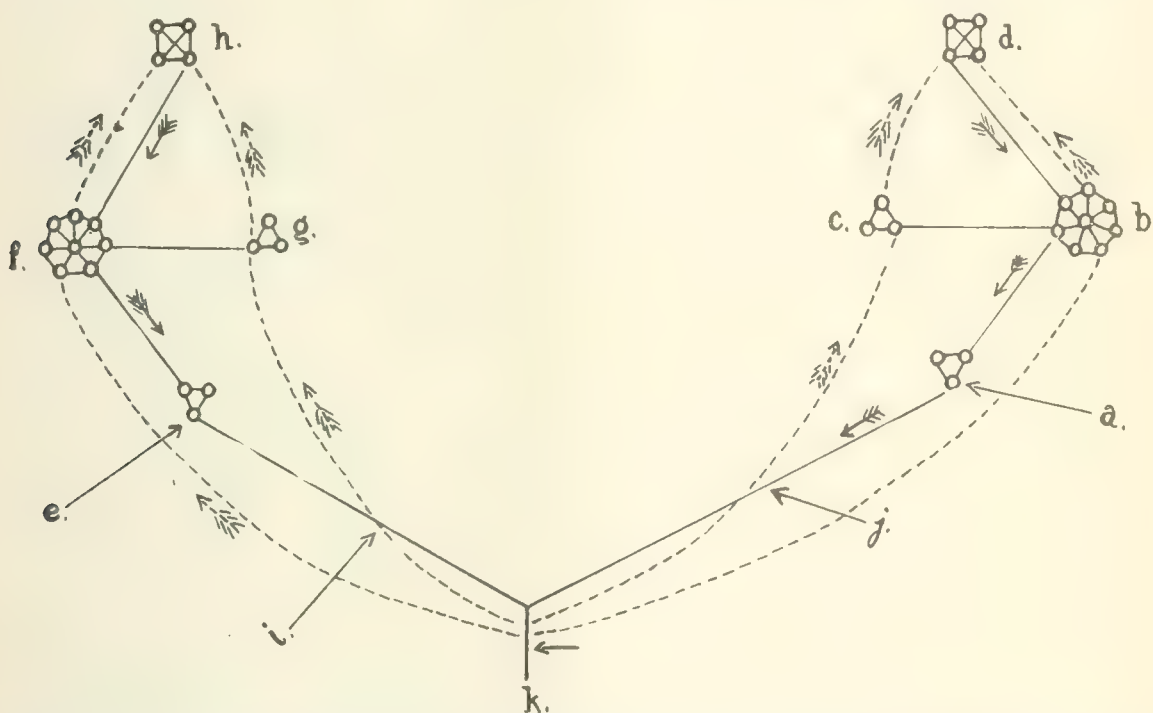


FIG. 1.—Normal conditions. *a*, centres which send impulses direct to the flexor tendon; *b*, centres active when I *feel* the movements of the flexing of the fingers; *c*, centres active when I *see* the fingers flexed; *d*, centres active when I *think*, "the flexing of the fingers;" *e*, centres which send impulses direct to the extensor tendon; *f*, centres active when I *feel* the movements of the extension of the fingers; *g*, centres active when I *see* the fingers extended; *h*, centres active when I *think*, "the extension of the fingers;" *i*, extensor tendon; *j*, flexor tendon; *k*, fingers.

The only point that I wish to emphasize in the treatment of the infantile cerebral palsies is the necessity of differentiation as to their cause. Of course this is difficult, often impossible; but the attempt should be made carefully to distinguish between cerebral palsies due to gross destruction of tissue, such as from hæmorrhage and porencephaly and palsies due to encephalitis and absence of development of the medullary sheaths, such as occurs in the condition usually known as Little's disease. In these latter states there is often no real paralysis. The fixation and spasticity are the principal symptoms. The patient's peripheral neuro-motor apparatus is functionable if he could only

instance, has been the subject of considerable speculation, but in reality there is very little difficulty about it. When a nerve impulse goes down from a spinal cord anterior horn cell, no matter for the moment where it starts, it has neither predetermination nor choice whether it will cause flexion or extension. It may be destined for a flexor muscle if it arises from cells that are the origin of fibres going to flexor muscles, but if the flexor muscle is attached to an extensor tendon, extension will be the result. The impulse may be compared to a locomotive which starts from a union station. It depends entirely upon the track to which it is shunted on leaving the yards whether it will bring up in Boston or in

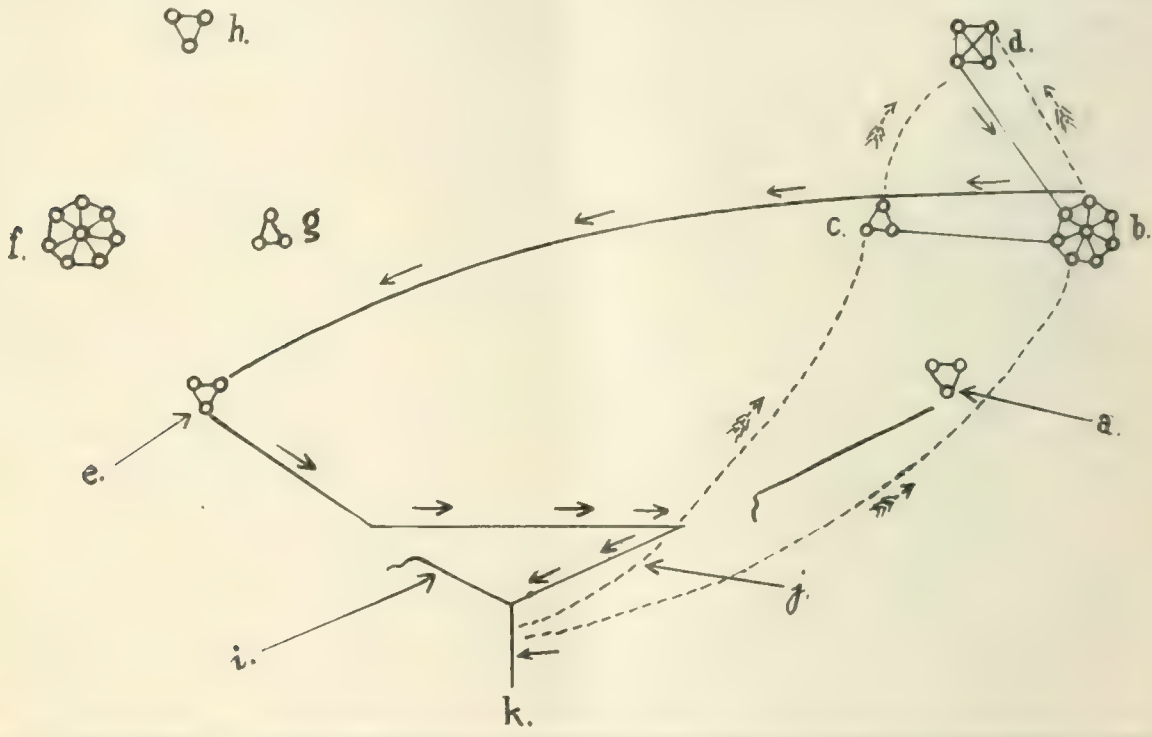
Buffalo. The fact that it has been going to Boston every day for a year in no way hampers it from going to Buffalo the next time if it is shunted that way. This conception in no way does violence to the teachings that the cells of the ventral horns of the spinal cord have grouping according to function. They certainly have grouping according to function, but, in the case of tendon transplantation, there is also functional transference.

The question, In what way is the movement-giving muscle incited to its new activity? is one that has been answered differently. As the result of transplantation there must be developed a new muscle individuality, as it were. This individuality is the re-

and simultaneously b, c, and d are active, and we *feel* see, and *think* of the movement simultaneously.

If in any way we get the *feelings* of the flexor movements distinctly in consciousness, then b must be active; and simultaneously d, c, a and the fingers will be flexed; but d and c may not be noticed in consciousness.

If the *thought* of the flexing of the fingers is very prominent in consciousness, then d must be active, and so also must c, b, a, and the fingers will be flexed, all simultaneously; but c and b may not be attended to, although usually in such cases d and b are both in attention. (d may be active, and the thought of the flexing of the fingers may be corre-



After operation a, centres which formerly sent impulses to the flexor tendon, but which are now disconnected, b, centres active when I feel the movements of the flexing of the fingers; c, centres active when I see the fingers flexed; d, centres active when I think, "the flexing of the fingers;" e, centres which formerly sent impulses to the extensor tendon, but which now send them to the flexor tendon; f, g, h, see fig. 1; i, extensor tendon; j, flexor tendon; k, fingers.

sult of adaptation, not only of coordinating centres in the brain cortex, but in peripheral parts as well. The psycho-physical process underlying it may be illustrated by the following figures, suggested to me by Mr. Henry Rutgers Marshall:

All the centres a, b, c, d, e, f, g and h, shown in Fig. 1 are cross connected; but those connections which are marked are most active under normal conditions.

What we may speak of as a "circular arc" of activity exists, principally on the lines a through flexor tendon to fingers, to b, to d to b and back to a.

When this arc is active all parts of it are active, to all intents and purposes simultaneously. It is to be noted that, while all centres on the circular arc act in unison, some may be more emphatic than others.

If we stimulate artificially, the fingers are flexed,

spondingly prominent in attention, but the action of the other parts on the circuit may be inhibited more or less completely so that flexion may take place only partially or not at all.)

The same description (mutatis mutandis) may be given of the action of the extensor tendon and of the centres e, f, g, and h.

If now the flexor tendon and the extensor tendon are cut and grafted, as in Fig. 2, then the circuit a, through flexor tendon to fingers, to b, to d, to b, and back to a is broken. So also is the circuit e through extensor tendons to fingers, to f, to h, to f, and back to e.

As I have said above, all the centres a, b, c, d, e, f, g, and h are cross connected but normally only those are active as shown in Fig. 1.

But under the conditions shown in Fig. 2 the

cross connection between b and e becomes important. For the first chance flexion of the fingers (probably produced artificially by the surgeon as soon as the operation is complete) will produce a simultaneous activity in the circuit e through extensor tendon to fingers, to b, to d, to b, and from b to e through the cross connection, which, under normal conditions, is inactive, but which becomes vigorously active under these new conditions.

Ever after, if we stimulate e artificially, the fingers will be flexed; and simultaneously b, c, and d will be active as before (Fig. 1), and we shall *feel, see, and think* of the flexor movement of the fingers simultaneously.

So also, if in any way we get the feelings of the flexor movements distinctly in consciousness, then b must be active, and simultaneously d, c, e, and the fingers will be flexed.

So also again, if the thought of the flexing of the fingers is very prominent in consciousness, then d must be active, and so also must c, b and e, and the fingers will be flexed, all simultaneously.

The central processes ruling and regulating the coordinating mechanisms have in children a much greater adaptability and possibility to change than in later years, when the more important and coordinated movements have become fixed and are more or less automatic. When peripheral deviation of centrifugal irritation is brought about so that the innervation impulse is directed into other muscles, the object being functional transmission and functional division, this prepares the altered centripetal influences and reactions in the way already pointed out. In this manner previously existing pathways are closed up and new ones are opened, so that there is a new control of the total innervation adapted to the new functional necessities.

Before closing I should like to say a word from the neurologist's standpoint of the scope of the operation. From what I have seen of the results of the operation I am inclined to believe that the field of its applicability is wider than most of us have heretofore supposed. The surgeon should be urged to utilize it, not only in the deformities of infantile palsies, but in similar deformities of cerebral spastic hemiplegias and possibly also of spinal traumatic spastic palsies.

32 WEST THIRTY-EIGHTH STREET.



The American Orthopedic Association will hold its sixteenth annual meeting at Philadelphia on June 5th, 6th and 7th, in Hotel Walton. Dr. W. J. Taylor, 1825 Pine street, is the chairman of the committee of arrangements and will furnish any information desired. Printed programmes may be obtained from the secretary, Dr. John Ridlon, Chicago.

Therapeutical Notes.

Intravenous Injections of Metallic Iodine.—Dr. Spolverini has studied the effects of these injections and discusses the subject in *Il Policlinico* for July, 1901. He has used these injections particularly in the treatment of chronic articular rheumatism and syphilis. Among the cases of syphilis he selected for this treatment those that presented tertiary manifestations and in which neither bath, potassium iodide, nor mercury gave good results. The formula employed was as follows:

R Metallic iodine. 36 grains;
Potassium iodide. 2 drachms;
Distilled water. 4 “

M. The author reports cases in which half an ounce of this solution was used with success. He has also obtained good results in tuberculous children, particularly in tuberculosis of the serous membranes and the glands. He states that these injections are well borne both by children and adults and that only a slight burning sensation is felt at the point of injection. A slight induration remains for several days at this point, but microscopical examination shows that this induration is not the effect of a thrombosis, but results from the formation of new connective tissue around the point of injection. No disturbances of circulation or respiration are noted, and though iodine is found in the urine immediately after the injections, no disturbance of the kidneys is observed.

A Depilatory.—The *Gazette hebdomadaire de médecine et de chirurgie* for March 6th, ascribes the following to Butte:

R Tincture of iodine. 45 minims
Spirit of turpentine. 90 minims
Castor oil. 60 minims
Alcohol. 12 drachms
Collodion. to 5 ounces

M. Paint the surface to be denuded for three or four days; all the hairs will then come away with the collodion crust that is formed.

Mercury Imidosuccinate.—Injections of mercuric imidosuccinate have been used by Horowitz, of Vienna (*Centralblatt für Therapie*, November, 1901), who recommends the use of this drug in all forms of syphilis. It occurs as a white powder, soluble in water, and almost insoluble in alcohol. Its solutions, to which a little cocaine is added for hypodermic injection, can be preserved for a long time without clouding, but little by little a flocculent precipitate is formed. In order to avoid this, the author employs small sealed glass bulbs, which each contain the dose to be used. He prescribes:

R Mercury succinimide. 25 grs.
Cocaine hydrochlorate. 10 grs.
Distilled water. 1 ounce

M. A five-per-cent. solution is used, so that every bulb contains one grain of mercuric succinimide and one third of a grain of cocaine. These solutions do not cause any pain at the point of injection nor produce any swelling or infiltration. As the salt contains a large amount of mercury its action is a pronounced one.

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THE PROPOSED UNIFORM ORGANIZATION OF STATE MEDICAL ASSOCIATIONS.

A committee appointed for the purpose by the president of the American Medical Association, consisting of Dr. J. N. McCormack, of Bowling Green, Ky., Dr. P. Maxwell Foshay, of Cleveland, and Dr. George H. Simmons, of Chicago, has devised a form of constitution and by-laws intended to serve as the substance of the constitution and by-laws of each State organization affiliated or to be affiliated with the national association, and the plan is set forth in a report published in the association's *Journal* for May 3rd. The gentlemen of the committee do not profess that their device is perfect or that in all its details it will be found available to advantage in every State; indeed, they intimate that much of the wording of those portions that in all probability will prove acceptable in all the States need not be formally enacted, inasmuch as it is elucidative rather than declaratory. It is desirable to have the constitution and by-laws of any society as briefs and condensed as may be consistent with clearness, but in this instance we think the entire report of the committee should be preserved in the archives of every State society that adopts its fundamentals, for it will furnish the readiest means of expounding the enactments.

Recognizing the diversity of conditions in the various parts of such an enormous country as this, the committee has wisely aimed at flexibility in all but essentials, and has sought to provide the greatest facility for conciliation and compromise in regard to disagreements and friction of all sorts and for the utmost liberality in rating individual physicians as to their eligibility to membership in the component county societies, which membership carries with it

the right of representation in the State organization and in the American Medical Association. There is, indeed, so far as we can see, no reason why, under such a general scheme as the committee has devised, there should not shortly be achieved a close approach to such an ideal unification of the medical profession as was lately forecast by Dr. Charles A. L. Reed, of Cincinnati, in his remarks before a Dayton society, published in our issue for April 19th, for no reputable legally qualified practitioner would be kept out of a county society or debarred from acting as its representative in the State and national organizations, no matter what his therapeutical theories or practice might be—provided only he renounced sectarianism, which would not at all mean that he should give up his belief or cease to practise in accordance with it, but only that he should no longer exploit it with the laity. Only as a united profession can we readily influence legislation in the interest of the public health and for the advancement of medical science, and we believe that the great body of physicians throughout the Union will concur in the liberality shown by the committee, and feel thankful to the gentlemen composing that body for the assiduity and broad-mindedness which they have brought to the devising of their scheme.

PROFESSOR MAX SCHÜLLER AND HIS CRITICS.

Professor Schüller's views on the ætiology of cancer may or may not turn out to be well founded, but it is difficult to avoid the impression that the unusual amount of opposition that they have encountered has been to some extent prompted by personal dislike for the man and perhaps by a feeling of jealousy aroused by the fact that he, a surgeon, has encroached upon the pathologist's preserve. Such feelings, it is needless to say, should have no place in scientific discussion. In the *Centralblatt für Chirurgie* for February 22nd, Schüller, after speaking of the general tendency to cry down new views, intimates that his own on the matter of cancer have been uncommonly ill-treated, and seeks to refute some of the criticisms that have been published. First of all, in his refutation, he takes up the allegation that certain bodies described by him as connected with the ætiology of cancer are in reality cork cells, with the intimation that such cells are extraneous bodies, having got into his preparations acci-

dently. As to this point, he simply declares that he has since repeated many of his observations, making new preparations on a large scale entirely without the use of cork-stoppered receptacles or any article of cork, and has found the same appearances as before.

As for Professor Ribbert's suggestion that the young organisms that, according to Schüller, escape from his large capsules and play the real pathogenic rôle in cancer are plasma cells, he feels sure that Ribbert would not have made it had he seen one of the preparations. With regard to the intimation that they consist of leucine, he fortifies his own interpretation by the testimony of Dr. Clewes, of the Buffalo laboratory. He closes with an aspiration which may be rendered thus: "May these words gain me friends! Every truly scientific investigator strives, not for glory, but for the truth. But even truth cannot progress without friends!" Truth "without friends" may not meet with acceptance so readily as with friends, but truth is inevitably recognized in the end, and in our opinion it will do no enduring harm for Professor Schüller's views to be dealt with in a spirit bordering on intolerance, even if they are destined to be accepted ultimately. As the case stands at present, he seems to us to have a certain advantage in the apparent disagreement among his critics.

HOW THE HAIR TURNS WHITE.

According to certain observations of Metchnikoff's (*Proceedings of the Royal Society*, No. 453), it appears that the performances of phagocytes are not always advantageous, at least from the cosmetic point of view. In a study of the general subject of atrophy, especially senile atrophy, Metchnikoff has found that the atrophic process that so affects the pigment of the hair as to turn it white is due to the intervention of phagocytes. These cells have each a single nucleus, he says, but they differ greatly one from another in general appearance owing to numerous amœboid prolongations of their protoplasm. They are situated primarily in the medullary portion of the hair shaft, but make their way outward into its cortical layer, where they absorb the pigment granules and remove them from the hair.

In hair which has partly turned white, but still preserves its pigment to some extent, a great number of these phagocytes may be found, while in ab-

solutely white hair phagocytes filled with pigment grow scarcer and scarcer and most frequently disappear completely. On observing the root of a hair that is beginning to whiten, a great many phagocytes filled with pigment are often found. It is indubitable, says Metchnikoff, that the phagocytes of the hairs swallow up the granular pigment of the cortical layer and carry it away, thus leading to complete whitening of the hair. In this way, he maintains, the occasional phenomenon of the hair turning white in a single night is to be explained, the phagocytes being endowed with greatly heightened activity. The whitening of the hair of old dogs, he says, is brought about by the same process.

It will be observed that the author does not profess to indicate more than the mechanism by which canities is produced, although he does class the process as atrophic. Probably we can only speculate as to the real cause or causes that set the mechanism in action, as to whether the phagocytes are endowed with new energy or the pigment granules undergo some change that makes them a readier prey for the phagocytes. The general association of canities with senility would perhaps point rather to the last-mentioned supposition, but so little is known concerning the matter that we can go no further than conjecture.

PROFESSOR JACOBI'S REPORTED RESIGNATION.

It is reported that Dr. Abraham Jacobi has resigned the professorship, that of diseases of children, which he has held for so many years in the College of Physicians and Surgeons. We hope the report is erroneous, for, while we recognize that Dr. Jacobi is well entitled to rest, we should greatly regret the loss of his continued service as a college teacher.

A CASE OF UNSOUGHT NEWSPAPER PUBLICITY.

It is our belief that medical men are often falsely accused of conniving at newspaper laudation of themselves, but it must rarely be the case that they are so badly treated by a newspaper as Dr. Milton W. Franklin and Dr. William S. Gottheil have lately been. The following is the substance of a letter that we have received from those gentlemen: "On April 9th there appeared in the *Medical Record* an account of some experimental work that we had done with regard to the transmission of light through the human body. This seems to have excited the curiosity of a daily newspaper in this city, but when

the representatives thereof came to see us, we absolutely refused to be interviewed or quoted in any way. Knowing the methods of contemporaneous journalism, however, we were careful to point out to the reporter that the experiments had no public interest, and that no claims for therapeutic results were made in the article. We refused to give the pictures for publication or to allow the newspaper men to use the machine to make others, and we warned the manufacturers on the subject. It seems, however, that the newspaper in question * * * * succeeded in getting the use of a machine at the factory, and repeated the experiments. The results were the postal card sent to the profession last week and the [newspaper] article. * * * * We desire to disclaim all responsibility in the matter, and more especially in the therapeutic statements and hints that it contains. On this latter subject we said in the *Record* only: 'The proof of the penetration of actinic light to and through the internal organs apparently opens a field for its successful application as a therapeutic agent in their maladies, in view of its admitted efficiency in a number of dermatoses.' Upon this conservative and provisional statement the entire newspaper superstructure was raised. It seems impossible to avoid undesirable publicity when the public journals think that a subject be strikingly exploited."

THE MADRID INTERNATIONAL CONGRESS.

In less than a year from now the Fourteenth International Medical Congress will be held in Madrid, from the 23d to the 30th of April, 1903. That time is rather early in the year for American physicians to intermit their practice and their college work for so long a period as attendance will require, except at serious inconvenience. Nevertheless, in remembrance of the cordial courtesy with which our army and navy delegates were received at a congress held in the Spanish capital at a time immediately preceding the outbreak of the late war with Spain, when almost everybody in each country felt that the war was inevitable, let us make the utmost effort to send a large delegation to Madrid next year. It is now by no means too early to begin the endeavor. We have the secretary-general's assurance, of which there was no need, that representatives from all countries will be most handsomely received.

PERFORATION OF THE AIR-PASSAGES BY TUBERCULOUS BRONCHIAL GLANDS.

Two cases of this occurrence are reported by Benda (*Ungarische medicinische Presse*, 1902, No. 4; *Centralblatt für innere Medizin*, April 26th). In

one of them the diagnosis was not made during the patient's life. The other case was that of a puny child, eight months old, the offspring of a tuberculous father. It came under treatment for dyspnea and stridor, which were interpreted as probably due to pressure of caseated bronchial glands on the air-passages. This surmise became a certainty when, after a short time, there appeared subcutaneous emphysema unaccounted for by any external injury. The child was not suffocated, but recovered, probably because the cheesy masses were not very extensive. Presumably it must be very rare for a diagnosis of enlarged bronchial glands to meet with this sort of confirmation.

THE MAGNET AS A REMEDY FOR FATIGUE.

At a recent meeting of the Paris Society of Biology (*Progrès médical*, April 10th) M. Féré said that he had been studying the action of the magnet on the nervous system. As in hysterical persons, he said, so in the healthy, the magnet exerted an action, provided fatigue was made to intervene, and fatigued persons showed some of the reactions of hysterical subjects. In cases of fatigue the magnet produced a revival of strength. His experiments had been made upon himself, and we think that M. Marey was fully justified in remarking that it would have been better to experiment on a person ignorant of the object in view, so as to avoid self-suggestion, and perhaps, too, the prevalent skepticism as to the capability of the magnet of affecting the animal organism in any way lurked beneath his remark.

IODINE AS A CAUSE OF EPITHELIOMA.

Multiple epitheliomata have been regarded as occasionally due to the use of arsenic. Hutchinson (*Archives of Surgery*, vol. XI., No. 42) in like manner considers that many cases of multiple cutaneous sarcomata may be fairly attributed to the use of iodine and its salts. Besides the frequency with which iodine salts are administered in a legitimate manner, many patent medicines are known to contain that drug. Iodine is also used in some of the commercial arts, particularly the preparation of photographic materials. We recollect having heard of cases in which multiple warts on the hands were supposed to have originated from prolonged contact with iodine and iodine preparations, by persons engaged in photographic industries. Considering the relation between papillomata and epitheliomata, it might be interesting to learn if such multiple cutaneous epitheliomata as Hutchinson refers to have been encountered among workers in photographic chemicals.

CONSULTATIONS BY TELEPHONE.

One of our contemporaries appears to be seriously taking to heart the question of whether medical consultations over the telephone should be charged for as office consultations or as home visits. It appears to be nonplussed because of the fact that, while the advice is given in the office, it is received at the patient's home. We must admit to seeing no insuperable difficulty in the weighty problem. It is not what the patient receives but what the physician bestows that forms the basis of his charge. The three factors, as we understand it, that enter into the problem of the physician's remuneration, are: 1, the special skill and knowledge brought to bear; 2, the responsibility involved; and 3, the time and labor involved in bringing the two former into action. Now, the first two are constant factors, more or less, so far as the when, how, and where are concerned. It is on the last only that any modification of the fee must depend. That being so, a telephone consultation is obviously an office consultation, and if the responsibility is to some slight extent increased by giving an opinion *in absentia*, the benefit derived is doubtless so much the less from the lack of that personal confidence—inspiring influence that always accompanies the presence of the trusted medical adviser. On that point, therefore, physician and patient may do well to cry quits.

THE DANGER OF DECAYING FRUITS.

Decaying fruits seemingly possess dangers other than those due to their ingestion, when confined in a close space. A longshoreman recently died from asphyxia induced the carbonic acid given off in the forehold of the *Lucania* from cases of oranges, lemons, apples, and other fruits. Two fellow workmen, also, who endeavored to rescue the unfortunate man when overcome by the gas, were themselves almost killed in the attempt. That such fumes are noxious is, of course, well known; but it is very rare, if not unprecedented, that they should actually cause death.

THE CIGARETTE AGAIN.

The *New York Times*, in its issue for May 4th, makes merry editorially over the fact that "Cigarette smokers have an industrious friend in the London *Lancet*." It quotes at some length some of the *Lancet's* arguments in support of the much and unjustly abused cigarette, and concludes: "It is doubtful if disquisitions like this one really influence anybody to a change of habits. Tobacco is not a thing to argue about—the arguments for and against its use in any form being equally numerous and all unanswerable. In such cases taste and convenience govern." This is not quite a fair statement of the case; it reminds one of the old saw, "orthodoxy is my

'doxy, heterodoxy is the other fellow's 'doxy." Neither the *Lancet* nor any other journal, so far as we are aware, has ever argued that people whose "taste and convenience govern" them into not using tobacco at all or discarding some particular form of its employment, should be converted and become smokers, either generally or in particular; all that the *Lancet* and some other journals have contended for is the right of the individual to object to be "governed" by the "taste and convenience" of the other fellow, enforced by purely theoretical, unsubstantiated, exaggerated, and in many instances false, statements as to the evil results of practices common, pleasurable, and even in occasional instances beneficial, when not abused. Some there are, particularly certain neurotic and cardiac subjects, and all children, who should not use tobacco in any form; some who should not use it in certain forms; no one should use it—or anything else—to excess. But these are all points for the individual to settle between himself, or his guardians, if he be not arrived at years of discretion, his medical adviser and his own "taste and convenience"—not that of the other fellow. The attempt at coercion—by either force or fraud—is equally an outrage in such a matter, whether the ukase be "thou shalt" or "thou shalt not," and is rightly met with a statement in defense.

THE RELATION BETWEEN LOCOMOTOR ATAXIA AND SYPHILIS.

In relation to the supposed connection of locomotor ataxy with syphilis, a communication by M. Laveran, on behalf of Dr. Matignon, for many years physician to the French legation at Peking (*Bulletins et mémoires de l'Académie de médecine*, 1902, No. 1; *Médecine orientale*, March 25th), is of interest. Dr. Matignon, in his many years of hospital practice, was struck by the great frequency of syphilis and the equally great rarity of locomotor ataxy among the Chinese. It is noticeable, however, that, in the yellow race, the syphilis was usually very benign, and it is possible that this benignity may have had something to do with the rarity of locomotor ataxy.

CURIOSITY CONCERNING NOTABLE PERSONS' ILLNESSES.

The reported dissatisfaction of the Dutch people with the fact that Queen Wilhelmina's physicians issue bulletins expressed only in general terms is a fresh manifestation of the public's unjustifiable demand for details concerning the health of distinguished persons that cannot with any proper consideration for delicacy be given out for publication. The profession should stand as a stone wall against this impudent demand, no matter how craftily the newspapers may seek to pander to it.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 12th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-Historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, May 13th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y. (annual); Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, May 14th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, May 15th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, May 16th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

The Royal College of Physicians of London.—Sir William Selby Church, Bart., M. D., has been re-elected president of the college.

Mt. Sinai Hospital.—Dr. Joseph Brettauer has been appointed attending gynecologist to the hospital, to succeed the late Dr. Paul F. Mundé.

St. Joseph's Hospital.—Dr. Charles O'Donovan, president of St. Joseph's Hospital Medical Board, has announced that the entire house staff had been reappointed for the ensuing year.

General Sternberg delivered an address on public health before the American Social Science Association, which met recently in Washington. Major Groff, of the medical department of the army, who has acted as president of the Board of Education of Porto Rico, discussed the Past, Present and Future of Porto Rican schools.

Academy of Medicine.—At the meeting of the section in surgery to be held on Monday evening, May 12th, the following papers will be presented: Sulphite Laps, for Absorbent Dressings, by Dr. R. T. Morris; Wounds, with a Discussion of what Constitutes Rational Treatment, by Dr. Frederic Griffith. These will be followed by a presentation of specimens of intraligamentous ovarian cyst, of pyosalpinx, and of appendix vermiformis, by Dr. Joseph Wiener, Jr.

The American Academy of Medicine will convene for its twenty-seventh annual meeting at the Kensington Hotel, Saratoga Springs, on Saturday, June 7th, at 11 a. m., and continue its sessions during Monday. The secretary, Dr. Charles McIntyre, Easton, Pa., will forward a complete programme to all who make application to him for it.

A Dinner to Dr. Jane E. Robbins.—The Social Reform Club gave a complimentary dinner to Dr. Jane E. Robbins at the clubhouse, No. 128 East Twenty-eighth Street, on Saturday, April 26th. The dinner was a testimonial to Dr. Robbins on the eve of her departure for Cleveland, where she goes to assume temporarily the headship of Alta House Settlement.

The Smoke Nuisance in Boston was discussed at a meeting of the Massachusetts Board of Health at the Parker House, Boston, on April 24, and a circular has been distributed signed by Charles W. Eliot, Richard Olney, Charles F. Adams, William Endicott, Henry L. Higginson, Edward C. Perkins, Laurence Minot, Henry Parkman and William T. Sedgwick, protesting against its continuance and urging that action be taken by the present Legislature against it.

Changes of Address.—Dr. S. Ormond Goldan, to No. 18 West Seventieth Street, New York; Dr. M. S. Kakels, to No. 71 East Sixty-sixth Street, New York; Dr. Frederick de Kraft, to No. 249 West Fifty-fourth Street, New York; Dr. John Leshure, to No. 153 Convent Avenue, New York; Dr. James Moran, to No. 152 West Fifty-seventh Street, New York; Dr. H. Rabinowitsch, to No. 168 Madison Street, New York; Dr. George A. Saxe, to No. 75 West Fifty-fifth Street, New York; Dr. Homer Wakefield, to No. 151 West Seventy-sixth Street, New York; Dr. Sara Welt-Kakels, to No. 71 East Sixty-sixth Street, New York.

The Medical and Chirurgical Faculty of Maryland, at a recent meeting, elected the following officers for the ensuing year: President, Dr. William T. Howard; Vice-President, Dr. Samuel T. Earle and Dr. Wilmer Brinton; Treasurer, Dr. T. A. Ashby; Secretary, Dr. J. W. Lord; Executive Committee, Dr. William Osler, Dr. Harry Friedenwald, Dr. Samuel Theobald and Dr. J. McPherson Scott; Trustees, Dr. W. J. Chambers, Dr. William Osler, Dr. T. A. Ashby, Dr. L. McLane Tiffany, Dr. G. L. Taneyhill, Dr. C. M. Ellis, Dr. J. E. Atkinson, Dr. E. N. Brush, Dr. S. C. Chew and Dr. J. W. Humrichouse.

The Medical Society of the County of New York met at the New York Academy of Medicine on the evening of April 28th. The following papers were presented: Concerning Defects of Vision, the Result of Certain Drugs, Drug Habits and Occupations, their Recognition and Treatment, by Dr. G. E. de Schweinitz, of Philadelphia; Injuries to the Eye and their Treatment, by Dr. J. Morrison Ray, of Louisville, Ky.; Contagious Diseases of the Eye and their Treatment, by Dr. Myles Standish, of Boston, Mass.; and The Microscopical Examination of Conjunctival Discharge in Contagious Diseases of the Eye, by Dr. Edgar S. Thomson, of New York.

Medical Officers Selected for South Africa.—So far the medical officers appointed to go to South Africa with the fourth contingent of Canadian troops are: Surgeon-Major Elliot, Quebec; Surgeon-Capt. A. R. Murray, New Brunswick, and Surgeon-Capt. W. H. Tye, of Chatham, Ont. The fourth has not yet been selected.

Milwaukee Medical College.—The college year ended at Milwaukee Medical College on April 14th with the usual commencement exercises and the conferring of degrees upon eighty-two successful seniors of the medical, dental, and pharmacy classes, by Dr. W. H. Earles, president of the college.

The Suffolk County Medical Society.—The annual meeting of the Suffolk County (N. Y.) Medical Society was held at Riverhead on Thursday, April 24th. The following officers were re-elected; President, Dr. John H. Benjamin, of Riverhead; vice-president, Dr. A. C. Loper, of Greenport; secretary, Dr. P. Van Benschuten Fowler, of Centre Moriches; treasurer, Dr. B. D. Skinner, of Greenport; historian, Dr. J. H. Benjamin, of Riverhead. Dr. George Ryerson Fowler, of Brooklyn, read an interesting paper on Fracture of the Lower End of the Radius.

A Country Branch for the Rush Hospital.—The trustees of the Rush Hospital for Consumptives, at Philadelphia, have secured for use as a country branch a farm of forty-seven acres, two of which are woodland, in Willistown, township, Chester county, Pa., on the main line of the Pennsylvania Railroad, two miles from Malvern Station and three from Paoli. Malvern is the highest point between Philadelphia and Harrisburg, being 635 feet above sea level. It is intended to receive at the country branch only cases in the incipient stage, in the treatment of which plenty of fresh air, good hygiene, and good food have already done wonders. It is the purpose of the trustees, if this plan is successful, to build small cottages on the ground similar to those at the Saranac Sanitarium, in the Adirondacks, which is so successfully managed by Dr. Trudeau.

The Medical Examining Board of Virginia has been appointed by Governor Montague as follows: State at large, Dr. R. W. Martin, Lynchburg; Dr. W. L. Robinson, Danville, and Dr. A. S. Priddy, Marion; First Congressional District, Dr. W. B. Robinson, Rappahannock; Second Congressional District, Dr. H. M. Nash, Norfolk; Third Congressional District, Dr. J. E. Warriner, Brook Hill; Fourth Congressional District, Dr. O. C. Wright, Jarratt; Fifth Congressional District, Dr. R. S. Martin, Stuart; Sixth Congressional District, Dr. Samuel Lile, Lynchburg; Seventh Congressional District, Dr. Robert C. Randolph, Boyce; Eighth Congressional District, Dr. R. M. Slaughter, Theological Seminary; Ninth Congressional District, Dr. E. T. Brady, Abingdon; Tenth Congressional District, Dr. C. W. Rogers, Stanton; homœopathic members, Dr. M. R. Allen, Norfolk, and Dr. E. C. Williams, Richmond.

Against Summer Term Colleges.—A joint decision has been announced by the medical examining

boards of Wisconsin, Michigan and Illinois that they have decided to throw out the diplomas of all students from medical colleges who could not show conclusively that they had put in the full terms required by law for the curriculums of medical colleges in the State. This decision may cut off a large number of students in the three States from practicing without an examination, as it is understood that there are a number of schools where the terms have been shortened through the medium of summer terms. The Wisconsin Board has recently investigated the conditions existing at the Milwaukee Medical College, but no report has been made public as yet.

Protest against the Sale of Antitoxine by the Board of Health.—On April 17th Bartow S. Weeks presented to Mayor Low a petition signed by about 1,100 "physicians, manufacturing, wholesale and retail druggists, and taxpayers," asking that the sales of vaccine virus and of diphtheria and other antitoxines by the Department of Health be stopped. The reasons submitted were three—that the sale of these products imposed on the department bacteriologists additional duties, which were repugnant to the scientific mind; that it was contrary to the principles of political science, and unjust to mercantile interests; and that it diminished confidence in the board of health. If the board needed additional appropriations, they should be granted, the petitioners held; but it should not be allowed to derive a revenue by selling therapeutic agents in competition with druggists. The petition concludes: "Let the gratuitous distribution of virus and antitoxine continue, but stop the sales."

A Legal Decision Against Substitution.—Quite recently the proprietors of Gude's Pepto-Mangan won a suit in the United States Court, which they brought to prevent Henry Thayer & Co., from continuing to market an iron preparation in a terra-cotta colored package closely resembling that used by the plaintiff. Some of the testimony which was given by the officers of the defendant company throws an interesting light upon the moral and mental attitude of the substitutor. The treasurer of the company stated as his reason for adopting a terra-cotta colored package for his preparation of iron that this sort of a package was the fashion in iron preparations, and that in order to follow the "fashion" he adopted this particular color. The opinion held by the court in the matter is shown in a verdict awarding the plaintiff substantial damages. It is a noteworthy fact that the "fashion" in new remedies is always set by some preparation in the production and exploitation of which large sums and much labor have been expended, and that this "fashion" is nearly always followed by scores of imitators who seek to profit by the enterprise, skill and knowledge of manufacturers with greater originality than themselves.

Banquet to Dr. E. H. Gregory.—A banquet was given in St. Louis, on the evening of April 17th, to Dr. E. H. Gregory, who has been a well-known medical teacher in St. Louis for fifty years. He was at one time Governor Dockery's instructor,

and has been associated in years past with many other eminent men. The banquet, at which Governor A. M. Dockery presided and Dr. F. J. Lutz served as toastmaster, was one of the largest in recent years. Dr. Gregory, who was born in 1824, has held the following honorable positions: Professor of surgery, 1864; professor of surgery, 1867; president of the St. Louis Medical Society of Missouri, 1871; first president of the Missouri State Board of Health, 1883; president of the Missouri State Medical Association, 1883; president of the American Medical Association, 1887; president of the St. Louis Surgical Society, 1892. He received the honorary title of Doctor of Laws in 1879.

The New York State Nurses' Association completed its organization at the annual meeting, held in Albany on April 15. The following officers were elected: President, Miss Isabel Merritt, of Cherry Valley; First Vice-President, Miss Julia Bailey, of Rochester; Second Vice-President, Miss E. J. Keating, of Buffalo; Secretary, Miss E. C. Sanford, of Rochester; Treasurer, Miss Mary Brooks, of Saratoga; Trustees, one year, Miss A. C. Maxwell, of New York; two years, Miss S. F. Palmer, of Rochester; three years, Miss L. L. Dock, of New York. Chairman of Committees: By-Laws, Miss Ida R. Palmer, of Albany; Legislation, Miss Eva Allerton, of Rochester; Publication, Miss S. F. Palmer, of Rochester; Credentials, Miss A. C. Maxwell, of New York; Finances, Miss L. B. Sanford, of New York.

The society is now ready to consider seriously the question of legislation for registration, which will ultimately place training schools for nurses under the supervision of the regents, establishing thereby a more uniform basis of nursing education in the State, and eventually making trained nursing a recognized profession. To accomplish these reforms the nurses hope for the cooperation of medical journals and medical societies. The practical result of registration will be the protection of the public against impostors, of whom there are scores in every large nursing centre, and a gradual raising of the standard of admission to training schools, with a more carefully prepared curriculum of both theoretical and practical instruction. The nurses of Illinois and New Jersey are already organized for this purpose, with Colorado, North Carolina, Pennsylvania and Massachusetts agitating. The movement is also strong in England.

Congress of German Naturalists and Physicians.—Between September 21 and 28, 1902, the Association of German Naturalists and Physicians will hold its seventy-fourth annual congress at Carlsbad, Austria. As on former occasions, the rule that lectures and debates may be carried on in any language of the world, will be adhered to, and to English, American, French, Spanish, and other forms. To naturalists and physicians the same privileges will be again accorded as the ordinary members of the association are in the habit of enjoying. It is estimated that between 6,000 and 8,000 men interested in the natural sciences and medicine will gather on that occasion at Carlsbad, and great preparations have already been made to receive the members and friends of

this famous association. Nearly all the principal professors of the universities of Berlin, Vienna, Prague and most of the other Continental universities will be present, and twenty-eight different branches of science will be covered in the programme for the lectures and debates. As several hundred inhabitants of Carlsbad understand and speak English, the place being annually frequented by several thousand tourists from England and America, the facilities, comfort, and convenience available for English and American visitors at this year's congress will be by far greater than on any former occasion. Those intending to visit the congress who wish to present addresses should give notice of this intention at an early date, as the number of speeches will be very large. We are requested by the secretary of the association to inform our readers that this association of naturalists and physicians pursues solely and exclusively the object of promoting and developing all branches of science, and that any other object, of whatever kind it may be, is strictly excluded. At the small exhibition of scientific objects, which will be held in connection with the congress, no charge will be made to exhibitors for the space required, nor will any entrance fee be asked from visitors. Inquiries or letters should be addressed to "The Seventy-fourth Congress of Natural Philosophers at Carlsbad, Austria." No stamp for reply need be enclosed.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 3, 1902:

DISEASES.	Week end'g Apr. 26		Week end'g May 3.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	26	6	29	10
Scarlet fever.....	434	17	420	25
Cerebro-spinal meningitis.....	6	5	0	4
Measles.....	480	22	612	22
Diphtheria and Croup.....	205	51	313	47
Small pox.....	56	13	54	14
Tuberculosis.....	248	154	316	133

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending May 3, 1902:

Smallpox—United States

California.....	Los Angeles.....	Apr. 12-19.....	3 cases.	
".....	San Francisco.....	Apr. 13-20.....	3 cases.	
Colorado.....	Denver.....	Apr. 12-19.....	7 cases.	
Illinois.....	Bellefonte.....	Apr. 19-26.....	2 cases.	
".....	Chicago.....	Apr. 19-26.....	13 cases.	
".....	Freeport.....	Apr. 19-26.....	1 case.	
".....	Galesburg.....	Apr. 19-26.....	1 case.	
Indiana.....	Evansville.....	Apr. 19-26.....	4 cases.	
".....	Indianapolis.....	Apr. 19-26.....	16 cases.	
".....	Terre Haute.....	Apr. 19-26.....	4 cases.	
Kansas.....	Wichita.....	Apr. 19-26.....	5 cases.	
Kentucky.....	Covington.....	Apr. 19-26.....	16 cases.	
".....	Lexington.....	Apr. 19-26.....	2 cases.	
Louisiana.....	New Orleans.....	Apr. 19-26.....	1 case.	
Maryland.....	Baltimore.....	Apr. 19-26.....	1 case.	2 deaths.
Massachusetts.....	Boston.....	Apr. 19-26.....	51 cases.	3 deaths.
".....	Brockton.....	Apr. 19-26.....	1 case.	
".....	Brockline.....	Apr. 19-26.....	2 cases.	
".....	Cambridge.....	Apr. 19-26.....	2 cases.	

Massachusetts	Everett	Apr. 19-26	3 cases.	
"	Fall River	Apr. 19-26	2 cases.	
"	Fitchburg	Apr. 19-26	1 case.	
"	Malden	Apr. 19-26	1 case.	
"	Medford	Apr. 19-26	1 case.	
"	New Bedford	Apr. 19-26	3 cases.	
"	Newton	Apr. 19-26	4 cases.	
"	Somerville	Apr. 19-26	5 cases.	
Michigan	Detroit	Apr. 19-26	5 cases.	
"	Ludington	Apr. 19-26	8 cases.	
Missouri	St. Louis	Apr. 13-27	83 cases.	2 deaths
Montana	Butte	Apr. 20-27	5 cases.	
Nebraska	Omaha	Apr. 19-26	45 cases.	
New Jersey	Camden	Apr. 19-26	3 cases.	
Hudson Co., including Jersey	City	Apr. 6-27	107 cases.	13 deaths
"	Plainfield	Apr. 19-26	1 case.	
New York	Buffalo	Mar. 27-Apr. 30	21 cases.	
"	New York	Apr. 19-26	56 cases.	13 deaths.
"	Yonkers	Apr. 18-25	1 case.	
Ohio	Cincinnati	Apr. 18-25	12 cases.	
"	Cleveland	Apr. 19-26	2 cases.	1 death.
"	Dayton	Apr. 19-26	2 cases.	
Pennsylvania	Columbia	Apr. 21-28	4 cases.	
"	Erie	Apr. 19-26	2 cases.	
"	Philadelphia	Apr. 19-26	31 cases.	6 deaths.
"	Scranton	Apr. 19-26	6 cases.	
Rhode Island	Providence	Apr. 19-26	2 cases.	
Tennessee	Memphis	Apr. 19-26	14 cases.	2 deaths.
Utah	Salt Lake City	Apr. 19-26	1 case.	
Washington	Tacoma	Apr. 13-20	3 cases.	
Wisconsin	Green Bay	Apr. 20-27	6 cases.	
"	Janesville	Apr. 19-26	1 case.	

Smallpox—Foreign.

Austria	Prague	Apr. 5-12	8 cases.	
Barbadoes		Apr. 12	5 cases.	
Belgium	Antwerp	Apr. 5-12	9 cases.	
"	Quebec	Apr. 12-19	9 cases.	2 deaths.
Canada	Winnipeg	Mar. 29-Apr. 19	18 cases.	
China	Hong Kong	Mar. 8-22	7 cases.	7 deaths.
Colombia	Panama	Apr. 21	Present.	
France	Rheims	Mar. 31-Apr. 6	5 cases.	3 deaths.
Gibraltar		Apr. 6-13	1 case.	
Great Britain	Dundee	Apr. 5-12	1 case.	
"	Edinburgh	Apr. 5-12	1 case.	
"	Glasgow	Apr. 11-18	11 cases.	2 deaths.
"	London	Apr. 5-12	274 cases.	73 deaths.
Greece	Athens	Apr. 5-12	1 case.	
India	Bombay	Mar. 25-Apr. 1	10 deaths.	
"	Karachi	Mar. 23-30	5 cases.	2 deaths.
Italy	Palermo	Apr. 5-12	40 cases.	5 deaths.
Mexico	Vera Cruz	Apr. 12-19	5 cases.	2 deaths.
Russia	Moscow	Mar. 29-Apr. 5	14 cases.	3 deaths.
"	Odessa	Apr. 5-12	3 cases.	
"	Warsaw	Mar. 29-Apr. 5	2 deaths.	
Spain	Corunna	Apr. 5-12	1 death.	
Uruguay	Montevideo	Mar. 8-15	71 cases.	5 deaths.
"	Montevideo	Mar. 22-29	70 cases.	3 deaths.

Yellow Fever.

Mexico	Vera Cruz	Apr. 12-19	12 cases.	5 deaths.
Venezuela	Puerto Cabello	Feb. 8-15	1 case.	1 death.

Cholera.

China	Canton	Mar. 19-Present	9 deaths among Europeans.	
"	Hong Kong	Mar. 8-22	23 cases.	19 deaths.
India	Bombay	Mar. 25-Apr. 1		3 deaths.

Plague—Foreign.

China	Canton	Apr. 24	Malignant outbreak.	
"	Hong Kong	Mar. 8-22	1 case.	1 death.
India	Bombay	Mar. 25-Apr. 1		909 deaths.
"	Karachi	Mar. 23-Apr. 30	119 cases.	92 deaths.
Zanzibar	Nairobi	Mar. 20	20 cases.	5 deaths.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 3, 1902.

DUBOSE, W. R., Surgeon. Detached from the *Wisconsin* and ordered to the *Solace*.

STOKES, C. F., Surgeon. Detached from the *Solace* and ordered to the *Wisconsin*, and, on arrival of that vessel at Puget Sound, ordered to the *Oregon*.

YOUNG, R. M., Assistant Surgeon. Detached from the Cavite Naval Station, Philippine Islands, and ordered to duty at Guam, L. I.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending May 3, 1902.

AGRAMONTE, ARISTIDES, Contract Surgeon, is granted leave of absence for three months.

BANISTER, WILLIAM B., is detailed as a member of the Army retiring board appointed in Washington, vice EDWARD C. CARTER, Major and Surgeon, relieved.

COX, WALTER, First Lieutenant and Assistant Surgeon, will report in person to the commanding general, Department of California, for assignment to duty with troops to be sent to the Department of Texas, and, upon the completion of this duty, he will proceed to Washington.

DARNALL, CARL R., Captain and Assistant Surgeon, will proceed to Plattsburgh Barracks, N. Y.

IRELAND, MERRITTE W., Captain and Assistant Surgeon, is granted leave of absence for fourteen days.

JOHNSON, RICHARD W., Major and Surgeon, is relieved from further duty at Fort Douglas, Utah, and will report in person to the commanding general, Department of California, for assignment to duty.

KIEFFER, CHARLES F., Captain and Assistant Surgeon, will report in person to the commanding general, Department of California, for assignment to duty with troops to be sent to the Department of Texas, and upon the completion of this duty, he will proceed to Fort Screven, Georgia.

KIERSTED, HENRY S., First Lieutenant and Assistant Surgeon, is granted leave of absence for two months, on account of sickness, with permission to apply for an extension of one month.

McHENRY, GEORGE A., Captain and Assistant Surgeon, is granted leave of absence for two months.

MOSELEY, EDWARD B., Lieutenant Colonel and Deputy Surgeon General, is granted leave of absence for twenty days.

RICHARDS, ROBERT L., Contract Surgeon, will report on the transport *Logan* for temporary duty during the voyage to the Philippine Islands.

SHELLENBERGER, JAMES E., Contract Surgeon, will proceed from St. Petersburg, Florida, to Fort Ringgold, Texas, for duty.

SMITH, ALLEN M., Captain and Assistant Surgeon, is granted leave of absence for fifteen days.

SNYDER, HENRY D., Captain and Assistant Surgeon, is detailed as a member of the examining board convened at Governors Island, New York City, during the temporary absence of WILLIAM H. CORBUSIER, Major and Surgeon.

THOMPSON, LOUIS A., Contract Surgeon, is relieved from further duty in the Division of the Philippines, and, upon the expiration of his present sick leave, will proceed to Columbus Barracks, Ohio.

VANKIRK, HARRY H., Contract Surgeon, will proceed to the rifle range, Winnebago Indian Agency, Nebraska, for temporary duty, relieving PAUL F. STRAUB, Captain and Assistant Surgeon, who will return to his proper station, Fort Crook, Nebraska.

WALES, PHILIP G., Captain and Assistant Surgeon, will, in addition to his other duties, take charge of the office of the chief surgeon of the Department during the temporary absence on leave of EDWARD B. MOSELEY, Lieutenant Colonel and Deputy Surgeon General.

WATKINS, VICTOR E., Contract Surgeon, is relieved from duty at Fort Williams, Maine, and will proceed to Whipple Barracks, Arizona, for duty.

WILLIAMSON, LLEWELLYN P., First Lieutenant and Assistant Surgeon, will report at Jefferson Barracks, Missouri, for duty.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days Ending May 1, 1902.

ANDERSON, J. F., Assistant Surgeon. To proceed to Norfolk, Virginia, for special temporary duty.

AUSTIN, H. W., Surgeon. Granted leave of absence for seven days from April 23, 1902, under paragraph 179 of the Regulations.

BAILHACHE, PRESTON H., Surgeon. Detailed to represent

the service at the American Congress of Tuberculosis at New York, on May 14th, 15th and 16th.

BANKS, C. E., Surgeon. Granted leave of absence for two days from May 2nd.

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for three days from April 30th.

BILLINGS, W. C., Assistant Surgeon. Granted leave of absence for two months from May 1st.

BURFORD, R. E. L., Acting Assistant Surgeon. Granted leave of absence for thirty days from May 15th.

BURKHALTER, J. T., Assistant Surgeon. To proceed to Scranton, Mississippi, for special temporary duty.

CARRINGTON, P. M., Surgeon. Detailed to represent the service at the American Congress of Tuberculosis at New York, on May 14th, 15th and 16th, reporting at Washington *en route* to New York, and on return to Fort Stanton.

CUMMINGS, H. S., Passed Assistant Surgeon. Detailed as inspector of unserviceable property at the office of the plague commission, at San Francisco.

GEDDINGS, H. D., Passed Assistant Surgeon. Detailed as supervisor of repairs and alterations of the steamer *Neptune*, at Baltimore.

GLOVER, M. W., Assistant Surgeon. Upon being relieved from duty at Boston by Assistant Surgeon JOHN McMULLEN, to proceed to New York, and report to Surgeon G. W. STONER, Immigration Depot, for duty, relieving Assistant Surgeon A. J. McLAUGHLIN.

GOLDBERGER, J., Assistant Surgeon. To report at Washington for special temporary duty. The Bureau letter of April 18, 1902, directing Assistant Surgeon GOLDBERGER to proceed to Tampico, Mexico, is amended so that he shall visit Norfolk, Virginia, New York, Havana, Cuba and Vera Cruz, Mexico, *en route*.

GRUBBS, S. B., Assistant Surgeon. The Bureau letter of April 18, 1902, directing Assistant Surgeon GRUBBS to assume command of the Guld Quarantine Station is amended so that he shall visit New Orleans, Pascagoula, Mississippi, and Mobile, *en route*.

HEISER, V. G., Assistant Surgeon. To proceed to Quebec, Canada, for duty in the office of the United States Commissioner of Immigration.

KINSELL, B., Acting Assistant Surgeon. Granted leave of absence for seven days from May 12th.

McLAUGHLIN, A. J., Assistant Surgeon. Upon being relieved from duty at the Immigration Depot by Assistant Surgeon M. W. GLOVER, to proceed to Washington and report to the Director of the Hygienic Laboratory for duty.

McMULLEN, JOHN, Assistant Surgeon. Relieved from duty at Baltimore, and directed to proceed to Boston, and report to the medical officer in command for duty and assignment to quarters, relieving Assistant Surgeon M. W. GLOVER.

PARKER, H. B., Assistant Surgeon. Relieved from duty in the Hygienic Laboratory, and appointed chairman of the board of medical officers for the investigation of yellow fever, malarial fevers and dengue, at Vera Cruz, Mexico.

PERRY, J. C., Passed-Assistant Surgeon. Relieved from duty as chief quarantine officer of the Philippine Islands, and directed to proceed to San Francisco and await orders.

THOMAS, A. R., Passed-Assistant Surgeon. Relieved from duty in the office of the United States Consul General at London, England, and directed to proceed to Manila and assume the duties of chief quarantine officer of the Philippine Islands, relieving Passed-Assistant Surgeon J. C. PERRY.

WETMORE, W. O., Acting Assistant Surgeon. Granted leave of absence for seven days from April 10, 1902, under paragraph 201 of the Regulations.

Promotion.

GIBSON, F. L., Junior Hospital Steward, promoted to the grade of senior hospital steward from June 11, 1902.

Board Convened.

Board convened to meet at Washington, April 28, 1902, for the physical examination of candidate for the position of second assistant engineer, R. C. S. Detail for the board: Surgeon R. M. WOODWARD, chairman; Assistant Surgeon B. S. WARREN, recorder.

Births, Marriages, and Deaths.

Born.

MUNSON.—In Washington, on Sunday, April 27th, to Dr. E. L. Munson, United States Army, and Mrs. Munson, a daughter.

Married.

BRICKER—PERRINE.—In Galesburg, Illinois, on Wednesday, April 23d, Dr. E. A. Bricker, of La Cygne, Kansas, and Miss Ethel Perrine.

GOODMAN—CLAY.—In "Auvergne," near Paris, Kentucky, on Thursday, April 24th, Dr. Cecil Goodman, of London, England, and Miss Susie Clay.

HERMAN—STOCKTON.—In Boston, on Wednesday, April 30th, Dr. F. M. Herman, of New York, and Miss Jessie L. Stockton, of Buenos Ayres, Argentine.

LOWRY—TROUT.—In Wamego, Kansas, on Thursday, May 1st, Dr. Howard S. Lowry, of Kansas City, Missouri, and Miss Bessie Trout.

McHUGH—HARPER.—In Pittsburgh, Pa., on Thursday, April 24th, Dr. Grant McHugh and Miss Anna E. Harper.

McLANDRESS—WRIGHT.—In Bay City, Michigan, on Tuesday, April 22d, Dr. George Stuart McLandress and Miss Sybil Katherine Wright.

MORRIS—JELKS.—In Hot Springs, Arkansas, on Tuesday, April 18th, Mr. William Chew Morris and Miss Julia Roberta Jelks, daughter of Dr. James Thomas Jelks.

SCHMIDT—APPELBAUM.—In St. Louis, on Wednesday, April 23d, Dr. John Schmidt and Miss Marie Appelbaum.

SHELLMAN—GIBSON.—In South Pulteney, N. Y., on Wednesday, April 16th, Dr. Arthur P. Shellman, of Binghamton, N. Y., and Miss Jennie Gibson.

WOODS—SINCLAIR.—In Philadelphia, on Tuesday, April 29th, Dr. Andrew W. Woods, of Canton, Ohio, and Miss Fanny S. Sinclair.

Died.

ADAMS.—In Southboro, Massachusetts, on Thursday, May 1st, Dr. Z. B. Adams, of South Framingham, Massachusetts, in the seventy-second year of his age.

DOUGAL.—In Milton, Pennsylvania, on Saturday, April 26th, Dr. Charles H. Dougal, in the sixty-seventh year of his age.

FINNEY.—In New Orleans, on Friday, May 2nd, Dr. James F. Finney, in the fifty-fourth year of his age.

HEATON.—In Alliance, Ohio, on Thursday, April 24th, Dr. Susan B. Heaton.

HOMAN.—In Boston, on Sunday, May 4th, Dr. John Homan, second, in the forty-fifth year of his age.

HOTTENSTEIN.—In Philadelphia, on Thursday, May 1st, Dr. Cyrus D. Hottenstein.

MASTEN.—In Nyack, N. Y., on Thursday, May 1st, Dr. Charles H. Masten, in the sixty-third year of his age.

PHELPS.—In Boston, on Sunday, April 27th, Dr. Charles Abner Phelps, in the eighty-first year of his age.

TARKINGTON.—In Greensburg, Indiana, on Thursday, May 1st, Dr. Joseph Asbury Tarkington.

THOMBS.—In Pueblo, Colorado, on Sunday, April 27th, Dr. Peter R. Thombs, in the sixty-second year of his age.

WILLIS.—In White Plains, N. Y., on Sunday, April 27th, Dr. Oliver R. Willis, in the eighty-seventh year of his age.

Pith of Current Literature.

The Journal of the American Medical Association,
May 3, 1902.

The Function of the Soluble Ferments of the Blood in Intracellular Digestion. By Dr. Alfred C. Croftan.—The author believes that these ferments are nucleo-proteids. They are, in general, so akin to protoplasm, both in their chemical reactions and in their behavior to various physical and chemical agencies, that they must be considered closely related to living protoplasm. As a matter of fact, all protoplasm has some ferment power.

Epilepsy, Its Ætiology, Pathology, and Treatment Briefly Considered. By Dr. William P. Spratling.—The author has found, on studying the temperature laws of epilepsy in one thousand observations, that a rise of temperature follows about fifty-five per cent. of all attacks, the temperature going highest, as a rule, after grand-mal seizures, in which muscular contractions are greatest; but also sometimes reaching 102° F. or over, in petit-mal and psychic attacks, probably indicating in the latter case the disturbance of the thermal centres in the brain. Treatment demands that the epileptic and his disease be considered as a unit and treated as such. As antispasmodics, camphor, opium and its derivatives, valerian, and belladonna are valuable. The opium-bromide treatment of Fleschig is valuable in some cases. In a case of status epilepticus, the best formula for stopping the attacks is the following:

R
Potassium bromide 2 ounces
Chloral hydrate 5 drachms
Morphine sulphate 2 grains
Deodorated tincture of opium 60 minims

M. Add enough water to make sixteen ounces and give the patient one ounce after he has had six attacks in rapid succession. Repeat in two hours if not effective. The dietetic treatment is important, and the epileptic should live on the lightest and most nutritious foods obtainable. Of the benefits of surgical intervention the author does not take a very hopeful view. The moral treatment is urged, as is also the creation for the patient of special institutions in the way of colonies, properly designed and constructed.

Blackwater (Hæmoglobinuric) Fever, with a Report of Two Fatal Cases Occurring in the U. S. Army Military Hospitals at Manila, P. I. By Dr. Joseph J. Curry.

Comparative Value of Cycloplegics. By Dr. C. H. Baker.

The Surgical Treatment of Ascites due to Cirrhosis of the Liver. By Dr. M. L. Harris.—The author concludes that while the increased tension in the portal system is an important factor, it is not the only one concerned in the production of ascites. Talma's operation in itself is quite simple and practically devoid of danger, as the deaths have been due to complications or to the advanced stage of the disease. As the chronic inflammatory changes in the peritonæum are ma-

terially instrumental in maintaining the ascites, the operation should be performed early, in the pre-ascitic stage if possible, in order that the reduction of tension in the portal system may delay the appearance of these changes and secondarily the ascites, as long as possible. In a few cases the ascites have apparently been favorably influenced by the operation, but such has not been the rule, nor does it appear that the operation has in any way modified the course of the disease.

Röntgen Rays in Pulmonary Disease. By Dr. Albert Abrams.

An Analysis of Fifty-two Cases of Tetanus Following Vaccinia. By Dr. Robert N. Willson.

Glimpses of the Practice of Medicine and Surgery in British and Spanish Honduras. By Dr. N. Senn.

Medical Record, May 3, 1902.

Inoperable Round-Celled Sarcoma of the Upper Jaw, with Metastases, Successfully Treated with the Mixed Toxines of Erysipelas and Bacillus Prodigiosus. By Dr. O. K. Winberg.

The Indications for the Surgical Treatment of Cholelithiasis. By Dr. A. A. Berg.—The author summarizes as follows:

Indications for medical treatment. Cholecystitic pain or attacks of biliary colic, in either case unattended by fever. *Indications for surgical treatment.* 1. Operations of choice, undertaken in the quiescent period, with the object of avoiding serious complications. A simple procedure, and followed by from two to three per cent. mortality. In (a) severe cholecystitic pain, or oft-repeated uncomplicated attacks of biliary colic; persisting in spite of medical treatment; (b) after the first attack of acute cholecystitis associated with fever. 2. Compulsory operations, undertaken at any time of the day or night; often amid unfavorable surroundings and in patients who are septic, emaciated, and of low vitality. Mortality—fifty to seventy-five per cent. In (a) foudroyant and intensely acute attacks of cholecystitis; (b) hydrops, empyema, gangrene, or perforation of the gall-bladder, cholæmia, abscess of the liver, and diffuse peritonitis.

Functional and Paralytic Strabismus. By Dr. D. B. St. John Roosa.

Hydrophobia and the Pasteur Method—A Rejoinder. By Dr. Charles Winslow Dulles.

Cancer of the Prostate, Complicated by General Fibroid Change of the Urethra. Urethrotomy. Prostatotomy, by the Bottini Method. Subsequent Partial Enucleation. By Dr. Granville MacGowan.

Gonorrhœal Rheumatism. By Dr. J. Douglas Westervelt.—The local treatment of the articular inflammation does not differ materially from that of any inflammation of the joints. For the urethritis we may resort to instillations of potassium permanganate, with the internal administration of cod-liver oil, with five grains of potassium iodide to each tablespoonful, given four times a day, after meals and at bedtime. The potassium iodide, by its eliminative properties, removes the

cause of the pains, the cod-liver oil cordial improves nutrition, tones up the nervous system, and, by regulating the kidneys, allays the acidity of the urine.

The Boston Medical and Surgical Journal, May 1, 1902.

Problems Relating to Surgery of the Stomach.

By Dr. William A. Mayo.—As to the method of performing gastro-enterostomy there are still a few questions to be settled. As to which is preferable, the suture or the Murphy button, the results are about the same. Again, as to whether the anterior or posterior wall of the stomach should be selected, there seems to be little choice. Theoretically, the posterior operation would seem the better, as one can secure the jejunum at a higher point. The main thing in gastro-enterostomy is that the opening should be low down, near the greater curvature.

Thrombosis of the Cavernous Sinus; with Report of Four Cases, Including One Cranial Operation. By Dr. Edwin Welles Dwight, and Dr. Harry H. Germain.—Thrombosis of the cavernous sinus is an extremely fatal condition. There is no way of deciding what the mortality really is in cases not operated on. Death following this condition is due to septicæmia or pyæmia, and, in well established cases, operation in one form or another offers the only hope of recovery. Excision of the eyeball is insufficient; operation on the lateral sinus is usually without effect. The rational treatment would consist in opening the cavernous sinus directly. This operation, however, has been done but twice—once in the case recorded by the authors and once in that of Hartley and Knapp. Hartley's operation demonstrates that it may be done without grave danger to the patient, providing that the patient is in fairly good condition. In the case recorded by the authors an incision into one sinus completely relieved the interference with circulation in both. It also demonstrates the fact that an operation is not associated with extreme difficulty, that it can be done under almost primary anæsthesia, is not associated with any degree of shock, can be finished in a few minutes (in this case eight), and that the hæmorrhage is easily controlled. The authors conclude, therefore, that thrombosis of the cavernous sinus is a condition distinctly susceptible of operation.

The City Consumptive Hospitals and the Duty of the Municipality and People Regarding Consumption. By Dr. Edward O. Otis.—The author points out that consumption, while contagious and communicable, is for that reason avoidable. It is very curable, especially at its inception. Contagion is restricted by isolation. Sanatoria and consumptive hospitals afford the best means of isolation, and by means of such institutions we steadily and surely reduce the existing number of cases. The resisting power of the individual is established and maintained by favorable environment. Economically, it is probably less expensive to care for the poor consumptive in a sanatorium or consumption hospital than in any other

way. Morally we owe the destitute consumptive a reasonable opportunity for recovery or a decent place in which to die.

A Case of Unilateral Progressive Facial Atrophy. By Dr. J. W. Courtney.

Progress in Public Hygiene. By Dr. Samuel W. Abbott.

Medical Notes, May 3, 1902.

Another Chapter on Phthisiophobia, and Resolutions Adopted by the New York Academy of Medicine. By Dr. S. A. Knapp.—In this article the author deals with some of the numerous letters of which he has been the recipient since his recent paper on "Official and Private Phthisiophobia."

Intravenous Infusion of Saline Solution. By Dr. George Crile.—In experiments in which the blood pressure had been lowered by a reasonable hæmorrhage alone, saline infusion promptly restored the lost pressure. If the pressure had been lowered by the exhaustion of the vasomotor system of afferent impulses set up by an injury of the cerebrospinal or the sympathetic nervous system, the infusion would restore the pressure in proportion to the vasomotor exhaustion. If this mechanism has gone into resolution, infusion is without curative effect. The peripheral resistance determines the height of the blood pressure, no matter how swift the stream or how great the volume of blood. If the peripheral resistance is lost, no amount of infusion can do more than temporarily and partially restore the blood pressure, and death is inevitable. If the shock is much increased by regional accumulation of blood, as in operations on the splanchnic area, infusion may be effective because the peripheral resistance is still present. If hæmorrhage complicates shock and the vasomotor mechanism is still intact, infusion is effectual. The author's deductions explain why certain cases of shock are frequently but little, if at all, benefited by saline infusion. It is true that in almost every case an artificial pulse may be produced, but it is without resistance. It will disappear quickly and no amount of infusion will sustain the circulation in such a case, because the vasomotor mechanism has gone into resolution, destroying peripheral resistance, hence no blood pressure can be created.

The Right and Wrong Use of Digitalis, Based on Cardiac Pathology. By Dr. William Henry Porter.—The author points out that if we are to understand thoroughly the action of a drug we must first clearly comprehend the pathological process that we are attempting to assist Nature to modify. He believes that we have too often regarded the heart purely as a mechanical pump, and have thus lost sight of the most important factor, the law governing its nutrition—that nutritive interchange between the constituents of the blood and the protoplasm outside the blood-vessels occurs only during the passage of the blood through the arterial capillaries.

Operative Treatment in Certain Suppurative Conditions of the Kidneys. By Dr. Alexander B. Johnson.—The author draws the following con-

clusions: 1. Acute pyelonephritis with miliary abscesses is more often a unilateral disease than has been supposed. 2. The changes are often not extensive in the diseased organ, so that a great part of the kidney can be saved and its natural function restored. The local conditions in the several forms of kidney suppuration are far less complicated than is the case in pyonephrosis and the indications may more often be fulfilled by a conservative operation.

On the Technique of Cystoscopy in the Female. By Dr. Frederic Bierhoff.

American Medicine, May 3, 1902.

Dietetic Aphorisms for Infant Life. By Dr. J. P. Crozer Griffith.—The author's homely aphorisms are seven: I. Nature's way and Nature's food are the best. II. Do the best you can with what you have. III. Keep up to the times. IV. Know what you want. V. Don't be lazy. VI. Go slow. VII. Starve.

On the Effect of the Digestion of Gelatin on its Styptic Properties. By Dr. Horatio C. Wood, Jr.—The author's conclusions are: (1) Pepsin-digestion of gelatin does not destroy its coagulating effect on the blood. (2) The resulting product is dialyzable, and therefore capable of absorption. (3) The administration of gelatin by the mouth in the treatment of hæmorrhage is, therefore, a rational procedure. (4) Gelatose seems to antagonize, if given in sufficient quantity, the anticoagulating action of peptone.

A Simple Method for Determining Percentages of Milk in Home-Modification. By Dr. Rowland Godfrey Freeman.—This method of obtaining percentages in modifying milk is simple and is applied as follows: (1) After deciding on the number of feedings for the twenty-four hours, the amount to be given at each feeding, and the formula of the food required, first determine the desired relation between the amount of fats and proteids, and obtain a cream or milk in which these constituents exist in that proportion. (2) Dilute this cream or milk with the required amount of water. (3) Determine the percentage of sugar required for twenty-four hours' feeding and order the same in packages containing the required amount. (4) If lime water is added, the amount so added must be deducted from the amount of water used.

Cysts of the Ureter. By Dr. Henry Harris.

Indications for the Mastoid Operation. By Dr. Lee Wallace Dean.—In making a diagnosis between systemic disease and mastoid inflammation, some of the things to which attention should be given are: 1. An examination of the fundus, to see if there is a choked disc, the result of an increased intracranial pressure. 2. Examination of the tympanic membrane, perforation of which, with constant discharge, indicates the most frequent cause of mastoid inflammation. 3. Partial or complete destruction of the drum, with pus in the middle ear. 4. Necrosis in the attic or posterior wall of the middle ear. 5. Cholesteatomatous masses in the middle ear. 6. Sudden elevations of the temperature to 103°—105° F. The danger lies,

not in the operation, but in not operating. The mastoid operation, if performed aseptically, entails very little danger. If mastoid inflammation develops, it is best in the beginning to give laxatives and apply, by means of Leiter's tubes, cold over the region of the mastoid. If the disease remains stationary or becomes worse, or if at any time there are symptoms of meningæal disturbances, the patient should be operated upon immediately; care should be taken to see that a thorough connection is established between the antrum and the middle ear, and, in addition, all of the cells of the mastoid must be opened.

A Leiomyoma of the Skin Arising from the Erector Muscles of the Hair-Bulbs. By Ernest Hoag, A. B.

Report of a Case Belonging to the Erythema Group or Henoch's Purpura, with Chronic Parenchymatous Nephritis—Autopsy. By Dr. Edward Judson Wynkoop.

A Brief Statement of the Principles Underlying the Physician's Obligation to Secrecy. By Dr. William C. Woodward.

Philadelphia Medical Journal, May 3, 1902.

The Surgery of the Heart. With Presentation of a Case. By Dr. H. L. Nietert.—From the author's observation in the suturing of heart wounds, he concludes that gentle manipulation may be applied without producing shock. The introduction of the suture produces but a slight irregularity in the heart's action. Heart wounds heal rapidly. Intracardial pressure is increased, even if hæmorrhage occurs during diastole alone. All heart wounds, in which there is danger of fatal hæmorrhage, should be sutured. If the wound does not involve the pleura, the extrapleural route should be employed. If the pleura has been injured, the intrapleural method should always be employed, and the flap devised by Rotter is the best. Although it is advisable for the surgeon to familiarize himself with the methods of operation and the flaps devised by the different operators, a thorough knowledge of the anatomy of the region is most essential, and each operator should modify the flaps as best suits the individual case.

The Relation of Uric Acid and Xanthin Bases to Gout and the So-called Uric Acid Diathesis. By Dr. David L. Edsall.

State Electricity in the Treatment of Insanity. By Dr. Robert Howland Chase.

A Case of Foreign Body in the Lung. Diagnosis Confirmed by Radioscopy. By Dr. Francis Huber.

Traumatic Meningitis with Effusion. Cerebral Convulsions. Double Trephining. Recovery. By Dr. Thomas W. Jackson.

Lancet, April 26, 1902.

The Ætiology of Typhoid Fever and Its Prevention. By Dr. W. H. Corfield.—In the third of the Milroy lectures upon the above-mentioned subject, the author discusses other foods which have been proved to become occasionally the vehicles

for the poison of typhoid fever. Infected oysters, cockles, mussels, ice creams, and ginger beer have all been proved to be the cause of outbreaks of typhoid fever. Many outbreaks of typhoid fever have been traced to direct infection from sewer air passing into houses. In conclusion, the author reviews the important question of the connection between the ground and ground-water or subsoil water, with the spread of typhoid fever, as advocated by Pettenkofer. In common with most authorities, the author does not believe that any such connection exists.

Some Abnormal Psychical Conditions in Children. By Dr. G. F. Still. (The third of the Goulstonian lectures upon the above-mentioned subject.)

On Some Points in the Treatment of Puerperal Eclampsia. By G. E. Herman, M. B.—The author takes exception to the universally accepted belief that in eclampsia it is important quickly to empty the uterus. Dührssen of Berlin has even devised an operation, called vaginal Cæsarean section, by which the uterus can be easily and safely emptied in five minutes, and which is recommended as a specific for eclampsia. The author has reviewed the published statistics of a large number of cases of eclampsia, and finds that, in a large proportion of cases, the fits continued after delivery, operative or otherwise. When the uterus is emptied the fits do not at once cease; emptying the uterus is not a certain means of checking the fits. If rapid delivery were the one thing needful in eclampsia, Cæsarean section would undoubtedly be the proper treatment. No other method of delivery is so prompt.

The author reports a case of eclampsia occurring in a woman aged twenty years, in which the prognosis appeared very bad, and yet recovery took place following the use of the tepid bath. A steadily rising temperature is not uncommon in the last stages of eclampsia, and in this case the bath was used for the double purpose of reducing the bodily temperature and of promoting diaphoresis.

Small-Pox Hospitals and the Spread of Infection. By Dr. J. C. Thresh.—In a preceding article the author called attention to the large number of cases of small-pox occurring in a certain district (Orsett Union) of the county of Essex, and stated it to be his belief that most of the primary cases had been infected from the small-pox ships of the Metropolitan Asylums' Board, which are anchored in the Thames opposite Purfleet. The author has continued his investigations on this subject, and has arrived at the following conclusions: 1. That amongst the cases which occurred in Purfleet, in both the present and the preceding epidemic of small-pox, there was a large proportion which could not be traced to pre-existing cases. 2. That all the usual factors tending to produce epidemic prevalence of small-pox were present in the Orsett Union, with the addition (save in the case of Purfleet) of an unusually large proportion of unvaccinated children under ten years of age. 3. That none of these usual factors is capable of explaining the usual peculiar distribution of the disease during the epidemics in-

vestigated. 4. That all the results point to some central continuous focus of infection corresponding exactly in position with the small-pox ships. 5. That most careful inquiry fails to show any means whereby this continuous flow of infection can occur, except on the hypothesis that it is airborne.

The extent of the area around a small-pox hospital which may be affected directly and indirectly by the hospital is much larger than has hitherto been supposed. In the case of the ships lying off Purfleet the influence is probably being felt at a distance of fully three miles, and the presence of a belt of water half a mile in width is powerless to arrest the contagion. There can be no doubt that the danger increases with the increase of the number of acute cases in the hospital, the infectivity not being marked until a certain degree of concentration is reached, and with the proximity to the hospital. With a small hospital for from ten to thirty cases there is but little danger of the disease being spread therefrom. The author is strongly in favor of the compulsory vaccination of all infants and the re-vaccination of all children between the ages of ten and twelve years.

A Case of Subcutaneous Myiasis. By E. B. Hector, M. B.—The author reports the case of a boy, aged six years and a half, who was suffering, when first seen, from a hard tender swelling on the back of the neck. Later he had what was apparently a boil on the left parietal eminence, from which had come a maggot. Several more such swellings formed on the left side of the head, from each of which a larva escaped. The larvæ were all of the same size, 1.2 centimetres in length and about the thickness of whipcord, white in color with a black dot at one end, containing twelve segments, and none of them showed any movement after expression from the skin.

The Spontaneous Cure of Senile Cataract. By S. Stephenson, M. B.—The author reports the case of a woman aged fifty-five years, suffering from double senile cataract, in which recovery occurred, brought about by the spontaneous successive dislocation of each cataractous crystalline lens with the return of excellent sight.

A Case of Placenta Prævia. By A. W. Lemarchand, M. R. C. S.—The author reports a case of central placenta prævia occurring in a woman aged thirty years. Labor was not interfered with, and the placenta was forced out by the head of the child, which was born dead. The uterus contracted well. The case was interesting for the following points: (1), that the patient was a young woman who had not had many previous pregnancies; (2), the character of the symptoms from the sixth month was typical and warned one to expect placenta prævia; (3), the good fortune to get a strongly acting uterus and practically no unusual loss of blood when labor did set in; and (4), that non-interference was justified.

Riforma medica. March 4, 1902.

Alcohol Acidified with Acetic Acid in the Treatment of Wounds Healing by Primary Union. By Dr. Luigi de Gaetano.—The absolute

asepsis of which modern surgeons dream, has not as yet been attained. It is a common clinical observation that, even in wounds healing by primary union, there is often a halo of redness around each stitch at the beginning of healing. In order to convince himself of the asepsis of wounds healing by primary union, the author examined bacteriologically the portions of suture which projected above the skin in a wound of this kind; the portion of suture which was included in the tissues, and, finally, the aseptic material which had been used to dress the wound (gauze). Examinations were made in a series of cases for two years in D'Antona's clinic. He found that in both the external as well as in the internal portions of the sutures, and in the gauze dressing, germs could be found and cultivated. The germs most frequently present in such wounds were the *Staphylococcus pyogenes albus* and *aureus*. The number of germs increased as time advanced after the operation. In order to obviate the danger of secondary infection in wounds that have healed *per primam*, through the germs which enter with the sutures, the author recommends the early removal of the stitches, if possible. He found that sutures could be removed in a primary union case on the fifth day after the operation. In some cases, *e. g.*, in laparotomy wounds, in which the intra-abdominal pressure would tend to separate the edges of the wound, the latter should be dressed with gauze and held together with plaster strips applied crosswise. In other cases, careful dressing and bandaging would be found sufficient.

A solution of acetic acid in the proportion of twenty drops in one hundred grammes of seventy-per-cent. alcohol was then prepared, and the suture material was immersed in this solution before the operation, and dried with aseptic gauze immediately before using. The needles must be introduced from within outward, in order to avoid bringing germs from the surface into the wound. The acetic-acid solution should also be used to wash the surface of the wound after the operation, and the gauze applied to the wound should be soaked in the same solution at the time of the first dressing. The wet dressing is then renewed on the third day. On the fifth day the wound is washed with the acetic-acid solution, all the sutures are removed, and the sterile gauze soaked in the solution is again applied. The author asserts that he has secured more complete asepsis by this method than without the use of the acetic-acid alcohol.

March 5, 6, and 7, 1902.

Delirium in Croupous Pneumonia. By Dr. A. Brancati.—The author has found that delirium occurs in 18.6 per cent. of cases of croupous pneumonia. It may assume the type of depressing or adynamic delirium, or the type of ataxic or active delirium. In the former cases the patient talks incoherently and is drowsy, in a state resembling *coma vigil*. In the active or ataxic form, the patient is constantly moving about restlessly, has hallucinations, and mutters incessantly. He does not recognize people, imagines that his bed rocks, and that it falls and is shattered to pieces, etc. Sometimes, but rarely, he has photophobia and acoustic hyperæsthesia. In the purely ataxic form, the agitation is sometimes very marked and alarming, with violent

movements, loud outcries, and sometimes involuntary defecation and urination. The delirium is always more intense in the hours of the evening. Fifteen cases are reported in which delirium played a prominent part.

March 11, 1902.

A Case of Acute Atrophy of the Liver. By Dr. Tito Carbone.—This case was noteworthy because the patient was young, a boy of twelve, rather an unusual age for acute atrophy; because of the presence of cirrhosis before the atrophic phenomena set in; and because alterations in the mesenteric ganglia were found, favoring the theory of an intestinal toxic origin of the disease.

March 13, 1902.

A Case of Extirpation of the Parotid for Cancer; Recurrence with Diffusion Into the Glands and the Skin. By Dr. Santi Pusateri.—A patient aged sixty years had noticed a growth in the parotid region three years previously, and was operated on in 1895, the tumor being removed. Eight months later there was a recurrence of the growth and the parotid was completely extirpated. The patient recovered and the wound healed well. The growth was found to be a carcinoma. In commenting upon the possibility of removing the entire parotid, the author refers to the dictum of Bottini: "Parotid tumors can be completely removed, no matter what their nature may be."

March 14 and 15, 1902.

Fœtal Small-pox not Secondary to Small-pox in the Mother. By Dr. Giuseppe Jacotini.—This is a most interesting case in which the mother, who was said to have been perfectly healthy, noticed that the fœtus, which was still-born at term, showed about twenty pustules of the size of a lentil. The child's development corresponded to that of one born at term. A number of cases of small-pox had been observed in the same house, and some of the children of the patient had been seized with the disease, but she herself had remained unaffected. The author concludes from a study of this case, that a pregnant woman may be in a certain degree immune from infection while the fœtus does not participate in this immunity. In infectious diseases occurring in the mother in the course of pregnancy, the essential factors as regards fœtal infection are the virulent substances passing from mother to fœtus, but the fever and the presence of placental lesions do not play a constant rôle. In this case the fœtus died of small-pox, while the mother was completely spared.

March 17, 18, 19 and 20, 1902.

Researches on the Active Substance of Typhoid Cultures. By Dr. Paladino Blandini.—The author advances experimental proofs to support the statement that a nucleo-albumin isolated by him from typhoid cultures constitutes the true toxine of typhoid fever. He has been able to immunize animals by means of this nucleo-albumin and to produce an immunizing serum which proved antitoxic in rabbits.

March 21 and 22, 1902.

Considerations on a Case of Congenital Dextro-Cardia of a Rare Type. By Dr. Alberto Lucchi.—A man aged sixty years entered with complaint of periodic and severe dyspnoea of varying duration. His apex-beat appeared in the sixth right intercostal space. Auscultation at the apex revealed a rough murmur with the first sound. The patient died after a protracted illness, during which the cardiac symptoms became worse in spite of temporary improvement under milk diet and digitalis. The autopsy showed dextrocardia; the aorta was dilated at its arch, the semilunar valves were calcified, the mitral orifice was large; the right heart was dilated and hypertrophied. In commenting upon the various theories offered in explanation of dextrocardia, the author says that, while we can suppose that dextrocardia is due to an inversion of the cardiac curve at the beginning of development, we cannot say with certainty how this takes place without further teratological studies.

March 24, 25 and 26, 1902.

Three Cases of Wounds of the Liver. Operation, Recovery. The Status of the Question of Hepatic Hæmostasis. By Dr. V. Martinelli.—The author's own cases, studied in the light of an extensive collection of material from literature, have led the author to the following conclusions: Punctured and incised wounds of the liver are in general more common than gunshot wounds of this part. While in the first the chief danger lies in the hæmorrhage, in the second group there is always danger of complications from the involvement of other organs, and of infection by the introduction of foreign bodies. The best method of hæmostasis in wounds of the punctured or incised varieties is by means of sutures. In gunshot wounds of the liver, packing offers the most successful means of arresting the bleeding. In wounds with profuse hæmorrhage, the author uses what he calls the costo-albo-abdominal method, which he considers both rapid and efficient. This consists in performing a median laparotomy, and adding a second incision beginning from the ensiform cartilage curving along the border of the ribs, at a distance of two centimetres. In this way a triangular flap with the ensiform as its apex and the two incisions, the median and the subcostal, is obtained, and its reflection gives a very wide field for inspection and operation on the liver. The mortality of hepatic wounds has been reduced by half within recent years, except in the case of gunshot wounds, where it has remained practically stationary.

Roussky Vratsh, March 23, 1902.

A Case of Double Congenital Incomplete External Fistula in the Neck, in Connection with the Question of Branchial Fistulæ. By Dr. N. A. Batouyeff.—An article sufficiently described in the title.

On the Surgical Treatment of Uterine Fibromyomas. By Dr. S. D. Michnoff.—In many cases the choice of the operation is a difficult one, as different opinions are held by authorities as to

the efficiency of the various methods employed in the surgical treatment of uterine fibroids. The author reports the results of operations for fibroids in 14 cases. The mortality was nil, and the recoveries were uneventful, save in six cases, in which there was fever after the operation. The clinical material studied shows, according to the author, that no one operation should be performed as a matter of routine in fibroids, but that the most diverse methods should be employed as occasion requires. The most common operation should be abdominal hysterectomy. The advantages of the abdominal route are set forth at length by the author. It is to be preferred on account of the wide field that it gives the operator, so that he can work with more care and can preserve intact the surrounding structures. The abdominal operation is the more conservative of the two, and does not, as a rule, last so long as vaginal hysterectomy. It is less likely to be followed by the disturbances that follow an artificial climacteric. In addition, the abdominal route keeps the vault of the vagina intact, is not so likely to be followed by vaginal prolapse, and preserves the shape and elasticity of the vagina.

On Penetrating Incised and Punctured Wounds of the Abdominal Cavity. By Dr. B. K. Finkelstein.—(Concluded.)

The Latest Methods of Physiological Chemistry and their Significance in Balneology.—By Dr. A. K. Prussian.—The author refers to the work of Arrhenius and van t'Hoff, in the chemical and physical relations of solutions to osmosis and freezing point, as well as to electroconductivity. Mineral waters, therefore, being nothing but solutions of inorganic salts in water, must be studied in the light of the ionization theory. Heretofore, the constituents of mineral waters have been studied exclusively as salts, while now we know that they exist in solution as ions; i. e., as positive or negative electrolytic constituents of the salt molecules. In the present method of analysis the salts of a mineral water are not determined quantitatively as such, but are calculated theoretically on the basis of their constituent bases and radicals, in other words, on the basis of the ions. The analysis is therefore only correct under such circumstances in so far as it indicates the number of the various ions. But every mineral solution contains three kinds of particles: (1), the electropositive ions; (2) the electronegative ions; and (3) the undecomposed molecules. The degree of decomposition of the molecules into their constituent ions depends upon the nature of the salt, and the concentration of the solution. In mineral waters it is generally marked, as the water is greatly diluted. Cryoscopy and the electro-conduction test must therefore be applied to every mineral water in order to determine the degree of ionization that has taken place in the substance to be analyzed. An interesting result of the new theories is the recognition which broths and beef solutions are gaining as nutrient substances. It is now recognized that the value of these solutions lies in the high absorbability of these soups, for their osmotic pressure is from $7\frac{1}{2}$ to 9 atmospheres, and that of the blood is only 6 atmos-

pheres. The empirical observation that "It is the soup that makes the soldier" has thus been confirmed theoretically.

Roussky Archiv Patologiyi, Klinicheskoy Meditsiny i Bakteriologii, March 31, 1902.
March 31, 1902.

The Effect of Quinine in the Treatment of Typhoid Fever and Remarks Upon the Value of Quinine in Some Other Diseases. By Dr. W. Kernig.—Erb, in *Therapie der Gegenwart*, No. 1, 1901, gave his observations as to the effect of quinine in typhoid fever. The author contributes his experience with this drug in the same disease. The low mortality, 7.6 per cent., obtained during the past ten years at the Obouchoff Hospital for Women in St. Petersburg, and the relief following the administration of one gramme (15 grains) of quinine, justify the conclusion that quinine in doses of one gramme every other day, and combined with the baths, exercises a favorable influence upon the course of the disease. The beneficial effect of this treatment is also noticeable on the pulse. The use of quinine, however, cannot be said to shorten the duration of the disease, and two circumstances even point to the opposite conclusion. First, convalescence begins with the beginning of the second, third, or even fifth week, as in the ordinary cases of typhoid not treated by quinine, so that the disease cannot be said to have been shortened by the use of this drug; and secondly, the number of cases of short duration was not greater among the groups treated by quinine than among any other groups of the same number.

An analysis of the effects of quinine in typhoid fever, including particularly its effects on the febrile remissions, is also given by the author in detail. The action of quinine in typhoid fever, in recurrent fever, and in lobar pneumonia is also considered, and the author believes that the administration of one gramme of quinine at night is of benefit in pneumonia.

On the Pathology of Gastric Hæmorrhages. By Dr. N. N. Michailoff.—(*Concluded.*) The author reports two cases of gastric hæmorrhages. In the first the clinical picture of ulcer of the stomach was obscured by symptoms of marked hysteria, so that the functional nature of the disease was suspected. At the operation the patient was found to have an extensive pericholecystitis, the adhesions of which produced a stenosis of the uodenum. The latter in turn produced a dilatation of the stomach and a reflex spasm of the pylorus. As a result, a hypersecretion of hydrochloric acid followed. The conclusion is that not all the cases of gastric disease accompanied by hysterical symptoms are to be considered as of hysterical or functional origin. In the third case there was hæmorrhage from the stomach accompanying an organic lesion of the central nervous system. In this case the hæmorrhages were so severe that an exploratory laparotomy was resorted to. No ulcers were found in the stomach on careful examination, and the wound was closed. The patient was subsequently found to have disseminated sclerosis of the brain and

spinal cord, due to disease of the arteries. Probably the bleeding was due to apoplexies in the gastric mucosa. In such cases the only possible application for surgical treatment would be a gastrotomy at the time of the hæmorrhage, so as to find the burst blood vessel and to arrest the bleeding.

The Symptoms and Pathology of Pseudomeningitis. By Dr. R. Peters.—The author analyzes 17 cases of false meningitis in children. Of these, 7 were cases of typhoid fever accompanied by symptoms of meningitis, 3 of influenza, 2 of cholera morbus, 1 of lobar pneumonia, 1 of scarlatina, and 2 of mixed infection (influenzal and streptococcic infection, typhoid fever, and erysipelas). In one case the disease was followed by idiocy, in one it terminated fatally, and the remaining fifteen patients recovered. From a study of the clinical and pathological features of pseudomeningitis, the author concludes that this condition is not a purely functional one, as has been asserted heretofore, by the majority of authors, but that it is an organic process, expressed principally by lesions in the walls of the vessels of the meninges, together with extensive exudations into the circumvascular and circumcellular spaces on the surface of the brain. The author classes the lesion in question as a serious encephalitis.

Case of Psuedo-chylous Exudation in the Pleura. By Dr. M. Peusner.—In this case the chylous nature of the transudate was determined by the presence of lecithin in the fluid. This transudate was found in a patient suffering from nephritis, and the author thinks that the present case shows that chylous exudates may be formed, not only in inflammatory and malignant exudates, but also in other pathological fluids. Further investigations are needed to establish the manner of formation of pseudo-chylous exudates with lecithin.

The liquid in this case had the appearance of milk diluted thirty times its bulk with water. It had a specific gravity of 1006, and, on standing, precipitated a sediment containing some leucocytes, red blood cells, and endothelial cells. No fat was found on extraction with ether. The opalescence was due to the presence of lecithin, which was possibly derived from the leucocytes.

Miscellaneous.

The Ice Coil in Acute Inflammation of the Mastoid.—Dr. E. Bradford Dench (*New York Eye and Ear Infirmary Reports*, January) in his own practice seldom employs the Leiter coil for a longer period than thirty-six hours.

Two cases, reported recently by the author, in which an abscess of the temporo-sphenoidal lobe and an extensive epidural abscess had undoubtedly been caused by the Leiter coil, together with his operative experience of the last year, seem to indicate very clearly that any attempt to abort an inflammation within the mastoid by means of the local application of cold is an extremely dangerous procedure. He naturally excepts those cases where the surgeon has the case under observation from the very inception of the middle-ear inflammation.

In such cases, and where there is at this early stage slight mastoid tenderness, it may be proper, after securing free drainage through the canal by an incision through the membrana tympani, to attempt to abort any possible mastoid involvement by the application of the Leiter coil. But where such cases are seen after the middle-ear inflammation has existed for a week, and where there is evident tenderness over the mastoid process, he is convinced that the local application of cold is inadvisable, and that it serves only to mask the symptoms of invasion of the osseous structures. His advice, in these cases, would be first to institute free drainage through the external auditory meatus, and to keep the parts as aseptic as possible by means of frequent irrigation of the canal with a mild antiseptic solution. If, at the end of forty-eight hours, all the symptoms of mastoid involvement have not disappeared, he recommends opening the mastoid process, and drainage of the middle ear by this posterior incision.

Fracture of Patella; Bony Union without Operation. A case under the care of Mr. Keetley, at the West London Hospital, is reported in the *West London Medical Journal* for April. The patient, aged eighteen years, was admitted on January 29th, suffering from a transverse fracture of the right patella, fracture of the right femur (supra-condyloid), and compound fracture of left femur in the lower third. There was half an inch of separation between the two halves of the patella on admission, but as attention was chiefly confined to the compound fracture of the left femur, the right leg was simply bandaged to a long posterior splint with a foot-piece, no extension being applied. On February 18th no displacement could be made out between the fragments of the patella and both halves moved evenly together. On March 1st the patella was found to have complete bony union.

Electrical Anæsthesia in Dentistry.—According to the *Dublin Journal of Medical Science* for April, Dr. L. R. Regnier, chief of the electrotherapeutic laboratory of the Charité Hospital, and Dr. Henry Didsbury, dentist of the Paris hospitals, have communicated to the Académie de Médecine de Paris, the results of their observations undertaken in the Hôpital Pereire de Levallois, on the possibility of inducing anæsthesia in teeth by electricity. To that effect they employed high frequency currents, developed by the d'Arsonval-Gaiffe apparatus. Teeth with only one fang and no inflammation of the periosteum can be extracted in this way without the least pain. Teeth with several fangs, but no inflammation of the periosteum, are generally taken out without pain; if sometimes the insensibility is not perfect, the pain is always considerably mitigated. This new method is not at all painful for the patient, is without danger to health, and requires no previous preparation. Dr. Regnier and Dr. Didsbury have by the same method obtained insensibility of the bone of teeth, and also of the nerves.

Some Suggestions in Conservative Gynæcology.—Dr. E. C. Davis (*Atlanta Journal Record of Medicine*, April) sums up a paper on this subject with the following recommendations: 1. Make a careful diagnosis of the condition of your patient,

and if you fail to find any pathological condition, say so. Correct all displacements before serious operations are advised, when the former are causing the discomfiture. 2. Repair all lacerations before they lead to diseases of pelvic organs. 3. Be extremely careful to determine the condition of the uterus and annexa before undertaking correction of displacements of the uterus or plastic operations in this locality. 4. Diagnosticate and operate early and thoroughly when malignant disease is detected in the generative organs. 5. Before major operations make careful examinations of the urine and the blood, if possible. 6. Remember that women have other organs besides those of generation, which are also subject to diseased conditions.

Gonorrhœal Pelvi-peritonitis in Men—Battey (*Thèse de Lyon*, 1901; *British Medical Journal*, April 5th) has collected thirty instances, many from his own observation, of gonorrhœal pelvi-peritonitis in men. It is rarely primary, being generally secondary to gonorrhœal infection of the bladder and prostate, and especially to epididymitis, and inflammation of the vesiculæ seminales and vasa deferentia. Even in benign pelvo-peritonitis the general and local symptoms are very marked. There is intense pain in the inguino-scrotal region, spreading subsequently to the iliac fossa. The patient suffers from severe and repeated vomiting, high fever, constipation or diarrhœa, while the pulse and general conditions and the facies complete the picture of peritonitis. Pelvo-peritonitis in the male is characterized, therefore, by its short duration, the intensity of the local and general symptoms, and its relatively favorable prognosis.

The author quotes only four cases that were fatal. As to treatment, he advises opium internally and ice to the abdomen. Leeches also may be of service.

Cassia Beareana in "Blackwater Fever."—Dr. Harford Battersby (*Lancet*, March 29th), commenting on some notes on this native African remedy for "blackwater fever" by Dr. O'Sullivan Beare, in the *Lancet* for February 1st, says that the most important points in the treatment of blackwater fever, apart from any specific malarial treatment, are to maintain the flow of the urine and to deal with the vomiting which is often a dangerous feature of the malady, making it difficult to administer either food or medicine and weakening the patient. It seems to be a point in the prescription of this medicine [Cassia Beareana] to give it with a great deal of fluid, and probably this assists in promoting free diuresis, even if the drug itself is not a diuretic. But what interests him more is the influence which it appears to have upon vomiting. In the cases mentioned vomiting seems to have been a prominent symptom, and the medicine seems to have relieved it. Perhaps even more striking than the effect of the remedy upon blackwater fever is the result obtained in so-called bilious remittent fever. He has sometimes wondered whether the number of cases classed under this head are all of them malarial; at all events the trouble here is usually vomiting and this the medicine seems to relieve. If this is so, the drug may be useful in other cases where vomiting is a troublesome symptom and it is to be hoped that all who use it will note carefully the effects produced.

Book Notices.

The Surgical Treatment of Disfigurements and Deformities of the Face. By JOHN B. ROBERTS, A. M., M. D., Professor of Surgery in the Philadelphia Polyclinic, etc. Second Edition, with a Chapter on the Reconstruction of Syphilitic Noses. Illustrated with 62 Figures. Philadelphia: The Philadelphia Medical Publishing Company, 1901. Pp. 72.

This brochure is a second edition of the Mütter Lectures delivered by the author before the College of Physicians of Philadelphia, in 1900, with an additional chapter on syphilitic deformities of the nose. The consideration of the subject is very terse, and the merit of the book consists in its exposition of the keen surgery practised by the author, which ought to arouse in other surgeons the desire to follow along the same lines for the relief and improvement of these hideous deformities.

Numerous illustrations, even if diagrammatic, would have rendered vastly more intelligible the author's otherwise explicit descriptions. Those who would excel in the cosmetic art of plastic surgery will find valuable hints in these teachings, which are the product of wide experience.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F. R. S., Fellow of the Royal College of Surgeons, etc. Edited by T. PICKERING PICK, F. R. C. S., Consulting Surgeon to St. George's Hospital and to the Victoria Hospital for Children, London, and ROBERT HOWDEN, M. A., M. B., C. M., Professor of Anatomy in the University of Durham, etc. A Revised American, from the Fifteenth English, Edition. With 780 Illustrations, many of which are New. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 5 to 1257. [Price, \$6.25.]

The old student of anatomy would scarcely recognize his Gray in this very modern text-book. The work has undergone a thorough revision, both as to text and as to illustration. Several of the subjects of the book have been placed in new subdivisions, and the text has been amplified almost everywhere by the addition of the newer facts of anatomy and by the augmentation of the surgical applications of anatomical knowledge. The anatomy of the schools to-day is not the "dry-as-dust" study it formerly was; it is made fresh and interesting by the simultaneous study of its practical application.

In the present edition, we may note that the development of the peritonæum has been properly placed under the head of embryology, and the entire subject of the development of the body has been rewritten and brought into accord with modern knowledge. This was not the case in previous editions. The lymphatic system has been likewise thoroughly revised, especially its surgical aspects. The surgical anatomy of the digestive system has been brought up to date and topographical anatomy, generally, has received thorough attention.

Many new illustrations have been added and old ones redrawn. The colored drawings are especially commendable. This new Gray certainly meets every demand and will, no doubt, continue to hold a leading place among text-books on anatomy.

A Treatise on Surgery. For Students and Practitioners of Surgery and Medicine. By American Authors. Edited by ROSWELL PARK, A. M., M. D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, etc. Third Edition, Enlarged and thoroughly Revised. With 692 Engravings and 64 Full-page Plates in Colors and Monochrome. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. 5 to 1408.

The innovations of this third edition continue this work, as it has heretofore been, an excellent representative of the progress of surgery in America. The addenda deal by on means with all the alleged advances, but merely with such as have met with favor at the hands of the majority of surgeons. The novelties comprise a chapter devoted to the histopathology of the blood in its bearing on surgical affections and a chapter on the parasitic studies of carcinoma. Other additions noticeable are those on spinal anæsthesia, osteoplastic amputations, prosta-tectomy, and blastomyces. Far too great attention has been lavished on surgical gynæcology in a treatise devoted to general surgery. On the other hand, the surgery of the mastoid is woefully deficient. The elaboration of the newer bacteriological teachings and the consideration of recent advances in surgical technics, together with numerous new illustrations, all contribute toward insuring for this revised book a new wave of popularity.

BOOKS, ETC., RECEIVED.

Quain's Dictionary of Medicine. By Various Writers. Third Edition, largely Rewritten and Revised throughout. With Fourteen Colored Plates and Numerous other Illustrations. Edited by H. Montague Murray, M. D., F. R. C. P., Joint Lecturer on Medicine, Charing Cross Medical School, etc. Assisted by John Harold, M. B., B.Ch., B. A. O., Demonstrator of Medicine, Charing Cross Medical School, etc., and W. Cecil Bosanquet, M. A., M. D., M. R. C. P., Pathologist to Charing Cross Hospital, etc. New York: D. Appleton & Company, 1902. Pp. xviii-1892. (Price, \$10.)

A Reference Handbook of the Medical Sciences. Embracing the Entire Range of Scientific and Practical Medicine and Allied Medicine. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by Albert H. Buck, M. D., New York City. Volume IV. Illustrated by Chromo-lithographs and Eight Hundred and Fifty-nine Half-tone and Wood Engravings. New York: William Wood & Company, 1902. Pp. vi-873.

The Diagnosis of Surgical Diseases. By Dr. E. Albert, late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized Translation from the Eighth Enlarged and Revised Edition. By Robert T. Frank, A. M., M. D. With Fifty-three Illustrations. New York: D. Appleton & Company, 1902. Pp. viii-419. (Price, \$5.)

Saunders' Medical Hand-Atlases. Atlas and Epitome of Operative Surgery. By Dr. Otto Zuckerkandl, Privat-docent in the University of Vienna. Second Edition, Revised and Enlarged. Authorized Translation from the German. Edited by J. Chalmers DaCosta, M. D., Professor of the Principles of Surgery and of Clinical Surgery in Jefferson Medical College, Philadelphia, etc. With forty Colored Plates and 278 Illustrations in the Text. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 410. (Price, \$3.50.)

Saunders' Medical Hand-Atlases. Atlas and Epitome of Otology. By Gustav Brühl, M. D., of Berlin, with the Collaboration of Professor Dr. A. Politzer, of Vienna. Authorized Translation from the German. Edited by S. MacCuen Smith, M. D., Clinical Professor of Otology.

Jefferson Medical College, Philadelphia, etc. With 244 Colored Figures on 39 Lithographic Plates, and 99 Text Illustrations. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 292. (Price, \$3.)

Photographic Atlas of the Diseases of the Skin. A Series of Eighty Plates, comprising more than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By George Henry Fox, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, etc. Part X. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. 127 to 140.

Traité de médecine et thérapeutique. Publié sous la direction de MM. P. Brouardel, Professeur à la Faculté de médecine de Paris, etc., et A. Gilbert, Professeur de thérapeutique à la Faculté de médecine de Paris. Tome neuvième. Paris: J. B. Baillière et fils, 1902. Pp. 5 to 998.

Report of Major W. C. Gorgas, Chief Sanitary Officer of the City of Havana. Volume IV.

Transactions of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics. First Annual Meeting, held in Washington, May 14 and 15, 1901.

Philadelphia Hospital Reports. For the Year 1900. Volume IV.

Transactions of the American Climatological Associations. For the Year 1901. Volume XVII.

New Inventions.

AN INSTRUMENT TO INCREASE THE SAFETY OF ANÆSTHESIA.*

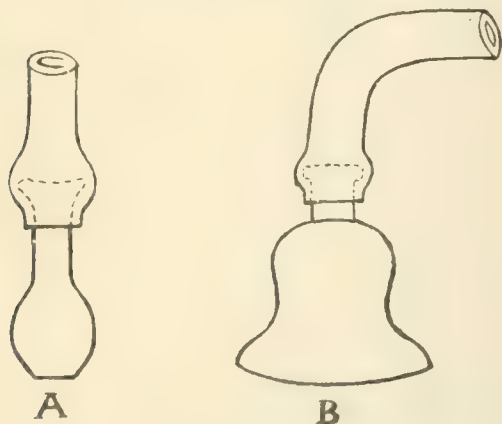
By FREDERIC GRIFFITH, M. D.,

NEW YORK.

SURGEON, BELLEVUE DISPENSARY; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE.

Any implement that will increase the safety of anæsthetic administration must be commended, for if we can lower the mortality of anæsthesia we shall to the same degree remove the ever-present stigma of which, if not always dwelt upon, the surgeon is none the less mindful, connected with all procedures where anæsthetics are employed.

While it is usually deemed sufficient for an anæsthetist to observe at intervals the condition of the



ocular reflexes, to note the respirations and color of the countenance, and from time to time to take the pulse of his patient, the careful administrator will keep himself constantly aware of his patient's heart and respiratory action.

*Read before the Surgical Section of the New York Academy of Medicine, Jan. 13, 1902.

Respirations are usually noted by observing the movements of the chest or belly or by listening for the breath sounds through the nasopharynx; the pulse rate is taken from the facial or radial arteries by palpation or observation of the deep cervical vessels.

For the purpose of allowing the anæsthetizer the use of both hands and still not to lose his supervision of the heart, and to enable him to be instantly cognizant of that organ's action, I have devised a modified stethoscope.

B in the figure is a bell of the ordinary wide-mouthed stethoscope to be fitted with a single attachment.

A well-fitting ear piece, A, joined by a three-foot length of light rubber tubing to the bell, prevents detachment when in use.

Placed over the apex of the heart, the receiver is held in position by a strap of adhesive plaster. As it is well to have as little paraphernalia as possible about a patient going under an anæsthetic, the instrument may be readily applied when relaxation commences.

Many extraneous friction sounds will at first confuse the listener, but as the single eye is trained at the microscope, so in a short time will the ear enable the user to have instantaneous knowledge of the action of the heart and lungs during this important period.

805 MADISON AVENUE.

Miscellany.

The Diagnosis between the Pseudo-membranous Anginas of Syphilis and Diphtheritic Anginas.—Surgeon-major M. Petges (*Archives de médecine et de pharmacie militaires*, April) sums up a careful paper on this subject with the following conclusions: 1. Syphilitic pseudo-membranous anginas are often difficult to diagnosticate from diphtheria; they are not very rare. A confusion between them may entail grave, and even fatal, consequences. 2. The diagnosis can only be satisfactorily assured by bacteriological examination. 3. In case of doubt, and while awaiting the result of culture-sowing, diphtheria antitoxine should be used.

Sanitary Measures for Reducing the Amount of Blindness.—E. W. Treacher Collins, F.R.C.S. (*Practitioner*, April), concludes a paper on Infantile Ophthalmia with the following suggested measures calculated to reduce the amount of blindness in the world: 1. Compulsory notification of cases of ophthalmia neonatorum by all persons, other than medical men, attending women in labor. 2. Instruction as to the importance of the universal adoption of prophylactic measures (preferably Credé's method, or the use of a sublimate solution, 1 in 2,000, or protargol 20 per cent.) by all lecturers and writers of text-books on midwifery. 3. The appointment of ophthalmic surgeons to maternity institutions, more especially those which provide for attendance of women at their own homes. 4. The provision in all midwifery bags of a drop bottle labelled "drops for the eyes." 5. The better training of monthly nurses in the methods of aseptic cleanliness.

A Bag Pervious to Air for the Administration of Ether.—At a recent meeting of the Leeds and West Riding Medico-chirurgical Society, Dr. W. McGregor Young (*British Medical Journal*, February 15th) read a paper on the Advantages of a Bag Pervious to Air in Ether-giving. He said that air-limitation for all practical purposes was a necessity, but the question arose as to whether in using the ether-bag they did not go too far and produce often an undesirable state of anoxæmia; certainly in unskilled hands this was apt to occur. It seemed to him that the advantages of the semi-open method in vogue in America might be combined with those obtained in using a Clover's regulating apparatus if, instead of an air-excluding rubber bag, a bag made of some porous fabric was used. Although by no means the only cause of cyanosis, the rubber bag was probably the most common one, and cyanosis was an undesirable, and even dangerous, condition, and the reproach of ether-giving. Besides, the rubber bag was an unclean thing. Dr. Young showed the bag which he proposed as a substitute, made of Holland linen. He contended that with this bag cyanosis was avoided, and as regards cleanliness it was beyond reproach, for a fresh bag newly washed and starched from the laundry was used for each case. He had tried it in a very large number of cases with excellent results. Chloroform could be added to hasten the anæsthesia by simply dropping it on the outside of the bag. He found that, the asphyxial factor being absent, the corneal and pupillary reflexes were no longer indicative of the same depth of anæsthesia. In the discussion which followed Mr. Mayo Robson spoke strongly in favor of Dr. Young's method.

Sterility Due to Obstruction at the Epididymis.

—Dr. Edward Martin, Dr. Berton Curnett, Dr. Valentine Levi, and Dr. M. E. Pennington (*Univ. of Penna. Medical Bulletin*, March), in an exhaustive and well illustrated paper, summarize as follows the facts demonstrated by a study of the subject:

In sterile marriages the fault certainly lies with the husband in from 10 to 15 per cent. of cases; probably in a still larger percentage.

Though absence of motile spermatozooids is a proof of their sterility, their presence does not necessarily demonstrate that the semen is fertile.

Microscopical study shows that spermatozooids, though conforming to a general type, differ greatly, and even in the same individual, in conformation, size, and color reaction. In spite of these differences, it seems possible to recognize the normal and probably fertile organisms.

In their passage through the epididymis the spermatozooids undergo developmental changes so marked as to be easily recognizable; hence, it is probable that the epididymis is not a mere conduit.

The prolongation of motility is a better index of fertility than the mere fact of motility.

The commonest cause of local sterility in the male is the obliterating bilateral epididymitis of urethral origin. Bilateral epididymitis is comparatively rare. Permanent obliteration of the tube of the epididymis is its exceptional rather than its usual termination, and is most effectually avoided by pro-

longed treatment. When the obliteration persists, it is in the tail of the epididymis.

Azoöspemia resulting from obliteration in the tail of the epididymis can be easily and safely overcome by forming an anastomosis between the head or body of the epididymis and the vas. Ejaculations following this anastomosis swarm with motile spermatozooids. Whether these are fertile, and whether the vaso-epididymal anastomosis will persist can be determined only by prolonged observation.

The Treatment of Membranous Colitis.—Dr. Michael G. Foster (*Edinburgh Medical Journal*, February) says that the first aim should be the treatment of the neurasthenia. A fair amount of exercise should be taken, with rest before and after meals. The food should be plain and digestible; vegetables should be given in *purée*, and fruit juice in preference to the whole fruit. Too strict a limitation seldom answers, and he has never seen much improvement on a purely milk diet. Alcohol in any form is, as a rule, best avoided. In the acute attacks attended with fever, rest in bed and a liquid diet are desirable. Morphine may be necessary in these circumstances, but its use must be most jealously guarded. The bowels must be regulated; castor oil in drachm doses is very useful, and may be frequently repeated. In most cases enemata are beneficial. These may be simply soap and water; a less irritating and often more successful method is the injection of from four to six ounces of olive oil. Medicated or astringent clysters are generally useless.

Remedies directed to soothing the intestinal pains.—Bael, in drachm doses of the confection, is sometimes useful; it appears to assuage the colicky pains and lessen the constipation. Bismuth is of very little use. Opium should be given only during an acute attack. Sir Dyce Duckworth recommends aromatic sulphuric acid in doses of from 20 to 30 minims. Iron is rarely well borne, and its administration should always be preceded by a blood count, as the pallor of the skin is apt to lead to an erroneous conclusion as to the true condition of the blood. So-called nerve tonics are useful; strychnine should be given with caution; silver of nitrate in doses 1-32 of a grain is sometimes of great service. Many cases derive great benefit from a course of treatment at the Baths of Plombières, in the Vosges. The waters are mildly alkaline, containing traces of silica and arsenic, and issuing from the earth at a temperature of 51 degrees C. Their value probably consists more in their method of employment than in their chemical composition. The treatment consists in the administration of warm baths, with a view to calming the nervous erethism, coupled with a course of "douches ascendants." The "douches ascendants" are large enemata of natural mineral water, which are given in the horizontal position. Elaborate and very efficient arrangements are made for regulating the temperature and rate of flow. The quantity injected is from $\frac{3}{4}$ to $1\frac{1}{2}$ litre; and during the operation the patient is turned from side to side, in order, as it were, to irrigate the colon. Another manœuvre employed is the *douche sous marin*. This is a douche of warm water, which is applied to the patient's abdomen while he is in the bath. The water of the bath acts as a buffer, and a form of massage

is the result. A healthy person feels definite peristaltic contraction taking place during this treatment. In addition, the patients are treated with a generous and nourishing but carefully prepared dietary. The results are undoubtedly very good, and in chronic cases sensibly hasten the cure. In the more hopeless cases Hale White advocates the performance of a right-sided colotomy, in order to give the bowel rest. Where milder remedies have failed, operation should never be too long delayed; even with all its discomforts, it affords a chance of escape from greater misery.

An Unusual Case of Tabes.—Dr. Byron Bramwell (*Lancet*, March 29), records a case of tabes in a married man, aged thirty-five years, who was admitted into the Edinburgh Royal Infirmary on Jan. 22d, because of inability to either stand or to walk. He had enjoyed good health until the present illness commenced. He absolutely denied having had syphilis or gonorrhœa. There was no suspicion of alcoholic excess. He was not a heavy smoker. For six months before the inability to walk developed he had had slight shooting pains in the legs, more especially the left, which was sometimes swollen at night. Occasionally a dull pain in the back and some little difficulty in micturition. The inability to walk developed rapidly on Jan. 13th. For a fortnight before this date he had felt some stiffness and "pins and needles" in his legs and feet, but had no difficulty in walking in the dark. On Jan. 12th, he walked three miles. On the 13th he had great difficulty in walking from one room to another, and on the 14th he was quite unable either to stand or to walk.

The inability to stand and walk was due to ataxia. No paralysis. Muscularity of the legs good. Movements of legs wildly ataxic. No ataxia in the arms. When the eyes were closed there was total loss of the sense of position, both during and after passive movements, in the lower extremities. Occasional shooting (lightning) pains in the legs (thighs and calves). Knee-jerks and Achillis-jerks completely absent, even after reinforcement; deep reflexes in the upper extremities present but not exaggerated; jaw-jerk present. Direct muscular excitability of anterior and posterior muscles of leg and of quadriceps group slightly increased; no myoidema contraction. Plantar reflex very active in both legs, the toe movement being flexion; cremasteric reflex absent; abdominal reflex slight. Pupils unequal, markedly dilated; the right measured eight millimetres and the left ten millimetres. Well-marked thoracic and ulnar analgesia and considerable analgesia and anæsthesia of the lower extremities. Bier-nacki's sign absent. Marked analgesia of muscles of calf. Slight, hypotonio. No girdle sensation. A little or no loss of sexual desire and power. There had never been diplopia or ptosis; ocular movements and optic discs normal; special senses normal; no crises, trophic, or vaso-motor derangements. Mental functions impaired; no articulatory defect, or facial or tongue tremors.

A striking and rapid improvement resulted from Frenkel's plan of treatment. On Jan. 22d the patient was unable to stand or to walk, the movements of legs being wildly ataxic. Frenkel's treatment was commenced on the 27th. By Feb. 7th the patient

was able to walk with the help of a go-cart. A week later he was able to walk with the help of two sticks. On March 5th he could walk steadily and well with sticks and could also walk across the room fairly well and without a marked ataxic gait, totally unsupported.

Dr. Bramwell considers the case interesting because of the following features: 1. The absolute and apparently quite straightforward denial of syphilis or gonorrhœa. 2. The rapidity with which the ataxia was developed. He has analyzed 155 cases of tabes which came under his notice and in only three of them was the ataxia very rapidly developed. 3. The dilated condition of the pupils. In 104 of the 155 cases of tabes which he has analyzed the size of the pupils was mentioned in the notes. In 69 of these 104 cases, or 66.3 per cent., the pupils were contracted (below three millimetres); in 27 cases, or 25.9 per cent., they were of medium size (between five and three millimetres); and in only eight cases, or 7.6 per cent., they were dilated (above five millimetres). 4. The rapid improvement which resulted from Frenkel's method of treatment.

Intermittent Claudication.—Osler (*Montreal Medical Journal*, February) says his attention was first drawn to this condition in horses, in 1877 or 1878, when studying comparative pathology. A few years ago, when studying angina pectoris, he looked up Charcot's description of this intermittent claudication in man, and made also the interesting discovery that Allan Burns in his *Observations on Some of the Most Frequent and Important Diseases of the Heart*, 1809, had given an explanation of this remarkable phenomenon. Osler quotes: "In health, when we excite the muscular system to more energetic action than usual, we increase the circulation in every part, so that to support this increased action the heart and every other part has its power augmented. If, however, we call into vigorous action a limb round which we have with a moderate degree of tightness applied a ligature, we find that then the member can only support its action for a very short time, for now its supply of energy and its expenditure do not balance each other; consequently, it soon, from a deficiency of nervous influence and arterial blood, fails and sinks into a state of quiescence." Burns puts it very tersely when he says, "the supply of energy and expenditure do not balance each other."

Charcot was the first to describe a condition in man identical with that met with in the horse. His Memoir was presented to the *Société de Biologie* in 1856. One day a patient in the service told him that he was not able to walk for more than a quarter of an hour without being taken with cramps in the legs. After resting a while he would get better, and would be able to resume his walking, and then a crisis recurred. At the autopsy Charcot found a ball encysted in the neighborhood of the iliac artery, and a traumatic aneurysm, which had obliterated the artery in its lower part. The circulation was carried on by collateral channels, which were ample to maintain the nutrition while the patient was quiet, and for a short period during exertion, but after a time, when the limbs were fatigued by the movements, the quantity of blood which reached them was insufficient, causing a relative ischemia, with

tingling, cramps, and impossibility of walking. He refers to the fact that the condition is often preliminary to gangrene, and narrates a case in which a patient with the affection had his leg amputated for gangrene.

Erb (*Deutsche Zeitschrift für Nervenheilkunde*, 13) has reported twelve cases, and has called attention particularly to its association with arterio-sclerosis and calcification of the arteries of the legs. The whole subject, too, has been reviewed this year (1901) by Goldflam in the *Neurologisches Centralblatt*, and in this country cases have been reported by Gordon (*New York Medical Journal*, 1900), and by Riesman (*American Medicine*, 1901).

Osler then reports two cases, the salient features of which are as follows:

CASE I.—*Vomiting and pain in abdomen—Pulsating tumor in epigastric region—History of syphilis—General arterio-sclerosis—Wiring and electrolysis of aneurysmal sac—Marked improvement—Return in nine months with well marked intermittent claudication.*

The patient volunteered the statement that there was an additional symptom which had disturbed him not a little; namely, after walking for a certain distance his legs would, as he expressed it, give out completely, so that he could not move another step, and had to sit down. After resting a few minutes he could then go on again. This was more particularly noticeable when he walked on the street. He had to go very slowly and could not go for any distance. There was no paralysis accompanying the loss of ability to walk. He could move his legs, but there was an uncontrollable feeling that he could not take another step. Accompanying this there was a sensation of dead, heavy weight in the legs, but no cramps. Walking about in the house (and in the yard) did not bring on the condition, but he had had it very frequently in the past few months, and he had learned to ward it off by walking very cautiously and slowly and resting at intervals. The femoral arteries and the dorsal arteries of the feet were distinctly sclerotic.

CASE II.—*Mitral stenosis—General arterio-sclerosis—Attacks of intermittent lameness with numbness and tingling in the feet and marked vaso-motor disturbances—Absence of pulsation in the dorsal arteries of the feet.*

With rest in bed, warmth to the legs and careful friction this patient improved very much. She received great benefit, too, from the use of full doses of nitroglycerin.

Osler concludes: "A word as to the name. I think it is very much better to use the term intermittent claudication, though it does not specify the etiology. It expresses well the most characteristic feature of the complaint. Erb's term, *intermittirendes Hinken*, is simply the German equivalent. Other terms have been used, such as *angeio-sclerotic intermittent dysbasia* by Charcot, *intermittent muscle paresis* by Erb, and *angeio-sclerotic paroxysmal myasthenia* by Higier, the author of a long article on this subject in *Deutsche Zeitschrift für Nervenheilkunde*, July, 1901. As shown in the horse and in the first case which I here report, the affection is not always due to simple arterio-sclerosis, but may be due to aneurysm, as in Charcot's case, and as is the rule in the horse. Oppenheim has reported instances

in nervous individuals in which the condition seems to depend upon vaso-motor disturbances."

The Laboratory Diagnosis of Glanders.—Langdon Frothingham (*Journal of Medical Research*, November, 1901) says that Strauss was the first to point out (*Comptes rendus de l'Académie des sciences*, cviii, p. 530; *Revue vétérinaire*, June, 1889) that if virulent glanders bacilli were introduced into the abdominal cavity of the male guinea-pig, peculiar suppurative lesions of the scrotal peritonæum generally resulted in a few days; hence the method of diagnosis by the intra-peritoneal inoculation of guinea-pigs with suspected discharges from animals or man is aptly termed the Strauss method.

In 1896 Frothingham published a short article in the *Veterinary Magazine*, advocating this method, and quoted a few cases where physical examination and mallein had proved useless, and this means successful. He now publishes the results of the tests of all the cases which have been sent to him up to June, 1901.

The material to be inoculated is collected with a small swab from a skin lesion, or the nose, or both. The swab consists of a small wad of absorbent cotton twisted about the end of a stout wire which is placed in a test tube, properly plugged with cotton, and thoroughly sterilized.

The cotton is removed from the wire with sterile forceps and placed in a small, strong bottle containing about 3 cubic centimetres of sterile water. (The amount of water is purely optional; Frothingham uses this quantity because his syringe holds about 1.5 cubic centimetres, and this gives a convenient and sufficient injection for two guinea-pigs.) The bottle is plugged so tightly that there can be no leakage and then violently shaken for some time, at least till the cotton fibres have become somewhat separated and visible particles of the discharge entirely broken up, thus making a cloudy fluid. The cotton is then squeezed as dry as possible with two sterile forceps and the suspension thus obtained is injected into the abdominal cavity with a hypodermic syringe. Two guinea-pigs are always used if available, since it often occurs that only one of two animals thus inoculated shows lesions of glanders later.

Any hypodermic syringe may be used in making these inoculations. The author prefers one holding about 1.5 cubic centimetres, with rather small needles, a glass barrel, and adjustable asbestos plunger. After use it is boiled for at least one half hour in water containing a little washing soda. It is then washed out with alcohol, next with ether, and then placed in a sterile test tube ready for future use.

Symptoms and Lesions.—Typical scrotal symptoms usually are visible in the guinea-pigs on the second or third day after inoculation, and consist of a swelling and redness of the scrotum and immovable testicles. Sometimes the whole scrotum is involved, sometimes only one side, and accordingly one or both testicles, which in the normal pig are easily pushed from the scrotal sac, remain fixed and cannot be forced into the abdominal cavity without using considerable strength to break down the adhesions, and causing much useless pain to the animal.

Autopsy in such cases shows marked subcutane-

ous œdema of the scrotum, and numerous more or less isolated foci of suppuration on the peritoneal lining of the scrotal sac, and on the peritonæum covering the testicle, which bind these two layers firmly together. The lesions are confined to the peritonæum in this region; the testicle itself is never involved, unless the disease is allowed to run a much longer course.

From this typical picture there may be all manner of variations. The lesions may be so confluent that upon separating the two peritoneal surfaces, a diffuse caseation is seen. As a rule, both sides of the scrotum are involved. Occasionally only one side is diseased, the other being perfectly normal. To find one side more affected than the other is very common, and the difference in severity of lesions varies through a very wide range. The two sides, for instance, may show a very slight difference of infection, or one side may be decidedly diseased, and the other show only two or three small foci.

Occasionally small foci, surrounded by a delicate hæmorrhagic zone, are seen on the peritonæum covering the pad of fat anterior to the testicles. If such lesions were the only ones present, it would be impossible to discover them in the living animal; they would have to grow much larger before they could be felt through the skin.

Often the only lesions are confined to the gubernaculum testis, and in such instances may or may not be felt in the living pig, depending upon extent or age of lesions.

Sometimes the *only evidence* of disease is one *abscess*, or there may be several. They may be situated in the subcutaneous or muscular tissue at the point of inoculation, or just beneath this in the peritonæum. Again, abscesses may be found in the regions of the stomach, pancreas, and spleen, between folds of intestine, anywhere, in fact, in the abdominal cavity, and, as a rule, cause adhesions of any portion of the viscera to another, or to the abdominal wall. These abscesses may be small and quite numerous, or they may be single and attain quite a size before being discovered. As a rule they are easily felt through the skin from one to three weeks after inoculation. Sometimes these lesions are caused by the glanders bacillus, sometimes by other organisms. In two instances the pigs showed at the end of two or three weeks, besides glanders abscesses in other parts of the body, suppuration of several joints from which cultures of the glanders bacillus were obtained.

It is not uncommon to find more or less peritonitis, due to the presence of various bacteria, and at the same time well-marked scrotal lesions of glanders. Sometimes one or both pigs die of peritonitis, no lesions of glanders being present. The danger of peritonitis may be diminished if the swab is placed for several days in the ice-chest. Kept thus for three or four days, the glanders bacillus does not seem to be injured, but other organisms may lose their virulence.

Cultures.—Potato cultures should always be made even from typical scrotal lesions. This is very essential, as was pointed out in my former article, because Kutscher¹ found a bacillus in the nasal secre-

tions of a glandered horse which caused similar lesions in the male guinea-pig, and which was not morphologically distinguishable from the glanders bacillus. A diagnosis can only be made by cultivation upon potato, where the growth of Kutscher's bacillus is white and not the amber or brownish colonies typical of the glanders bacillus.

Another organism which may be met with in this kind of work and which may cause a faulty diagnosis from its cultural appearance is the *Bacillus pyocyaneus*. A forty-eight-hour growth upon potato may closely resemble that of the bacillus malleus—the next day, however, the green color appears. Moreover, the bacillus of green pus is motile, while the glanders bacillus is not, though its active Brownian movement may be mistaken for individual motion.

The author then reports 125 positive tests, 123 from horses and 2 from men.

Positive results were obtained at the first test in 105 cases; at the second in 16 cases; at the third in 2 cases; and at the fourth in 2 cases. Scrotal lesions were observed on the second day after inoculation in 59 cases; on the third in 51; on the fourth in 14; and on the fifth in 1 case.

A series of negative tests is also given, made from 189 horses. In thirty-five cases the horse was afterward killed as glandered. Twenty-nine of these were tested once; 3 twice; 2 three times; 1 six times. On these cases the author remarks:

This is not a remarkable number of failures, perhaps, everything considered, and it is not difficult to account for most of them. We must consider the probability that in glanders, as in other diseases, one undoubtedly meets with specific bacteria of different virulence. These cases were simply suspicious, in some scarcely any ground existing for a test, except to err on the safe side. In some instances a poor or insufficient discharge was obtained, though this in itself means but little. In mild cases and early stages it would not be surprising if glanders bacilli were not present at all in the nasal discharge or in too small numbers. Undoubtedly many of these cases would have yielded positive results if tested a second time. Of the 29 cases tested once, 25 were condemned at later inspection, three were condemned at the time the swab was taken, and one animal died of glanders before the second inspection. Hence here were four absolute failures.

There are two important points to be noted: First, when glanders lesions are healing, the bacilli in them are probably less numerous, and perhaps less virulent; and second, that the guinea-pig is not highly susceptible to glanders. The latter point is well illustrated by the fact that one of two inoculated pigs so often remains well, while the other develops glanders; yet the conditions of inoculation would seem to be identical.

The two cases in men are interesting and show the value of this method of diagnosis. In neither case was a diagnosis otherwise possible, and in one instance suspicions of small-pox were at once dispelled, much to the relief of the community. The author believes that this method of diagnosis is the most valuable one at our command. A positive test means everything, a negative test nothing, though several negative tests are of great importance.

¹Zeitschrift für Hygiene und Infektionskrankheiten. Bd. No. 21, S. 156.

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Original Communications.

SUBCUTANEOUS INJECTION OF PARAFFIN IN THE CORRECTION OF NASAL DEFORMITIES.*

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In the presentation of these cases I wish to acknowledge my indebtedness to Dr. Chappell, from whose clinic, at the Manhattan Eye and Ear Hospital, I obtained them, and the permission to pursue the experiments.

The patients I have the pleasure of exhibiting to this section show the results obtained in the correction of the deformity known as saddle-back nose by the use of paraffin subcutaneously injected. The main causes occasioning this are syphilis, traumatism, tuberculosis, scrofula, infectious abscesses, and lupus.

As this deformity is mostly due to a destruction of cartilage and bone from whatever cause, there is little of an expedient nature left for the surgeon in the way of restoration; hence it is that paraffin as an inert material, and when injected subcutaneously, maintaining the form in which moulded, offers a solution to an otherwise perplexing problem.

Without entering into the anatomical deformities which occasion this trouble, and with which all members present are thoroughly acquainted, I will proceed with the conditions in which paraffin has been employed.

It has long been used for injections into cystic cavities, after the evacuation of the fluid, so that the cystic sac could be more readily dissected out in its entirety. It has thus been particularly used in vulvo-vaginal cysts.

The use of paraffin for the correction of nasal deformity was first tried by Gersuny, of Vienna, in 1900. He reported two cases, one of two years' standing, with no visible changes in the contour of the nose or any softening of the paraffin. He also recounted a case where the injection was in another

part of the body, and though the patient passed through typhoid fever running a temperature as high as 40° C. = 104° F., no disturbance to the paraffin resulted, other than temporary softening.

In this country there have been only two reports of cases coming under my observation. The first is given in the *Virginia Medical Semi-monthly* for September by Dr. J. F. Lynch; in his case he used the "white vaseline," or petroleum jelly, which is a



CASE 1.—Deformity due to scrofulous destruction of the septum. Photograph taken three months and a half after injection of paraffin.

soft salve, at the temperature of the room and which, I should infer, would be a semi-liquid at the temperature of the body. This is not the kind of paraffin I have used.

The other case is reported by Dr. A. C. Heath, of St. Paul, Minn., in *American Medicine* for December 7th. Here the entire cartilaginous septum was destroyed. He prepared a cavity the day before the injection of paraffin by introducing a two-drachm

more, 1831.

Medical and Surgical Memoirs of Nathan Smith, M. D., Balti-

Schleich solution. Considerable disturbance of the local circulation, severe pain and great swelling of the nose resulted from the paraffin injection. The paraffin used had a melting point of 98.6° F. His result was very satisfactory. Twenty-six days later



CASE II.—Deformity due to traumatism occurring in childhood. Photograph taken December 5, 1901.

some redness of skin over paraffin was still present, this gradually disappearing.

I have made some experiments on the cadaver to determine the course of the paraffin when injected subcutaneously and with unrestrained pressure. I first made hot applications to tissues in order to get the normal temperature of the body, and when the temperature in the nares showed 99° F. I injected into the tissues over the dorsum of the nose two drachms of liquefied paraffin at 115° F., using considerable pressure. The tissues rose up readily, and the main point of swelling took place at the end of the needle, but some tumefaction occurred at the inner canthus of both eyes, and followed down the angular vein. The paraffin appeared to have displaced the layers of connective tissue, and to have made for itself a berth, assuming the conformity of the solid parts over which it was injected. Upon dissecting away the integument, I found the paraffin *en masse*, and to form a perfect cast of the outer surface of the two nasal bones.

On attempting to inject the paraffin into the lower end of the nose, I found the skin too intimately connected with the lateral cartilages to make it a success, the paraffin damming back into the tissues over and to the sides of the dorsum.

I also injected melted paraffin, under strict aseptic precautions, into the nose, back, and ear of a rab-

bit. To all outward appearances the animal was a healthy specimen, selected as such from a number at the Carnegie Laboratory. No anæsthetic was used and but little pain was manifested by the animal. The tissues bulged easily, there being but very slight adherence between the integument and underlying structures. No reaction appeared on the part of the rabbit, but after ten days he unexpectedly died. Not believing that the injections were in any way a factor in its death, I performed an autopsy, finding a large tuberculous abscess just above the sacral region. The peritoneal cavity was also infected by coccidia. These conditions undoubtedly caused death. Upon examining the tissues around the injected paraffin, absolutely no evidence of inflammation was found. Apparently there had been no tendency of the paraffin to gravitate into structures beneath. The supranasal injection showed an evident attempt on the part of tissues toward mechanical encapsulation. The paraffin was in a hard mass and without any obvious change. Neither integument, areolar connective tissue, the periosteum of the nasal bones, nor the cartilages gave any evidence of inflammatory character, thus showing the inertness of paraffin injections.

At this time I again made injections into the peritoneal cavity and supranasal tissues of another rab-



CASE II.—Photograph taken two months after injection of paraffin.

bit. The animal has lived without apparent reaction until to-day, twenty-two days having elapsed. I chloroformed the rabbit this morning, and have the pleasure of showing you the paraffin in the peritoneal cavity, located between the liver and the dia-

phragm, and with absolutely no evidence of inflammation. It is easily movable, and a small piece having become detached has floated around in the cavity and now lies upon the liver, and no evidence is shown that Nature has thrown out any adhesive bands to hold it in place. The injection into the nose is the same as that reported in the former rabbit, and the only evidence of encapsulation seems to be more of a mechanical nature than of an inflammatory character.

I believe there are no changes in the tissues other, perhaps, than the formation of a protecting capsule.

In my clinical work I have observed rigid asepsis and have used 5 minims of a four-per-cent. solution of cocaine prior to the paraffin injection. I have not employed Schleich's solution or any other mixture as a preliminary to paraffin; it appears fully capable of making its own cavity. I do not endorse the use of Schleich's solution, since more tissues may be separated by it than should be filled in with paraffin.

The injection has been accomplished with but little pain at the time. The paraffin is sterilized before using. I have it in an agate vessel holding about three ounces, and this I suspend over an alcohol lamp until it melts and bubbles—expelling the air—the temperature being about 115° F. Then, with a forcible aspirating syringe and a large needle I draw

neath the skin, carrying its point beyond the site of greatest deformity. If this is at the root of the nose, I insert the needle about three quarters of an inch above the tip and with its point upward. If the deformity is at junction of nasal bones and carti-



CASE - III.—Photograph taken in January after injection of paraffin.

lages, I insert the needle at a point over the nasal spine, directing the point downward.

The injection is made slowly, at the same time withdrawing the needle and using the thumb and index finger of the left hand to mould the paraffin to the necessities demanded by the peculiarity of the deformity. Unless care is exercised, the paraffin is likely to force its way to the inner canthi of the eyes, where there is a mass of loose areolar tissue.

The paraffin remains plastic about half a minute and can be moulded as desired during this time. Two of my patients remained in the hospital two days, and some redness and swelling resulted, but under the influence of ice—one hour on and one off—this readily subsided. No pain was experienced except a soreness on pressure, which lasted about a week. The swelling had all disappeared before this time.

While the result is not an absolutely perfect nose, yet there has been such marked improvement as to justify like procedures in all such cases. Paraffin prosthesis is not confined to the nose alone, but is being used in mastoid operations for filling in the excavation immediately after operation and sewing



CASE III.—Deformity due to specific destruction of cartilaginous and part of bony septum. Photograph taken in December.

the paraffin up and evacuate the air bubble, and submerge the syringe needle and all in sterile water at 120° F. This keeps paraffin in liquid form. Then, uplifting the soft tissues of the nose above the dorsum with the left hand, I insert the needle well be-

up the wound. Dr. Haskins, of the Manhattan Eye and Ear Hospital, has been pursuing investigations upon this method and presented his case recently at a meeting of the Otological Section. I see no reason why old abscess cavities should not be filled in



CASE III.—Another position of patient showing pinched expression

with paraffin, and assist Nature in overcoming the great loss of tissue.

CASE I. M. D., a woman, aged nineteen, had measles, diphtheria, and scarlet fever as a child, with cervical adenitis following the last. Family history negative. When about fifteen she had adenoids removed. Four years ago she was in Carney Hospital, South Boston, where she had what was called scrofula of the nose and, resulting from this, partial destruction of the cartilaginous septum and a falling in of the nasal bones, making a typical saddle-back nose. She was without treatment for two years, when she was brought to the Manhattan Eye and Ear Hospital. On November 4th last it was undertaken to correct this deformity. The part was prepared aseptically and antiseptically. Five minims of a four-per-cent. solution of cocaine were injected superficially at the point where it was intended the paraffin needle should enter. In this case it was at the junction of the nasal bones with the lateral cartilages. After a few minutes I inserted the needle of the paraffin syringe, which had been previously filled with the liquefied paraffin, at the cocaineized point, and carried it subcutaneously well beyond the site of greatest deformity; at the same time uplifting soft tissues with the left hand. I then gradually emptied the syringe, withdrawing the needle as I did so and exerting pressure laterally to confine the paraffin to where it was needed. About one drachm was used in this injection, some of which escaped to the right side of the nose and the inner canthus of the eye, occasioning slight tumefaction. The patient was taken into the hospi-

tal, although she showed no symptoms of reaction and no pain was manifested except soreness. In a few hours after her going to the ward, however, some swelling occurred, but no rise in temperature and but slightly increased pulse. Two days later she was discharged. I had not corrected entirely all the deformity existing, and she returned a week later when a smaller quantity of paraffin was injected at a point nearer the tip than the other. About half a drachm was used at this injection and prepared in the same manner as before. A little more cocaine had been used at this time than previously, and the patient showed results of this increase, the pulse being rapid, the breathing difficult, and the patient restless. All these symptoms passed away shortly and no swelling resulted from the injection, or more pain than on the former occasion. She went out of hospital shortly after, and since then no untoward symptoms have resulted. At the present time I can see no diminution in the quantity of injected paraffin from the original, and the nose is certainly greatly improved in appearance. I was unable to obtain a photograph before operating with which to make comparison, but will refer you to my associates on the clinic and the house staff of the Manhattan Eye and Ear Hospital for verification of the improvement obtained.

CASE II.—R. B., a man, aged twenty-eight. Family history negative. No specific or tubercu-



CASE III.—Corresponding position after injection of paraffin.

lous history. When five years of age, he sustained a severe blow on the nose, resulting in crumpling of the septum and flattening of the nasal bones. The point of greatest deformity was at the junction of the frontal with the nasal bones. On December 2d,

after the usual preparation, one drachm of paraffin was injected over the root and dorsum of the nose, raising the surface over the root $\frac{1}{8}$ of an inch and over the dorsum about $\frac{1}{16}$. Some redness and tension resulted. He was kept in the hospital and ice poultices were applied. There was no rise in temperature and but slight temporary increase in pulse. On the 3d there remained slight redness and swelling, but little tenderness. The temperature and pulse were both normal. He was dismissed from the hospital on the 4th, the swelling having largely abated and the deformity being markedly reduced, though not entirely overcome. He returned on the 9th for the correction of the remaining deformity, when I made an injection of about $\frac{1}{2}$ drachm of liquid paraffin, observing the same precautions. There was no reaction following this further than some redness and pain at the point of the needle's entrance, which remained in this location for about a week and then disappeared. No unusual sensations have been experienced since then. The improvement in the facial expression is marked.

CASE III.—A. B., an Italian; specific necrosis of entire cartilaginous, and part of bony septum, trouble having begun about five years ago. Was not a typical saddle-back nose, but tissues all clung to nasal bone and cartilages, and with a markedly upturned tip, giving a peculiar pinched expression to face. Operated on December 7th, after the customary precautions. Quite a little paraffin ran to inner side of nose and inner canthus of right eye, following course of angular vein. No reaction resulted just after operation, so patient was permitted to go out of hospital, but returned two days later with considerable oedema under both eyes and some swelling over nose. He was kept in hospital for a few days and under the influence of ice and acetate of aluminum, alternately, swelling all disappeared. The temperature reached 99° F. during this time. There was slight pain, but no rise in pulse. Patient at present shows marked improvement over former conditions.

122 EAST THIRTY-FOURTH STREET.

THE CLINICAL ASPECT, SYMPTOMS, AND DIFFERENTIAL DIAGNOSIS OF OSTEOMYELITIS.*

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ATION, ETC.

If we were to endeavor to find one word to express the clinical aspect of acute osteomyelitis at its height, none would so aptly fit it as "typhoidal." Chassaignac has called it "*typhus des membres*."

If a longer term were desired in explanation, we

would say, the symptoms were those of a malignant form of progressive sepsis, as Senn has expressed it.

Should we divide this disease into stages, as Park has done, we would then apply the clinical aspect named to what he calls the first stage, or "stage of purulent infiltration."

Following Zeigler, we would place our physical signs of osteomyelitis in that group of diseases having most typical symptoms and characteristic features, which he has termed the "septic pyæmias."

For convenience of description we may divide the symptoms of osteomyelitis into four stages: I. The premonitory, or stage of infection. II. The acute, or stage of invasion. III. The subacute, or stage of conflict. IV. The quiescent, or stage of repair.

I. *The Premonitory Stage*.—We can place no definite bounds on this stage as to onset, whether it occurs during the course or convalescence of an acute exanthema or infectious disease; during the healing of the umbilical cord; during a bronchial catarrh or intestinal diarrhoea, pharyngitis, or amygdalitis; an exposure to cold or dampness, as many observers have pointed out; some trauma, or simple furuncle. We are made aware of infection by the general feeling of apathy, anorexia, malaise, and exhaustion, which are followed usually by a profound chill or, in the case of young children, by a convulsion; at this time the second stage begins.

II. *The Acute Stage*.—At this period of the disease, dry tongue, high temperature with continued fever, gradually rising, and with morning remissions, rapid pulse, and respiration are the rule, a typical typhoid clinical aspect. Emaciation is rapid. At times, in the fulminating and grave cases, muttering delirium, especially in children, rapidly supervenes; the spleen is usually enlarged, the serous and synovial cavities from metastasis or extension show their secondary involvement by exudations of a serous, fibrinous, purulent, or hæmorrhagic nature. Occasionally the system is so overwhelmed by the septic intoxication, entirely disproportionate to the local lesion, that within a few days the patient dies from one of the endless complications which may supervene in this disease, such as septic pneumonia, metastatic meningitis, pericarditis, acute nephritis, etc., before a correct diagnosis is made.

Death may be very sudden from fat or septic embolism. Pain, fortunately from a diagnostic standpoint, is one of the earliest and most constant symptoms, and directs attention to the bone involved. In cases of multiple osteomyelitis the intoxication may be so profound that this symptom is absent.

In patients old enough to do so, the pain is described as of an excruciating boring character, owing to the tension caused by the inflammatory exudation in the medulla of unyielding bone. The greater the exudation the more intense is the pain,

*Read by invitation before the Medical Society of the County of New York, December 23, 1901.

which is also worse when the evening temperature is highest. With the escape of the purulent material from the bone cavity and periosteum into the surrounding soft parts, or with its evacuation by the knife, chisel, and curette, the pain lessens in severity or ceases altogether.

The early exact location of the seat of pain is most important, as favoring its early relief and the prevention of extension into adjacent bone tissue and joints or by metastasis to other bones or tissues. Pain in the knee as in tuberculous hip disease may be a misleading symptom of acute disease at the upper end of the femur, but as Nathan Smith point-

edly involved and gives us the means of locating our incision even before swelling in the soft parts has occurred. This point is usually found earliest near the epiphysial junction in the diaphysis.

According to Park, we may have œdema of the extremity below the lesion within forty-eight hours, and this may be regarded as quite suggestive. The thrombophlebitis in the medulla easily accounts for this. Owing to the deep-seated venous obstruction the superficial veins become much distended.

Deep fluctuation may be slow in development until the inflammatory products have involved the periosteum (2 to 3 days), after which the general swell-



CASE IV.—Osteomyelitis of the Right Clavicle.

ed out, in 1798, this pain referred to adjacent joints is only a very early symptom and soon the pain is localized at the point of disease.¹

Tenderness is, on the whole, therefore, a more valuable sign as to the exact location of the focus of disease. This can be easily detected by digital examination and the point of most extreme sensitiveness can be found; this is usually the centre of infection where the periosteum has become second-

ing and fluctuation may come on rapidly with the extension to the parosteal tissues and superficial abscess formation. At times the periosteum may be entirely separated from the bone by the purulent exudate, with, secondarily, death of the underlying bone and general swelling of unusually large proportions all around the shaft. The long bones are usually involved, and more commonly those of the lower extremities, but the flat bones, such as the sternum, cranium, and pelvis, are also attacked at times by a severe inflammation. Forty-one cases of

¹Medical and Surgical Memoirs of Nathan Smith, M. D., Baltimore, 1831.

acute vertebral osteomyelitis are recorded in the literature (Hahn, *Beiträge zur klinische Chirurgie*, Bd. xxv, H. 1, 1899). Abscess is quickly formed in this function, unlike the slow tuberculous abscess formation. It is more common in the lumbar region. Four fifths of all cases have occurred in adolescents (Bradford and Lovett, *Orthopædic Surgery*, second edition, 1899). There is local pain and tenderness about the spine, which is not present in tuberculous cases, as a rule. Paralysis is present in one third of the cases (Muller, *Deutsche Zeitschrift für Chirurgie*, Bd. 41; Hahn, *Beiträge zur klinische Chirurgie*, Bd. xlv, Heft 1; Makins and Abbott, *American Surgery*, May, 1896; Chipault, *Gazette des hôpitaux*, 1897, lxx, 1,442; Riese, *Centralblatt für Chirurgie*, 1898, S. 585; Tixier, *Bulletin médical*, July 21, 1895).

As a rule, in children the epiphysis is a barrier to the extension of the process into the joint cavity, but this is not the rule in adults. In the event, however, of purulent joint involvement, we have swelling with the other cardinal signs of acute inflammation. Townsend and Whitman have reported cases of an acute suppurative arthritis in infants, which is secondary to an osteomyelitis.

Of these, Townsend (*American Journal of the Medical Sciences*, January, 1890) tabulated seventy-three, eighteen of which were personal observations, and Whitman, in his *Orthopædic Surgery*, adds twelve others seen by him. Of these, 64 were non-articular, and 21 involved more than one joint.

Keen (*Surgical Complications and Sequels to Typhoid Fever*) has analyzed thirty-four cases of osteomyelitis of a severe and destructive type, as sequelæ of typhoid fever, in 43 per cent. of which the hip joint was involved, and in 40 per cent. spontaneous dislocation had occurred from distention or rupture of the capsule.

Serous synovitis may occur from circulatory disturbances and not by extension of the pyogenic process.

Epiphysiolysis, however, is a more common result of acute inflammation and tension at the epiphysial line. This symptom is easily detected as a false point of motion, or, in the case of the hip joint, by the presence of the trochanter above Nélaton's line. Epiphysial separation may occur suddenly.

Pathological fracture sometimes takes place in this stage, and may be recognized in the usual manner by crepitus, etc.

Redness and local heat are only present when the abscess approaches the surface; and muscle spasms, with contractions, are frequent symptoms, with abolition of function.

The patient will not move the limb or allow any one else to move it on account of the pain and feeling as though it would be fractured.

Skin eruption is mentioned by Park as occurring

in infection due to the *Bacillus pyocyaneus*, and the odor from such abscesses is peculiarly foetid.

Complications involving the viscera will present their characteristic symptoms.

III. *The Subacute Stage.*—Should the patient survive initial toxæmia of the acute stage, and the coalesced intra-osseous abscesses find sufficient drainage, the conflict between the bacteria and the necrosed bone, on the one hand, and the living tissues, on the other, will show a most decided abatement in the severity of all the symptoms.

During this stage of sequestral extrusion from the sinuses which are usually present and the formation of the involucrum, more or less fever persists (99° to 101° F.).

Pain, as has been stated, is relieved as the intra-osseous tension is removed. Cachexia is marked if the suppuration is prolonged, and often the body, face, and extremities show excessive pilosis, especially in brunettes.

Appetite improves and sleep is possible without anodynes. Complications are less likely in this stage. If serous synovitis has been present in an adjacent joint, this clears up, leaving no trace.

IV. *Quiescent Stage.*—With the removal of all traces of necrotic tissue and septic material, the part goes on to regeneration with only such symptoms remaining as have been caused irremediably by the pathological process and those symptoms which are incident to the repair and strengthening of the disabled bone. The greater extent of the disease largely governs the duration of this stage and the restoration of function.

A relapsing form is described, and Rosenbach has contended that pus microbes may remain latent for twenty years, and then, under provoking influences, reproduce the disease in a modified form.

The differential diagnosis of this disease should present, ordinarily, no serious difficulties, with our improved laboratory technique in blood examination, bacteriology, and the Röntgen light, supplementing more detailed history-taking and more thorough clinical examinations.

The diseases which are more commonly confounded with osteomyelitis are typhoid fever and rheumatism; those that might be mistaken for it by the unwary are tuberculous epiphysitis or joint disease, specific osteochondritis, scurvy, and sarcoma.

Osteomyelitis should be most easily distinguished from typhoid fever, first, by the presence in the former of a leucocytosis, which, according to Cabot (*Clinical Examination of the Blood*, 1898), gives counts that vary from 18,000-29,000 white cells; while, in typhoid fever, from Thayer's figures we find a normal leucocyte count, and Hayem, Kheta-gurow, and others, record even subnormal leucocyte counts as low as 1,000. The conclusion which Cabot draws is that, even granting that in a small number



CASE V. Beginning left tuberculous osteitis of the hip joint. focus in femoral head. abduction of the thigh: obliteration of trchanter major's epiphysis and general clouding of the area of osteoporosis.

of cases of typhoid fever leucocytosis is present, we may almost invariably say that such increase is due to some complication, such as phlebitis, perforation, or a typhoid osteomyelitis, which cannot at the time be recognized.

Cabot further says: "The diagnostic value of the blood in osteomyelitis seems to me considerable, inasmuch as it is difficult by the symptoms alone" (in the acute stage) "to feel sure enough to be willing to operate. 'Rheumatic pains,' 'growing pains,' and neuralgia can be excluded by the presence of leucocytosis."

Second, Widal's reaction, if positive, should exclude osteomyelitis, but unfortunately Widal's reaction is seldom obtainable before the seventh day. When positive, however, it is a most valuable sign of enteric fever, and but few errors have been made in diagnosis.

Flexner's case, occurring at the Johns Hopkins Hospital, in which the symptoms were obscure, gave a positive Widal reaction, and showed no intestinal lesions at autopsy, but large numbers of typhoid bacilli were found in the gall-bladder (Thomas, *Medical News*, March 26, 1898). Thompson (*Medical News*, October 30, 1897) cites the case of a young man with typical symptoms of typhoid, without hæmorrhage or rose spots, with a very positive Widal reaction and a painful swelling over the right shoulder, of several months' duration, which troubled him little otherwise. Aspiration showed pus, which was evacuated from an extensive suppurating deltoid bursitis. The temperature immediately sank to normal, and the patient promptly recovered. It is not stated in this report whether cultures were made from this pus which showed the presence of the typhoid bacillus, and no mention is made of the leucocyte count, so we cannot wholly find fault with the Widal reaction present; nor is it stated whether this patient had had typhoid previously, while the reaction is known to occur for years after an attack.

I am unable to find in the literature a case of typhoid osteomyelitis occurring independently of an attack of typhoid fever in which the Widal test was made. But Charles Simon is my authority for stating that a positive Widal reaction would not be present in such a case.

Third. The skiagraph would show areas of osteoporosis, perhaps beginning osteosclerosis, purulent periosteal excavation, and possible epiphysal separation or pathological fracture in bone-necrosis.

Acute rheumatism never assumes the grave aspect of a septic infection; it never goes on to suppuration; the pain is referred to joints, not to the shafts of bones; and, as a rule, several joints are involved, not one as is the rule in osteomyelitis.

Hayem (*Du Sang*, Paris, 1889, p. 917) and Osler (*Practice of Medicine*) call attention to the rapid

destruction of red corpuscles (of 1,000,000 or more) in acute rheumatism. The leucocyte count is less in rheumatism than in osteomyelitis. Of course, the skiagraph of a case of acute rheumatism would show nothing except, perhaps, the circumarticular and intra-articular exudation.

The absence of a high temperature in tuberculous epiphysitis, syphilitic osteochondritis, scurvy, and sarcoma should certainly exclude them from being mistaken for the acute stage of osteomyelitis. A sudden onset, and the skiagraph showing the usual limitations of the osteomyelitic process, and the insidious slow onset of tuberculous joint disease, which the skiagraph shows localized in the epiphysis, should clear up any doubt, especially when we bear in mind the negative leucocytosis found in tuberculous bone disease prior to abscess formation. Tuberculin would also give a negative reaction in acute osteomyelitis.

Scurvy gives a secondary anæmia but no high fever. The bleeding gums, echymotic spots, and subperiosteal hæmorrhages (clearly shown in the skiagraph), together with the exhibition of antiscorbotic diet, as indicated by the patient's age and history of feeding, should render this disease easily recognizable. Epiphysal separation is, however, common to both, but the skiagraph of scurvy shows no osteoporosis in the bone. Specific bone disease has the night pains, but neither the temperature, the tenderness, nor the extremely high leucocytosis that we find in osteomyelitis.

Finally, osteosarcoma shows a grave secondary anæmia, but rarely yields to a pyogenic infection, and has not a high temperature or the tenderness seen in osteomyelitis. The Röntgen picture would show no tendency to involucrum formation, simply a general, irregular osteoporosis. In either case, radical operation would be indicated, and would clear up all doubt.

In another paper I have dwelt on the diagnosis of these affections in nurslings (*American Journal of the Medical Sciences*, November, 1901).

I will quote the following cases from my wards in the Hospital for Crippled Children, to show the mistakes commonly made in diagnosis and in the general course of this disease:

CASE I.—I. F. G., a boy, aged four years, was admitted to my wards with the history of a fall down the steps. Did not complain for four days after the injury, when pain became most severe, but no treatment was instituted until brought to me three weeks after accident. The child was much emaciated, looked ill, and had a temperature on admission of 102° F. A large fusiform swelling of the right thigh about its middle and on the front and outer aspects was noted. It was resistant, did not markedly fluctuate, was extremely tender to the touch, and local heat was appreciable, but it had no redness or surface discoloration. The leg was flexed on the



CASE VI. - Osteomyelitis of the left tibia before operation, showing the limitation of the process at the epiphyseal line, with areas of osteoporosis and sequestration below. Line of involucrum clearly shown, and general induration of soft parts.

thigh and the thigh on the body; motion was possible at the hip joint, but not at the knee. The day following admission, the child was operated on under ether, and 150 cubic centimetres of pus were evacuated from the medullary cavity, and this showed, on culture, *Staphylococcus pyogenes albus*. The entire periosteum was separated, the bone had undergone pathological fracture, and both epiphyses were involved. Large quantities of necrosed bone were removed by chisel and curette, the whole was swabbed with pure carbolic, washed out with alcohol and bichloride, packed with gauze, and a posterior opening made to facilitate drainage. The child rallied from the operation, but seemed thoroughly infected, and had a temperature which averaged from 100-104° F. for thirty-seven days, during which time we freely used stimulation and salt solution infusions. Shortly before death, which occurred very suddenly, the temperature was 103° F., and rapidly fell to 95° F., where it remained for three hours before dissolution, from fat or septic embolism.

In contrast I will recite the following:

CASE II.—H. K., girl, aged eighteen months, injury supposed to be due to a fall. Had walked, but suddenly stopped walking, and swelling appeared in left thigh. Operation within a week of onset of bone trouble. Localized abscess found in diaphysis under periosteum near upper epiphysal line; curetted, drained, etc. Healed in two weeks. All motions much restricted at hip joint. Spent the summer at Mountain Hospital, where traction and rest were used, and in the fall, the motions were: Flexion, 40°; abduction, 35°; rotation, 60° outward; 85° inward.

The patient was discharged with three eighths of an inch shortening.

The following case I will mention to show what osteomyelitis may be treated for previously to a correct diagnosis being made:

CASE III.—W. R. C., a boy aged four and a half years, was dropped by his nurse. Pain in right thigh and fever followed. First treated for "chills and fever"; secondly, for "white swellings"; thirdly, for "fracture," which had occurred pathologically, and was cut down on, to wire fragments, when dead bone was found and partially removed by the family physician.

CASE IV.—J. K., a boy, aged ten years. A bucket of coal fell on his left tibia seven days before admission. Onset sudden, pain intense, temperature 103° F., on admission. Diffused redness, swelling, and tenderness, from knee to ankle; synovitis of knee made out. *Had a boil on left buttock*. Immediate preliminary operation by incision through periosteum from knee to ankle, partial relief. Osteomyelitis in right clavicle noted. Later, skiagraph showed extent of lesion, and thorough curetting of upper two thirds of the tibia and acromial end of the clavicle resulted in full restoration of function. Synovitis cleared up spontaneously.

This next case I add to show the possible action of cold in producing these cases, and also the value of skiagraphs in diagnosis and localizing lesions:

CASE V.—E. T., a girl fifteen years old, with remote phthisical family history. Temperature on admission, July 29, 1901, 99½° F. On May 1st a horse ran away with the child, and she was thrown out of the vehicle; she complained of backache and drowsiness. Two weeks later she went to a party, got very wet going, and spent the evening in damp clothes; could scarcely walk home from "rheumatic pain" in left hip, which was followed in two weeks by swelling, and in three weeks from onset the right clavicle became swollen.

The thigh became flexed and adducted, and the attending physician tried forcible straightening with great increase in pain. The temperature ran from 101° to 104° F., sweats and emaciation set in rapidly, and morphine was freely used. The child was brought to me, not for operation, but to correct the malposition.

The leucocytes numbered 10,000, and the temperature was low on admission, so it was decided not to operate immediately at any rate. Traction was then employed, the subacute pain then present subsided, the swelling disappeared, and the malposition was overcome, but the trachanter was found one inch above Nélaton's line. The clavicle, remaining acutely inflamed, was incised and curetted, healing kindly. The skiagraphs showed the indurated clavicle and the probable involvement of the ilium at the upper and posterior lip of the acetabulum. As motion was now fairly good, the general condition excellent, and the parents desired me to avoid operation on the hip joint, it was decided to await some irritation from the necrosed bone before cutting down on it, and, for the present, to keep the patient under observation.

CASE VI.—R. S., a girl sixteen years old. In the skiagraph her knees are shown, the result of an osteomyelitis of the lower epiphysis and diaphysis during the first month of the patient's life, with an abnormal deepening of the intercondyloid notch, a scar in the bone, possibly of pathological fracture, and distortion of the external condyle.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE.*

A PRELIMINARY COMMUNICATION.

By RAMON GUITÉRAS, M. D.

NEW YORK.

From the first beginnings of the healing art, surgery has been gradually and insidiously, but none the less surely, invading provinces that had belonged solely to medicine; but never has this tendency been more forcibly manifested than during the past few decades.

A few of the more striking examples of this drift in the stream of medical progress will suffice to bring its existence to the realization of everyone who hears me to-day. The surgical treatment of appendicitis, of gallstones, of trigeminal neuralgia, and of epilepsy have all in their time aroused enthusiasm and evoked hopes for the future of surgery as the

* Read at the annual meeting of the American Association of Genito-urinary Surgeons, held at Atlantic City, N. J., April 29 and 30, 1902.

supreme mistress over disease. But most striking of all are the advances made by surgery in two hitherto exclusively medical diseases—cirrhosis of the liver and Bright's disease.

In cirrhosis of the liver two procedures are now employed by surgeons. The first is the establishment of collateral channels for the portal veins by grafting an omental segment to the abdominal parietes, devised by Talma (3). The second is the scarification of the adjoining peritoneal surfaces of the anterosuperior aspect of the liver and of the diaphragm, for which we are indebted to Morrison (1) and Weir (2).

With the surgical treatment of Bright's disease I propose to deal to-day in a synthetic review of the work done in this direction in the past, a statement of the status of the question in the present, and, as far as I can, a forecast as to what the future may bring forth in the surgical treatment of a disease so intractable as chronic nephritis has been hitherto.

It is only within a comparatively recent period in the history of surgery that the kidney has been considered as a field for surgical treatment, and most of what are now regarded as surgical diseases of the kidney formerly belonged to the domain of the physician. To-day the only definition of the surgical diseases of the kidney that is broad enough to include all the possible advances of renal surgery is that which designates as surgical all those conditions of the kidneys that may require surgical treatment in any phase of their development. Since Simon first classified the surgical diseases of the kidney and formally recognized them as a part of general surgery, the onward strides of our art in dealing surgically with diseases of the kidney have kept pace with the advances of surgery in all its branches.

The first noteworthy publication in which the suggestion is expressed that a form of nephritis is amenable to surgical treatment is that of Reginald Harrison (4), who reports three cases of "albuminuria" which were cured by incisions into the parenchyma of the kidney. He attributed the success attained by these operations to the relief of the increased renal tension which accompanied the nephritides with which he had to deal. His three cases are of sufficient historical interest to merit brief notice here:

CASE I.—In 1878 a young woman of eighteen years complained of severe lumbar pain three weeks after a suspected attack of scarlatina. The urine showed albumin and casts. On exposure, the kidney was found to be very tense and was incised, with the expectation of finding an abscess. No suppuration was found. The wound was drained and healed. After the operation there was an increased secretion of urine and the albuminuria gradually and completely disappeared.

CASE II.—In 1887 a man, fifty years old, suffering from hæmaturia, renal colic, and temporary albuminuria, became worse after an attack of influenza.

Pain in the left kidney was found on palpation. Albuminuria became constant. Incision of the kidney was performed for supposed stone. Complete recovery followed.

CASE III.—In 1893 a woman, aged forty-four years, who had had transient hæmaturia and albuminuria for a year, became worse after an attack of influenza. There was constant albuminuria, and there was pain on palpation in the left kidney. An incision was made with idea of finding a stone. Nothing but nephritis was found. The cure was gradual and complete.

Harrison's three patients were operated upon apparently for other conditions than the nephritis, but the results noted involved a cure of subacute or acute infectious nephritis by nephrotomy, and were noted in the article as such. An important conclusion from his experience was also made by Harrison, namely, that interference with nephritis in one kidney benefited the functional condition of the other.

David Newman, of Glasgow (5), was the next author whose work gave a clue to the possibility of influencing the progress of Bright's disease by surgical operation. In two cases reported in this article nephropexy was performed for the relief of torsion of the renal vessels, causing albuminuria and the presence of casts in the urine. In both cases the albuminuria was transitory and concurrent with the attack of pain, and disappeared after operation. Newman did not make any epoch-making deductions from his experience, though it tended to show the influence of kidney fixation on nephritis, or at least on albuminuria.

Wolff (6) reported a number of operations performed by E. Rose for movable kidney. In a recent article by Edebohls (24) the statement was made that one of these cases was a case of chronic nephritis, and was cured by nephropexy. A very close search for this case in Wolff's lengthy article failed to show among the twenty-two cases reported any case that might correspond to that to which Edebohls refers, except one instance of movable kidney in which the organ was found atrophic (congenitally?). The urine was apparently normal. I was puzzled to know where to look for an explanation of this, as time was too short to investigate the matter further. For the present I think I am justified in excluding the Rose-Wolff case from my list of nephropexies followed by the improvement of a chronic nephritis.¹

There has been for some years a class of cases of chronic nephritis which often came under surgical treatment on account of being mistaken for surgical affections. I refer to those groups of chronic nephritis which are accompanied by hæmaturia and neph-

¹Since these lines were written there has come to my notice an article by Dr. G. M. Edebohls (*M. Rec. A.*, 1902, April 26th) in which the author gracefully admits that he mistook Wolff's report of a case with atrophied kidney for one of interstitial nephritis. The error was first noted, it appears, in Karel's translation of Edebohls's article of December 21, 1901 (24) in the *M. Rec. A.*, 1902, February, 1902.

ralgia. The literature of these cases is now abundant. As early as 1899, for example, Louis Mc-Lane Tiffany (8) reported a case of chronic nephritis accompanied by nephralgia in which the capsule and parenchyma of the offending side were incised with success. In 1886 Péan reported a similar case cured by nephrectomy. In a number of cases since then either nephrectomy or nephrotomy has been performed with considerable success in the presence of chronic nephritis accompanied by hæmaturia or nephralgia or both. Pousson (8), to whose own work I shall refer later, collected twenty-five cases of this class from literature (including two of his own cases). He sums them up as follows:

Hæmaturic nephritis, 10 cases.	{ 7 nephrectomies 2 nephrotomies 1 exploration	{ 2 deaths. 5 cures. 2 cures. 1 cure.
Nephritis with nephralgia, 2 cases.	{ 1 nephrectomy 1 nephrotomy	{ 1 cure. 1 cure.
Subacute infectious nephritis, 4 cases.	{ 4 nephrotomies	{ 4 cures.
Acute infectious nephritis, 9 cases.	{ 3 nephrectomies 6 nephrotomies	{ 3 cures. 2 deaths. 4 cures.

The mortality in these twenty-five cases was, therefore, only four, *i. e.*, 16%, if the three cases are excluded in which death was due to uræmia some weeks after the operation. A complete list of the cases will be found in Pousson's article (8). Among the first twelve cases in the table there were a number in which the presence of chronic interstitial nephritis was demonstrated beyond any doubt. It may be noted, however, that Pousson classes among these twenty-five some cases which belong properly to surgery alone, such as Weir's (11) and Israel's (12) cases of nephrectomy for miliary abscess giving rise to nephralgia. The compilation of cases by Pousson shows, however, that nephrectomy and nephrotomy have been performed since 1886 in a number of cases of chronic interstitial nephritis with hæmaturia or nephralgia or both, as well as in a number of cases of acute and subacute infectious nephritis.

But it is to be noted that in none of these cases, so far as I have been able to find, was nephrectomy or nephrotomy performed with the primary object of curing chronic Bright's disease. In all of them, including Harrison's cases already quoted (which are included in Pousson's list of twenty-five cases), the operations were performed for the relief of a suspected "surgical" condition of the kidney.

Formerly it was believed that all cases of unilateral hæmaturia or nephralgia were due to some "surgical" disease of the kidney, *i. e.*, stone, tumor, in-

fection, etc. It was afterward found that when in such cases the patients were operated upon by simple exploratory nephrotomy, the symptoms disappeared or at least improved, though no lesion of a surgical character had been found. It remained for Israel (13, 14, 15) to establish the fact that many of these cases were in reality chronic nephritides, and that the terms essential hæmaturia, nephralgia, angeioneurotic nephralgia, etc., which had been used to designate such cases, were frequently misapplied to cases in which the basis of the disease was chronic nephritis. A careful study of the literature of the subject, as well as of the fourteen cases of hæmaturia and nephralgia upon which Israel operated, showed that in only six such cases in the entire literature was the kidney found normal, and of these, four were not examined microscopically. In twelve of his fourteen cases there was distinct evidence of chronic nephritis. Of Israel's fourteen cases reported in his monograph (14) three patients died, two with severe double nephritis. Of the remaining eleven, six completely recovered, in three the symptoms recurred after prolonged intervals, and in two the nephrotomy was a failure.

According to Israel, therefore, nephrotomy is indicated in cases of chronic nephritis with hæmaturia or nephralgia, or both. Referring to the mechanism of action of his operations in these cases, Israel reminds us that it has been known for a long time that a chronically inflamed tissue may be made to retrogress toward the point of health by splitting the affected structures. By nephrotomy new venous channels, he thinks, are formed between the kidney and the surrounding structures, and then congestion, the primary phenomenon of inflammation, is relieved. He adds that the mere separation of the fatty capsule from the fibrous capsule is of benefit, as it tears some peripheral vessels and thus draws blood from the organ.

Though Israel insists that these hæmaturias and nephralgias are often due to chronic nephritis, and that nephrotomy is indicated whenever these symptoms become severe and medically uncontrollable, he refutes the charge made by Senator that he (Israel) aims at a surgical treatment of chronic nephritis. In a recent article (15), in replying to Senator in a discussion of the subject before the Verein für innere Medizin, January 20, 1902, Israel makes this disclaimer particularly emphatic (*loc. cit.*, p. 146, col. 1), and states that he never, with the exception of one case of nephritic anuria, has operated in cases of chronic nephritis unless they were accompanied by one or both of these symptoms in severe form, to wit: hæmaturia and nephralgia. "In this respect," Israel adds, "chronic nephritis is like cholelithiasis, for the presence of gallstones alone does not justify operation, neither does the

presence of chronic nephritis without hæmaturia and nephralgia justify operative interference."

That Israel's intentions have been misunderstood on many sides may be easily shown. Summing up what has been done in the way of treating nephritis by nephrectomy and nephrotomy, Naunyn (16), writing in November, 1889, says: "With these successes nephritis has, therefore, entered into the ranks of those diseases which, under certain conditions, *i. e.*, for the present, in cases accompanied by profuse bleeding, require surgical interference. This advance of surgery, in addition, opens a still wider path, and it was Israel's work that, here again, proved epoch-making. Nephrotomy may some day play a far greater rôle in the treatment of Bright's disease."

Before I leave the subject of nephrotomy in chronic Bright's disease accompanied by hæmaturia and nephralgia, I must briefly refer to the work of Malherbe and Legueu (17). These authors plead for a more restricted use of the term "essential hæmaturia," and show by clinical and pathological reports that renal sclerosis may be accompanied by severe hæmaturia. The operation they recommend for the so-called essential hæmaturias consists in exposing the kidney, and drawing it forward, exploring its surface, and noting the presence of adhesions or of mobility. If it is found movable, nephropexy should be performed, but in any case nephrotomy is indicated.

Pousson (18, 19), whose compilation of cases has already been noted (10), and Mongour (20) have reported their experience with nephrotomy in the treatment of chronic nephritis in the several papers referred to.

Pousson (18), in his recent article, sums up his surgical work on chronic nephritis and states that he has operated in six cases of Bright's disease. He reports briefly the histories of two cases, one of which he regards as cured. Three of his previous cases were: I. A nephrectomy for hæmaturia and nephralgia, performed June 13, 1889, followed by improvement. The kidney showed chronic interstitial nephritis (8). II. A nephrectomy for calculous anuria on the left side, reported in (8). III. A nephrotomy for unilateral nephritis with hæmaturia, followed by removal of the same kidney. The three cases reported in his last article (20) were nephrotomies for the relief of uræmic symptoms in chronic Bright's disease. Two of these were performed in 1901. According to Mongour (20), who comments on Pousson's work, nephrotomy tends to restore to a normal condition those parts of a kidney which are as yet fairly healthy. In chronic nephritis with a moribund patient, the kidneys may still contain, as has been shown experimentally, enough fairly healthy tissue to sustain life, if that tissue is given

a chance to return to a normal condition. Nephrotomy has the same effect upon renal tissue strangled by the tight-fitting fibrous capsule that bleeding has upon uræmia, *i. e.*, it removes toxines, and in consequence increases urinary secretion. He regards nephrotomy as an operation of emergency in desperate cases of chronic Bright's disease. Such cases are seen when the uræmia persists to such a degree that milk diet, bleeding and diuretics, artificial serum injections, etc., are of no avail; when œdema is pronounced and pulmonary, cardiac, and cerebral complications arise.

It will be seen that neither Pousson nor Mongour proposes to operate in chronic Bright's disease except by nephrotomy in cases of emergency, when the patient's life hangs in the balance.

Ferguson (25) reported two cases in which he operated early in 1899. These cases may be briefly summed up as follows:

CASE I.—Exposure to cold, followed by pain over the left kidney for three years. No albumin, but scanty urine and hyaline casts. Kidney exposed and decapsulated. Stone in the kidney had been suspected. The pathological report showed chronic interstitial nephritis. Cure.

CASE II.—Chronic pain over the right kidney for two years. Acute exacerbations. Septic kidney suspected. No albuminuria. Decapsulation followed by relief of pain.

In this paper Ferguson (June, 1899) expresses the idea that chronic nephritis should be treated upon the same surgical principles which are applied to control of inflammation elsewhere in the body. This may be done by relieving tension and draining off the inflammatory products by aspiration, puncture, scarification, free incision and drainage.

Before considering the latest phase of the question, renal decortication, performed specially for the cure of chronic Bright's disease, I may briefly sum up the net results of the work of the authors quoted above, since the time of Harrison. It appears that if we exclude the cases of chronic nephritis accompanied by hæmaturia and nephralgia, in which Israel operated by nephrotomy for the relief of these symptoms, there were no recorded cases of operations performed specifically for the cure of chronic Bright's disease. The cases reported by Harrison were of an acute or subacute type, and his underlying principle was relief of excessive renal tension.

The cases reported by Newman were fixations for movable kidneys, in which incidentally improvement in the nephritic symptoms was noted. The case of Rose, reported by Wolff, was not one of chronic nephritis, as I have shown above. The twenty-five cases collected by Pousson include a number of cases in which clear lesions of interstitial nephritis were present, but in all of these the operations were performed (nephrectomies and nephrotomies) under the sus-

picion of a "surgical lesion." The same is true of Ferguson's cases. Pousson's cases, reported by himself and by Mongour, were undoubtedly cases of chronic nephritis, but the operation in these cases (nephrotomy) was undertaken as a procedure of emergency in the presence of severe uræmic symptoms.

It is therefore with great satisfaction that I am able to say conscientiously that Edebohls, of New York, is entitled to the full credit of having been the first actually to perform an operation on the kidney for the sole and primary purpose of curing chronic Bright's disease, and that his only possible competitors for this claim are Harrison, who operated in acute cases with the intention of relieving the symptoms and preventing their becoming chronic, and Israel, who operated in cases of chronic nephritis for the relief of hæmaturia and renal colic, and who himself emphatically disclaims any intention of introducing the surgical treatment of the type of cases of chronic nephritis.

To the work of Edebohls (22, 23, 24), therefore, we now turn as the most important contribution to our subject made thus far, in order to complete our study of the history and literature of the question as well as the consideration of its present status.²

Edebohls operated in eighteen cases of chronic Bright's disease, in fourteen of which the operation was bilateral, and in four unilateral. The examination of the urine, the previous history, and the appearance of the kidney at the operation were the chief factors in the diagnosis of these cases. In sixteen of these cases the operation was nephropexy (eleven unilateral, five bilateral) according to Edebohls's method, which involves denudation of about one-half of the cortex over the convexity of the kidney and its fixation to the inner surface of the abdominal wall in the lumbar region. In the last two cases simple removal of the fibrous capsule was used, the kidney being replaced in its fatty shell without suturing to the parietes. Of the eighteen cases, the right kidney was affected with chronic Bright's disease in four, the left alone in four, and both kidneys in nine, while in one case the unilateral or bilateral nature of the case remained undetermined. In six of the eight unilateral cases, the healthy state of the opposite kidney was confirmed at the operation, so far as unaided sight and touch could tell.

² These lines had been written and the paper had been made ready for presentation, when an article in defense of his claims appeared from the pen of Dr. G. M. Edebohls in the *Medical Record* of April 26, 1902, three days before the meeting. Readers are therefore referred to his article for a fuller exposition of the claims of Dr. Edebohls as to the priority of his work.

There was no mortality in these eighteen cases. Three cases were thrown out on account of the shortness of the time of observation. Of the remaining fifteen, there was only one failure to cure chronic Bright's disease by operation alone, without any other treatment. In the case in which the operation failed, the opposite kidney was removed by another surgeon, and the patient lived for five years thereafter with the one kidney which had been operated upon by nephropexy. The patient died after a hysterectomy. Summing up the results, Edebohls found that in eight cases which were observed for a sufficient length of time the albumin and casts disappeared from the urine, on the average, in four months and a half, the shortest time being one month, the longest twelve months. The average period of observation in these cases was forty-four and three-fourths months.

He concluded that chronic Bright's disease was curable by operation, though it is not said that Bright's disease will yield to surgical treatment in every case and in all stages. The present state of our knowledge will not, however, permit an exact definition of the limits beyond which the operation does not avail. His explanation of the action of decapsulation in such cases is that it provides for the formation of adhesions and the growth of new arterial vessels supplying the kidney with healthy blood, and contributing to the regeneration of the still but little altered parenchymatous elements, as well as to the absorption of the interstitial tissue, exudate, etc. In this respect Edebohls's operation is analogous to that of Morrison (1) for cirrhosis by scarifying the surface of the liver. The only contraindications, so far as known, are the impossibility of anæsthetizing the patient and the presence of severe symptoms indicating that the patient will probably not live for a month, as it takes this length of time at least to bring about an improvement.

The questions which arise upon a thorough consideration of Edebohls's work are so numerous that I cannot attempt to discuss them all here. Fortunately, most of these questions are theoretical, and so the operation from the practical viewpoint seems justifiable, in the light of the results already noted, in properly selected cases.

The first question is that of bilaterality, and here is a problem which has not been fully solved. Edebohls found, to his own astonishment, that in eight cases one kidney was the seat of chronic nephritis, in nine cases both kidneys, and that in one case there was doubt as to the bilaterality of the lesion. In six of the eight cases of single kidneys involved, the soundness of the other kidney was verified by operation.

I have begun to gather a large number of data involving a study of autopsy records in some of the

New York hospitals, with a view of establishing the proportion of unilateral Bright's disease. The time for this study has, however, been so short that I am forced to postpone the publication of the results to a subsequent communication. It must not be forgotten, in this connection, that even if the autopsy records show that chronic nephritis is almost always bilateral post mortem, this is not necessarily so in the less advanced cases. The only way to decide this would be to perform a large number of biopsies on the kidney, noting in each case the condition of both organs. If the practice of operating for chronic Bright's disease continues to extend, as it promises to do, such data will be accessible in a few years.

The next question is as to the difficulty of diagnosing chronic nephritis, and especially of distinguishing the various types of the disease on inspecting and palpating a decorticated kidney which has been withdrawn through the lumbar wound. Edebohls seems to consider this as a comparatively simple matter after some practice. I cannot agree with him that renal lesions are more easily distinguishable in life than post mortem, and I think that anyone experienced in post-mortem work and in renal surgery will bear me out in this respect. Israel, whose operative experience is certainly not to be lightly held, says emphatically (14) that chronic nephritis is much more difficult to distinguish in the living, even after splitting the kidney, than in the dead. How much more difficult, then, it must be to distinguish chronic nephritis without performing the "anatomischer Schnitt," but merely after stripping the fibrous capsule.

The theory of action advanced by Edebohls in explanation of his results is, of course, not a new one, at least so far as it pertains to other tissues and organs. In the case of the kidney it wants, however, experimental confirmation, and I have begun, in collaboration with Dr. G. A. Saxe, to work out the experimental side of the question. I hope that we shall be able to present our results in the near future.

My experience with surgical interference for the cure of chronic Bright's disease has been limited to three cases, in all of which the time of observation has been too short to warrant any personal conclusions.

My first patient was a baker, aged seventy-nine years. He was transferred to me, as having prostatic hypertrophy, for removal of the prostate. His principal symptoms were headache, dizziness, and frequent urination (seven or eight times during the day and two or three at night).

On examination, he was found to be a man of medium stature, well nourished, with no evidence of oedema save under his eyes, where a marked puffing of the skin was present. His kidneys could not be palpated. His external genitals were normal, his prostate was slightly enlarged as felt by rectum,

and his urethra was of normal size. Bladder examination showed the presence of two ounces of residual urine, but otherwise was negative. Examination of the urine passed in twenty-four hours showed the amount to be ninety-five ounces; the reaction was acid, the specific gravity 1.016, the urea 1.27%, the presence of albumin evidenced by marked reactions and estimated by Esbach's method at 0.125 gramme in a litre. The sediment showed epithelium from the bladder and the renal pelvis and many hyaline and granular casts. The patient was therefore suffering from chronic nephritis, in addition to his prostatic hypertrophy, although his bladder was in good condition, was not inflamed, and contained only two ounces of residual urine.

Here, then, was an interesting problem. The chief danger of prostatectomy lies in the kidneys, and it is important to have sound kidneys before an operation is attempted. It therefore appeared to me justifiable to operate upon his kidneys first, and having improved them as much as possible, then to operate upon the prostate.

Accordingly, the kidneys were exposed by vertical incisions in the lumbar region. In both, the fatty capsule was found to be markedly adherent to the capsule proper. The pedicles were short, and on this account the kidneys could not be drawn outside of the parietal wound, as had been intended. The capsula propria was not, however, very adherent to the parenchyma, the scissors being needed but twice. The kidneys were both mottled, dark gray, or bluish-black, and there was a considerable amount of oozing of blood from the denuded surface. The capsula propria was cut away from the fatty capsule by means of curved scissors. The kidneys were then both replaced, and the fatty capsule, the fascia, and the skin were sutured separately.

The urine was diminished to about one half its wonted quantity for a few days after the operation. The color was higher, the specific gravity was raised, and there was a considerable amount of blood, renal epithelium, and casts. The last specimen, obtained about one month after the operation, showed an acid reaction, a specific gravity of 10.15, 2.1 per cent. of urea, a faint trace of albumin, no renal epithelium, and a few hyaline and granular casts. The patient's recovery was uneventful. The wounds healed by first intention, and he was up and about in two weeks. The improvement, as shown by the urine, was more than could be expected in a man of his age, but time alone will tell whether this improvement will continue and ultimately lead to a cure, or whether he will become worse after a temporary improvement. I may here add that his prostatic symptoms have all disappeared and that he urinates normally.

The second case was that of a woman, thirty-five years of age, who showed much more marked symptoms of Bright's disease than the first patient. She complained of pain in the right side of the abdomen and loin, and of headache and indigestion, extending over a period of several months. Examination showed her heart and lungs to be normal, her pulse to be 90, full and strong, arteries healthy, temperature 98.2° to 98.6° F. The urine was clear, acid, of a specific gravity of 1.026, contained a large amount of albumin, hyaline, granular and epithelial casts, and renal epithelium. Unfortu-

nately, no quantitative examination of the urea was obtained.

On palpation, she was found to have a movable kidney, and, profiting by my former experience, as well as by the experience of other surgeons, that movable kidneys are apt to become affected with nephritis and that splitting the capsule and peeling it back for some distance and anchoring the kidneys tend to improve their condition, as regards both the mobility and the nephritis, I performed nephropexy on the affected side, with the object of relieving the symptoms and curing, if possible, the nephritis. The kidney was larger than normal, perhaps owing to a diffuse nephritis. The patient was operated upon but two weeks ago, and, while she is progressing well, the report of her further history will be given in a later communication.

The third patient was a housewife, forty-four years of age. She was able to be about and to do her household duties, and complained of nothing but cedema in her feet and ankles, which would settle in her external genitals and buttock at night. She was well nourished, and had normal lungs and heart, and a regular pulse of good tension, ninety to the minute. Her urine was a pale yellow color, acid in reaction, of a specific gravity of 1.010, contained only 0.8 per cent. of urea, hyaline and granular casts, and a large amount of albumin, 3 grammes to the litre.

After consultation with the visiting physician and the visiting gynecologist of the hospital, it was decided to operate under chloroform instead of ether, on account of the unfavorable condition of her kidneys and as her heart's action was comparatively good. The patient was brought upon the table, anæsthetized, and an incision was made over one kidney. Before the organ was even exposed, the pulse failed markedly, although the chloroform was being administered by an experienced man. The operation was immediately suspended, and even then it was with difficulty that the patient was resuscitated.

Several other patients have been referred to me for operation for chronic nephritis. In some of these, on careful examination, aided by thorough urinary analyses, I have not found sufficient cause to warrant an operation, while other patients were too advanced in uræmia or their hearts were not in sufficiently good condition to warrant an anæsthesia. It cannot be brought out too clearly, now at the early stage of the surgical treatment of chronic Bright's disease, that one should be very careful in his selection of patients to be operated upon, and should not regard every case in which a diagnosis of chronic nephritis has been made as suitable for operative treatment.

I may say in conclusion:

1. That nephropexy is always a beneficial procedure in a movable kidney in a patient suffering from chronic nephritis.

2. That nephrotomy has proved a valuable operation in unilateral chronic nephritis associated with hæmaturia and nephralgia.

3. That the value of a complete decapsulation of the kidney as a therapeutic measure in chronic Bright's disease has not as yet been determined, as

the procedure has not been employed extensively enough to warrant positive conclusions. With the exception of Edebohls's two cases, reported in December, 1901, and the case reported herein by the author, no reported instances of decapsulation pure and simple for chronic Bright's disease have as yet come to my attention at the time of writing this article, although perhaps the operation has been performed in a number of other cases of chronic nephritis.

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75 WEST FIFTY-FIFTH STREET.

WHY DOCTORS DISAGREE.

A PLEA FOR A MODERN CODE OF ETHICS.

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This is an age of electricity, machines, combines, and commercialism, and it behooves the progressive man of medicine to look ahead and not backward if he would keep pace with the times and in touch with the age.

Why doctors disagree has been a mooted question of long standing both in and outside of the profession, and the subject is well worthy the consideration of the most profound thinkers of the age.

While I do not feel prepared to solve this momentous question to the satisfaction of the entire profession, I hope it will not be considered presumptuous or impertinent on my part to offer a few practical suggestions along certain lines that may serve somewhat as a searchlight for abler minds who may be interested in this subject.

Having been an active participant for nearly twenty years in the emoluments, pleasures, and vexations that fall to the lot of an average general practitioner, and having been a pretty close observer of men and things, both in this and other countries, I feel as Martin Luther did on a certain occasion when he said: "I have a certain right to my opinions, even though the devils of earth and hell oppose me."

We have in our profession doctors of various types. We have Dr. Loyal, Dr. Ethics, Dr. Wise, Dr. Bigbiz, Dr. Monopoly, Dr. Gossip, Professor Blow-horn, Dr. Busybody, Dr. Jealous-Eye, Dr. Commercialism, and old Dr. Knowall. When we consider such a variety of characteristics in one profession, is it any wonder that doctors disagree?

In the city of Philadelphia, in the year 1847, a convention of reputable medical men was held for the purpose of formulating a code of medical ethics for the future guidance of the medical profession of that age. Fifty-four years have elapsed since that code was formulated. The charter members of three-fourths of the State medical associations of the United States were suckling babes when that code was written. The oldest members of the American Medical Association, with few exceptions, were not over twenty-one years of age.

In that age there were no specialists, no sanitariums, but few hospitals, no railroad corporations, no clubs or social advertising rings, cliques or combines of commercialism. No Homeopaths, no Osteo-

paths, Christian Science Healers, etc. Dentistry and pharmacy were unborn. Doctors of medicine were as scarce in that age as our LL. D.'s are in the present age. There was one doctor to every three thousand inhabitants. At the present time there is one doctor to every six hundred inhabitants. In other words, it requires five doctors with all the modern achievements, etc., to do the work now that one doctor did fifty years ago. The medical colleges, although the requirements are severer than formerly, are turning out six thousand graduates a year. If this continues, how long will it be before there is one doctor for every one hundred of the population?

Considering these facts and the vast array of changes that have taken place in the various attitudes of the profession toward the outside world, is it not natural to conclude that important changes in the old code of ethics are essential? Should we not keep pace with the times by so modernizing our code that the profession may be harmonized into one grand body of brethren? We want a code that will grant equal rights and justice to all and special favors to none; a code that will foster brotherly love and fraternal courtesy toward every reputable graduate of medicine in the United States; a code that will discountenance cliques, rings and clubs whose object is commercialism, selfishness, and self-advertisement.

For the past fifty years the question of medical advertising has been agitated. There is not a single meeting of the American Medical Association that this great question is not brought up for discussion, and, like Banquo's ghost, it will not down. There is a wide difference of opinion as to what constitutes medical advertising. This is a most vital question of the present age, and I hope we have men in this society whose minds are sufficiently clear and matured to give this question a thorough ventilation, and that this society will take the initiatory steps toward bringing about such reforms and changes in the old code as will redound not only to her honor, but to the elevation of the whole profession of medicine. On account of the sentimental reverence cherished for our dead forefathers who participated in the formulation of that ancient writing of 1847, which seems to carry with it some of the sacredness of the Declaration of Independence, our modern thinkers fail to comprehend the importance of a modern code of ethics for the guidance of the medical profession of the present age. We need a code that will treat specifically on the many mooted questions of the age.

For a member of the medical profession to deliberately say that he does not in some way advertise himself or his profession to the public, or is not pleased in seeing his name occasionally in a newspaper, associated with an important surgi-

cal operation or with the illness of a distinguished patient, that good brother deliberately exaggerates. "All roads lead to Rome," and it is by no means necessary that a physician should always advertise in a newspaper or by handbills in order to accomplish his ends, nor does it always follow that he is unjustified or unworthy of professional respect, because, under the stress of his environments, he makes himself better known to the world by a judicious announcement of *who*, *where* and *what* he is.

We have men in the profession who consider a professional card in a newspaper a flagrant violation of the code of ethics, yet these ethical gentlemen, who are usually well known and well established in their community, never lose an opportunity to secure free local puffs in a daily newspaper.

This is the class who would say to the new doctor who has just located: "Sit thou supinely down and let the community remain in 'blissful ignorance' of thy presence."

Many worthy practitioners who have spent long years of arduous toil in preparing themselves for their life's work, on the success of which their own existence and possibly that of their families depends, are confronted by this class of professional shysters as well as by many other unhallowed obstacles, such as free clinics, free dispensaries, and a host of charitable institutions which treat not only the deserving poor, but in many instances those who are amply able to pay for professional services. Away with a code of ethics that takes no cognizance of such inconsistencies.

Dr. G. Frank Lydston writes in the *Medical News* as follows: "It is my belief that our forefathers when they wrote in the old code 'Thou shalt not advertise,' wrote in a Pharisaical spirit, without realizing the magnitude of the subject." Dr. Lydston further says: "This is the cloak for more hypocrisy on the part of the medical profession than anything ever written." He further states: "Whatever the conditions may have been at the age in which that code was written, conditions are such at the present age as to absolutely demand advertising of one kind or another. Many men attempt to gloss over this, but they are advertising themselves in various and peculiar ways." Some attend medical conventions as an advertisement of their importance, and make great efforts to have their discussions and addresses paraded before the public in a secular newspaper. We want a code that will teach the difference between newspaper puffs, unpaid for, and newspaper cards or announcements, paid for, with their relative application to a new doctor who has just located in a new field, and to an old doctor who is well known and well established in the community. We also want the code to teach enough common sense etiquette to those who are too selfish in their make-up

to know whose duty it is to make the first "courtesy call" when a new doctor locates in a new field. These are very important matters that are omitted entirely from the old code of ethics.

I am acquainted with a certain city, in a certain State, where the doctors have passed a law not to recognize any doctor who locates in that city until he has paid them the homage and honor of a personal call. This is not only contrary to common social etiquette, but to common sense as well. In this same city of 20,000 inhabitants there are forty doctors. There are two medical societies and about fifteen medical factions. The latter consist of from two to four doctors who have agreed to meet each other in consultation when necessity demands it, but these must not consult with any of the others nor with any new doctor without special consent from the *faculty*. And if called to meet a new doctor in one of their own families, it is understood that a change of diagnosis is the first essential step toward crippling the influence of the new doctor.

This is not an overdrawn picture, but is as true as life. These medical men scarcely ever attend any medical conventions. Only ten of the number are members of any State medical association, and only three out of the whole forty are members of the American Medical Association, and rarely attend the meetings. Is this not a pretty state for educated men of a great profession to be in?

We want a code of laws that will reach just such a class as this and bring them into the fold and fellowship of the rank and file of the profession. My recent experience abroad, fellowshipping with the various nationalities of medical men while attending the International Medical Congress on Professional Medicine and the Thirteenth International Medical Congress in the city of Paris, made profound impressions on my mind. Among the many important things I learned by association was the great liberality and high toned courtesy and genuine hospitality exhibited in the medical profession abroad.

Being an American and from a section of country where commercialism and petty jealousies exist in the very atmosphere, I was unprepared for such a high state of clever civilities. I know of nothing that helps a doctor to get out of his narrowness of mind and heart more than frequent association with the rank and file of the profession. Then, on the other hand, I know of nothing that keeps a medical man down and constantly under the influence of the "green-eyed monster" more than staying at home and holding himself aloof from the meetings of the various medical associations that are constantly being held, both State and national, within a few hours' ride from his door. We want a code of laws that will be so attractive and important to medical men that it will bring them out to the annual conventions

of our State and national associations. By doing this we can solve a part of the problem of "why doctors disagree."

The struggle for existence in the medical profession has always been a sharp one, and in the present age it is rapidly growing keener each year.

From the earliest historic times, physicians have been the promoters and conservators of the best interests of humanity. So intent have they been in seeking out the causes of disease, in relieving human suffering and pain and battling with the grim destroyer—death, that they have neglected their own material welfare and have permitted a horde of parasites and vampires to fasten themselves upon humanity and to absorb many of the benefits which rightfully belong to regular physicians.

Mankind has always, more or less strongly, believed in an intangible, supernatural causative factor in the production of disease, and even at the tensely practical people this tendency is shown by present time among our own progressive and in-

The regular medical profession has always had the innate superstitions and prejudices of mankind to contend with, and has never received that degree of public recognition and support that its gallant fight against disease has merited.

Why is this the case? Why is it that the medical profession is not represented in the Cabinet at Washington? These questions are very practical, but I shall not attempt to answer them here. My better judgment, however, whispers to me that the medical profession of the United States needs a national code of laws, like unto that of Germany, that will reach every class and kind and be the means of uniting the entire profession into one great whole. Until this is done it cannot hope to attain that prominence to which it is justly entitled. In the great empire of Germany the medical profession is supported and honored for her true worth. All the medical institutions, hospitals, etc., are amply equipped and supported by the government. The true medical man is honored for his ability and protected by the government. He is encouraged to make research for the cause and cure of disease by rewards of distinctions and high honors from the government of that up-to-date country. If the United States government would do itself, as well as the medical profession, the honor of following in the footsteps of our Fatherland, it would only be a matter of time when the medical profession of the United States would excel the world in matters of scientific research. Then there would be less occasion for so much strife and bitter antagonism as exist in the profession at the present day. Competition would be of a higher type and on more honorable grounds.

If it is within the province of the code to teach medical men to be consistent and courteous toward

each other, we also need one that will teach them the very great significance of inspiring their patients with a sufficient amount of confidence in their skill to prevent them from becoming discontented with their services, and on account of this discontent consulting Dr. Newcomer or Dr. Last.

Here lies the sacred key that unlocks the main cause of doctors' quarrels, jealousies, and misunderstandings, and unless we can formulate a law and have it enacted by the State Legislature to debar a sick man of his natural privilege of consulting whomsoever he pleases, we need not expect to smooth over the idiosyncrasies of some medical men.

Strange as it may seem, the tendency on the part of many doctors is to blame Dr. Last for all the losses in their patronage, when in reality it is all their own fault in not being able to hold their patronage after once securing it.

"The mills of the gods grind slowly,
And the fittest only should survive."

22 SEVENTH AVENUE.

HYPNOTISM, A USEFUL AID IN THE TREATMENT OF MORPHINE HABIT.

By SIGMUND A. AGATSTON, M. D.

NEW YORK.

To overcome a habit, whether of a most trivial character or one which seriously impairs the mind and body, requires, as we all know, an extraordinary struggle. Even so simple a habit as that of biting the finger-nails takes a wonderful hold on its victim, clinging to him for years, in spite of his repeated efforts to free himself from it. Yet it is hardly fair to compare this to a habit, the mastery over which necessitates the maintenance of a moral strength in the face of physical suffering, the severity of which may be appreciated by those only who have experienced it.

Of all habits, the customary use of morphine is one of the worst, frequently resulting in a physical and moral wreck, examples of which are of very common occurrence. Most practitioners recognize the difficulty of its treatment; some even go so far as to declare that it is impossible to effect a cure. This is certainly true of a great many cases.

It is, therefore, not amiss to mention any modification in the treatment which may prove of benefit. It has, within the last year, been my good fortune to treat one case, of the permanency of the cure of which I am absolutely certain. The reason that I wish to speak of this case, in particular, is, because I ascribe my success largely to the use of hypnotism as a hypnotic and sedative.

Recently I tried the same treatment in a mild case with equally good results.

CASE.—The patient was a woman aged thirty-

Therapeutical Notes.

eight years, accustomed to taking 25 grains of morphine within twenty-four hours. I gradually reduced this within two weeks to half a grain, and within another week to zero. The suffering was intense. The nausea, vomiting, diarrhoea, colic, insomnia and restlessness, nearly unsettled her mind. At the end of a few days she was completely exhausted and on the point of giving up the treatment. Drugs used, such as antipyrine, hyoscine hydrobromate, belladonna, sulphonal, trional, aromatic sulphuric acid, etc., failed to relieve any of the distressing symptoms. It was then that I thought of hypnotism. When I first mentioned it to the patient she was inclined to ridicule the idea, stating that she did not think it was possible to hypnotize her. But, on the contrary, I found her a very easy subject and put her into the hypnotic state in very short order. I then made the suggestion that she sleep for eight hours, awaking at a certain hour. The patient slept for two hours and was then aroused by some noise in the house and spent the rest of the night in misery. The next night I made a similar suggestion, being careful this time, however, also to suggest that she be unable to hear any noise or feel any pain, and that she awake feeling better and refreshed. The patient followed the suggestion to the letter. She soon, however, returned to the colic, vomiting and diarrhoea, but, having had a night's rest, she was better able to stand the strain and was encouraged to continue the treatment.

From this time on I hypnotized her every night, as I found that a suggestion for the following night would not have any effect. Sometimes I would omit a night, substituting sulphonal and trional, but that would never give her any more than an hour's sleep, and she would continue to have pain, vomiting and diarrhoea during the sleepless hours.

Of course, by this time I had got the patient completely under my control, and could do with her almost anything I chose. Thus, I could put her to sleep for five or ten minutes at a time and take away a headache, or similar ailments.

It is plain, therefore, that hypnotism, in this case, could not have been replaced by any other means of relieving the symptoms.

After the last dose was discontinued the insomnia persisted for quite some time, but soon began to respond to sulphonal. The patient then went to the seashore, and as the general condition improved, the insomnia disappeared. It is now over a year since she has taken morphine. She feels perfectly well and has no desire for it.

In conclusion we may state that, while hypnotism cannot cure a morphine habit, it will be found an invaluable adjuvant in a treatment which is extremely trying to both the patient and the physician, no matter how great the will power in the former and the determination in the latter.

50 WEST 112TH STREET.

The Colorado Board of Medical Examiners.—The Colorado State Board of Medical Examiners have elected the following officers: President, Dr. Miller, Laramie; secretary, Dr. G. P. Johnston, Cheyenne; treasurer, Dr. E. E. Leever, Spring Valley.

The Treatment of Toxic Amblyopia.—Dr. Terrien (*Progrès médical*, April 19th) has followed for long periods the cases of patients who, after having had a large scotoma for white and colors, have regained good central visual acuteness. It is, of course, essential that tobacco and alcohol should be foregone. For the phenomena of general intoxication, when the patient has insomnia and agitation, he prescribes at first small doses of opium or potassium bromide. A little later he employs strychnine, either hypodermically or in pills. The former method he considers preferable, the dose being from 1-65, in cases reaching to 1-35, of a grain.

The following is his formula for pills:

R Strychnine sulphate. . 1-65 of a grain
Amorphous quassine. . 1-6 of a grain
Powdered rhubarb. . . q. s. to make one pill

M. ft. pil. Two or three daily before meals. In addition, where practicable, he employs weak continued electrical currents, one electrode on the forehead, the other moved alternately under the two eyes. The current should not do more than cause a faint tingling, and should be stopped on the least sensation of pain.

Kauri Resin.—(According to the *Formulaire des médicaments nouveaux*, 1902, p. 229.) This resin is derived from a Conifera, *Dammara australis*, Don., habitat New Zealand, New Caledonia, etc., and occurs in two varieties. One is a fossil resin which is highly valued in commerce under the name of gum kauri; the other is the resin as recently gathered from the tree. The latter is soluble in 90 per cent. of alcohol, ether, and slightly in turpentine. By dry distillation, it is found to contain an oil called dammarol, an acid resin, dammaric acid, which occurs in the form of crystalline salts, and a neutral resin, dammaryl. The resin is recommended by Forne in cutaneous affections as a substitute for collodion and traumatine. It is also given internally in vesical catarrh with favorable results. The syrupy alcoholic solution may replace collodion in the treatment of wounds, and tincture of benzoin in the treatment of dental caries. A solution of this resin in its essential oil may be used in histological technics, instead of Canada balsam.

Menthol in the Treatment of Cough.—According to Sanger (*Therapeutische Monatschrift*, July, 1901) menthol is a valuable remedy in the symptomatic treatment of cough. It is an non-toxic anæsthetic and calms the irritation of the air passages as well as does morphine. A few crystals of menthol are placed on a spoon and heated over a lamp or stove for from five to twenty seconds. In this way a sufficient amount of menthol vapor is produced for the patient to inhale. A solution of menthol in alcohol, in the strength of from 40 to 50 per cent., may also be used, from 10 to 20 drops being placed in the hollow of the hand and thus inhaled. In order to remove the mucus which lines the bronchi and sometimes interferes with the action of menthol, injections of mentholated oil may be given, thus evoking a cough which serves to remove the mucus.

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THE ARMY COMMISSION'S WORK IN
YELLOW FEVER.

For the information of those of our British brethren who may not have had access to the various American journals in which from time to time the results of the commission's investigations have been recorded, Major Walter Reed, of the Medical Department of the United States Army, the president of the commission, has prepared a succinct account of its researches, and it is published in the April number of the new English quarterly *Journal of Hygiene*. The résumé given by Dr. Reed, written in a very clear and readily comprehensible style, might be read to advantage by his own countrymen as well as by the British.

The commission first satisfied itself by a number of experiments that yellow fever could be conveyed from one person to another by injecting subcutaneously a little of the blood of a person sick with the disease, so that the inference was justifiable that the *materies morbi*, whatever it might turn out to be, must be contained in the blood, even if it was also lodged in other fluids or in certain tissues of the body. A bacteriological study of the blood of yellow-fever patients was then made, with particular reference to Sanarelli's *Bacillus icteroides*. In no instance could a culture of this organism be grown from the blood. Indeed, no other organism that the disease could be imputed to was susceptible of cultivation from the blood, although all known media were employed industriously. Many experiments were made to test the question of infection by fomites, and the results furnished very strong evidence that the disease could not be conveyed by their agency. It was shown conclusively that non-immune persons could with impunity sleep in a bed

that had immediately before been occupied by a yellow-fever patient or wash the linen or bedclothing of such a patient. Now, Sanarelli's bacillus has often enough been found in the excreta, and, that being the case, one would feel sure that soiled clothing would prove a fruitful means of spreading the infection if that organism were really the cause of the disease.

Dr. Reed is inclined to believe that the pathogenic organism of yellow fever is too minute to be isolated with the aid of any means now at our command—"ultra-microscopic" he calls it. The commission was impressed with the idea that an intermediary host must harbor this minute organism, and the medical world is now fully aware of the demonstrated agency of *Stegomyia fasciata* as that intermediary host, but it cannot yet be asserted, says Dr. Reed, that other mosquitoes than those of the genus *Stegomyia* are incapable of playing the same part. The length of time that infected mosquitoes may survive and continue dangerous as a source of infection may readily account for the old theory of infection from fomites, which held persistent sway up to the close of the war with Spain.

The work of the commission cannot be too highly commended, and the profession, we think, is under a separate obligation to Dr. Reed for having given such an admirable account of it. We must add that great credit is due the brave men who suffered themselves to be subjected to experiment in aid of the work, three of whom, including Dr. Jesse W. Lazear, a member of the commission, forfeited their lives as a consequence.

THE MODERN AMBULANCE SERVICE.

The use of the ambulance wagon in civil life is undeniably one of the greatest of recent advances in the work of rendering prompt assistance to the sick and injured. It is not to be doubted that the efficiency of an ambulance service has a demonstrable influence in saving life and in lessening suffering. New York may well be proud of having been the first city in which a civil hospital ambulance wagon was made an adjuvant to hospital work. Bellevue is credited with having initiated the service, in 1869. All the large hospitals in New York soon followed the example set by Bellevue, and so they did in other cities, so that now it is a matter of course to summon a hospital ambulance

wagon whenever a person is severely injured or suddenly taken ill and needs to be conveyed as promptly and comfortably as possible either to a hospital or to his home. The younger members of the profession perhaps do not fully appreciate the importance of the advance that has been made in this matter, for they do not remember the old days when a passing express wagon or even a truck was impressed into temporary service whenever a street accident resulted in a severe injury.

Almost year by year our ambulance service has gone on improving, chiefly perhaps in the direction of better construction and equipment of the wagons. The recent gradual replacement of horse vehicles by motor wagons and the adoption of rubber tires are elements of improvement that should not be underrated. But with all this we must not regard our service as perfect; still other improvements are to be looked for. It seems that in one or two respects Boston can give us a lesson. Dr. Francis D. Donoghue, of the Massachusetts Emergency and Hygiene Association and chairman of the association's committee on lectures to policemen and firemen, gives in the *Boston Medical and Surgical Journal* for May 8th an interesting account of the satisfactory working of a police adjunct to the ordinary ambulance wagon service. The police patrol wagons of Boston have been so altered as to fit them to convey the sick and wounded, thus adding materially to the ambulance facilities of the city. The ambulance surgeon is lacking on these wagons, but, inasmuch as the driver and helper of each wagon hold diplomas for emergency work, Dr. Donoghue thinks that the patients must rarely suffer from the lack of "first aid." The service has been so improved in Boston, he says, that the extreme limit of time that any sick or injured person need remain without transportation, after a policeman or the police department has been notified by telephone, has been reduced to seven minutes. This reduction is doubtless owing in great measure to the establishment of the patrol ambulance wagon. We know of no reason why similar arrangements should not be made in other cities.

BOVINE TUBERCULOSIS AND LEGISLATION.

A French physician, Dr. Paul Garnault, seems greatly exercised lest the laws intended to protect the French people against tuberculous disease of

bovine origin may be so modified as seriously to impair their efficiency, or else lest the government, always, he intimates, glad of an excuse for laxity in their enforcement, may allow them to become practically a dead letter. The immediate occasion of his alarm, as expressed in an article contributed by him to the *Progrès médical* for April 26th, is the attitude taken by one M. Denis in the Chamber of Deputies recently. M. Denis, it seems, is not a believer in the transmissibility of tuberculous disease from cattle to human beings, and he rests his unbelief largely on Koch's famous contention before the British Congress of Tuberculosis. He denounces the French protective enactments as severe and uncalled for, and seeks, according to M. Garnault, to make a political issue of the question, being himself a member of the opposition. M. Garnault, on the other hand, not only declares that the legislation of 1888 was none too severe, but says that it was not strict enough. The worst feature of the situation, he adds, is that, whether it was severe or not, it is not seriously enforced. Neither political party, he avers, ought to be able to profit by legislation one way or the other upon such a subject, for, as he puts it, "tuberculous milk from the stable of a Republican is just as dangerous as that from the stable of a Conservative."

Koch and those who profess their agreement with him to a greater or lesser extent have not, we believe, made any notable impression on those who entertain the fear that tuberculous cattle are a menace to the health of persons who consume food products furnished by them. Experimental inquiry has been notably stimulated, and that is to be welcomed rather than deprecated, for a question of such close bearing upon the elucidation of the causes of human tuberculous disease cannot be too rigidly investigated from all points of view. Not until it has been absolutely demonstrated that bovine tuberculous disease cannot be communicated to the human subject can any community afford to relax its laws for the prevention of such transmission. We see no indication at present that any country will do so. In Germany, if anywhere, Koch's argument was likely to influence legislation, one would think, but it does not appear to have done so; the British government is apparently not inclined to try dangerous experiments, and we very much doubt if the French people will be found exceptional in this

respect. As for our own population, we feel confident that they will be slow to loosen the safeguards that have already been put in operation. Our agricultural interests are vast and our dairy products of enormous value, but the preservation of the public health is above all other considerations. We must omit no precaution against so destructive an agency as tuberculous disease.

A PROPOSED NON-OFFICIAL NATIONAL EXAMINING BOARD.

The remoteness of inter-State reciprocity in the matter of the license to practise has led recently to the proposal to form a non-official national board of examiners—for an official board is out of the question under the constitution of the United States, and it is useless to exclaim “so much the worse for the constitution,” as one of our contemporaries has been moved to do—the board to be composed of men who would command universal respect. But respect is not enough; authority is necessary. We see only one way out of the difficulty. Let the board be composed, as has been suggested by Dr. William L. Rodman, of Philadelphia (*Journal of the American Medical Association*, May 10th), of the surgeon-general of the army, the surgeon-general of the navy, the surgeon-general of the Marine-Hospital Service, two representatives of the American Medical Association, elected by the House of Delegates, and a representative of the American Congress of Physicians and Surgeons. Then let every State medical examining board pass a resolution to the effect that it will accept the national board’s certificate without question, only requiring the holder to prove his identity.

THE RANK OF THE RETIRING SURGEON-GENERAL OF THE ARMY.

The announcement that Congress has taken preliminary action favorable to the retirement of Surgeon-General Sternberg with the rank of major-general is exceedingly gratifying. Dr. Sternberg’s long and efficient service fairly entitles him to this distinction. We have long contended that the surgeon-general of the army should be a major-general from the date of his appointment, and we still hope that before many years that will be the case.

THE MARTINIQUE CALAMITY.

The terrible catastrophe that has befallen the islands of Martinique and St. Vincent stands out prominently as one of the greatest of the disastrous cataclysms that have in historical times come upon the world, as though to assert Nature’s contemptu-

ous denial of the talk about the subjugation of her forces by the triumphs of civilization. At the same time, it must serve to emphasize also in more ways than one the increasing solidarity of the human race, rendered possible by those same triumphs of civilization that by increasing rapidity of communication annihilate distance and time and make all the world neighbors. The rapidity with which the entire civilized world has heard of this later disaster, the speed with which it is able to set about rendering prompt aid to the thousands who have escaped an overwhelming death only to find themselves face to face with suffering, starvation, and disease are triumphs of civilization that must impress upon us, terrible as the catastrophe now is, how much more far-reaching it would have been in its disastrous results had it occurred in more remote times, when owing to slowness of communication and transit, the fatal horrors which universal sympathy is now straining every nerve to avert would have had full sway ere intelligence could have reached the world, or when known, relief measures could have been conceived and executed.

Of the nature of the death-dealing forces but little at the present time can be said, until reliable information is at hand, but if newspaper reports can be relied on, it is likely that many of the victims suffered suddenly and painlessly from natural “electrocution.” Many minor details give color to such an idea, among them two instances in which it is reported that bodies were found burned to a crisp, while a silk handkerchief on the mouth in one case, and the shoes in the other, were absolutely untouched. The unanimity and promptness with which the great nations, and more especially our own, have responded to the call for aid and placed their official organizations at the service of humanity, must be a source of deep joy to all social economists. Ships, stores, provisions, medicines, and government medical officers are all being lent to the afflicted localities. Most assuredly medical services will be urgently needed.

MORE PUBLIC PLAYGROUNDS.

On May 7th, a child four years old was cut in two by a trolley-car in Williamsburg while playing “tag” in the street. Such a calamity is of course deplorable, and the bereaved parents need all the sympathy they can have; but the fact must not be overlooked that if it is true, as stated, that the child, particularly a child of such tender years, “had been given permission to go to the street to play,” such a catastrophe was distinctly courted. The question is simply this: Children cannot play in streets in which there is much traffic, and especially where the trolleys run, without a certain number of young

lives being sacrificed. Three possibilities are open: The traffic must be stopped that the children may play; the children must cease to play in the principal thoroughfares that the traffic may continue; or, parents individually must decide whether their own convenience and the advantage accruing to their children from play are of such importance as to justify taking the chances to life and limb that the latter run in playing in the streets. There is yet another alternative, the acquisition by the city of frequent small plots for public playgrounds, the provision of which would enable the authorities to enforce a rule keeping young children, when unattended, off the streets altogether. Of course such a procedure would be costly to begin with; but the nation would be benefited by many promising young lives saved, and by the increased healthiness and physique of the rising generation in the more densely populated and poorer portions of the city.

SYPHILITIC ATROPHY OF THE GENITALS.

At a recent meeting of the Belgian Society of Dermatology and Syphilography (*Gazette hebdomadaire de médecine et de chirurgie*, April 27th) M. Bayet showed a patient whose case, if Bayet interpreted it correctly—and we see no reason to suppose that he did not—furnishes a fresh example of the manifold abnormalities that may be caused by syphilis. At the time he was shown, the patient was thirty-nine years old. He had formerly been a strong man, fleshy and with no lack of hairy development. Until three years ago he had habitually taken enormous amounts of spirituous liquors. In 1895 he contracted syphilis, and the disease assumed a grave form. In 1899 he ceased from alcoholic excesses, having apparently already suffered with multiple neuritis. In the course of a few years the man's external appearance had undergone gradual changes, and at the time he was shown there were to be observed a waxy aspect of the skin with complete effacement of the folds and loss of hair, totally of the pubes, the axillæ, and the limbs, while the beard and the eyebrows were reduced almost to nothing. Moreover, the genital organs had become atrophied; the penis was reduced in volume, the testicles had shrunk to the size of a marble, and the prostate was barely to be made out. In short, the appearance was that of veritable genital infantilism. For three years the man had had no sexual desire. He had lost energy, and he was speedily fatigued. There was atrophy of the deltoids and of the scapular muscles. The sequence of events was explained by M. Bayet as follows: Multiple neuritis consecutive on alcoholism and syphilis, consequent atrophy of the muscles of the arms, and atrophy of the

testicles, the last-named condition leading to the effects commonly observed after castration. Orchitic extract had been administered without success.

THE UNDERSIZED PROSTATE AS A SOURCE OF TROUBLE.

It may be somewhat surprising to be told that in boys too small a prostate may give rise to a train of troubles similar to that occasioned by the enlarged gland in old men, but Englisch (*Zeitschrift für Heilkunde*, 1901, No. 12; *Centralblatt für innere Medizin*, April 5th) makes out a very good case in support of the proposition, and he finds, too, that an undersized prostate is not very uncommon, for he has encountered it in 199 out of 1,757 cases in which he examined for it. He has in mind, not atrophy of the gland, but its congenital deficiency in size. In diagnosis, this defect is distinguished from atrophy by the normal consistence of the organ. It is particularly apt to be found in tuberculous subjects. By contracture of the internal sphincter of the bladder, a sort of valve is formed, destitute of glandular structure, but consisting either of mucous membrane alone or of mucous membrane and muscular fibres. The smaller the prostate, the more decided is the valve. The consequences are inability of the bladder to overcome the impediment constituted by the valve, distention and subsequent eccentric hypertrophy of the bladder, dilatation of the ureters and of the pelves of the kidneys, and renal atrophy. The symptoms are enuresis at puberty and after that period, strangury, which may amount to retention, vesical catarrh, pains in the region of the pubic symphysis, and, more rarely, disturbances of the rectum and of the pelvic nerves. In mild cases, the treatment may consist in the passage of sounds; in severe cases, in dissection of the gland, with or without ablation of the cut surfaces.

THE OPERATIVE TREATMENT OF GASTRIC ULCER.

At a recent meeting of the Kiddleminster Medical Society, W. Shelton (*Lancet*, April 26th), showed a patient, a girl aged twenty-four years, in whom the abdomen had been opened to control hæmatemesis, and, nothing being found on the anterior stomach wall, a longitudinal incision through it had been made, disclosing an ulcer with bleeding arterioles on the posterior wall. Inversion of the stomach wall and the application of sutures effected a cure. This case seems fairly illustrative of the growing promise of gastric surgery.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 19th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, May 20th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, May 21st.—Woman's Medical Association (New York Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, May 22d.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Virginia.

FRIDAY, May 23d.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, May 24th.—New York Medical and Surgical Society (private).

Change of Address.—Dr. James Moran, to No. 152 West Fifty-seventh Street, New York; Dr. Wisner R. Townsend, to No. 125 West Fifty-eighth Street, New York; Dr. F. L. Wachenheim, to No. 105 East Eightieth Street, New York.

A Warning.—The profession is warned against a young man, heavily-built, tall, good talker, who professes to be an agent for Collier's Weekly and solicits subscriptions to this periodical, offering a three-volume history as a premium. The manager of this weekly declares this man an imposter. None of their canvassers are permitted to collect money.

The Medical Association of the Greater City of New York.—A Stated Meeting of this Association will be held at the New York Academy of Medicine, on Monday, May 12th, 1902, at 8.30 P. M. A report of Committee on the Death of Dr. John E. Richardson will be acted upon, and Dr. A. M. Phelps will present a paper on The Etiology, Pathology and Treatment of Joint Diseases, discussed by Dr. Robert F. Weir, Dr. George R. Fowler, Dr. Russell A. Hibbs, Dr. Reginald H. Sayre, Dr. Joseph A. Blake, Dr. T. Halsted Myers, Dr. C. N. B. Camac, Dr. Charles Ogilvy, and others.

Resolutions on the Death of Dr. Walser.—At a recent meeting of the Richmond County (N. Y.) Medical Society, the following resolutions were adopted and the secretary instructed to forward them to the New York Medical Journal:

WHEREAS, Our associate and co-laborer, Dr. Theodore Walser, has been called by a Divine Providence to a heavenly rest at a ripe old age, after a life well spent,

RESOLVED, That we, his associates of the Richmond County Medical Society, of which he has been a prominent member for forty-seven (47) years, vice-president four (4) years,

and president two (2) years, in meeting assembled, hereby record our profound sorrow at the loss of so valued and esteemed a member of the medical confraternity, and our unanimous appreciation of his high professional worth, amiable character and blameless life.

RESOLVED, That the sympathy of this society be and is hereby extended to the family of the deceased in their sad bereavement.

RESOLVED, That a copy of the above resolutions, suitably engrossed, be forwarded to the family of the deceased by the secretary of this society.

WILLIAM BRYAN, Vice-President.

HORACE W. PATTERSON, Secretary.

A Board to Control the Sale of Serums in Washington.—The Medical Society of the District of Columbia has prepared and submitted to Congress a report and recommendations regarding the regulations of the sale of serums, etc., in the District of Columbia, in which they recommend the enactment of the following amendment to the bill now before congress on this subject:

"That the Surgeon General of the Army, the Surgeon General of the Navy, the Supervising Surgeon General of the Marine Hospital Service, the Chief of the Bureau of Animal Industry of the Department of Agriculture, and the Health Officer of the District of Columbia be constituted a board with authority subject to the approval of the Secretary of the Treasury to promulgate from time to time such rules as may be necessary in the judgment of the board to govern the issue, suspension, and revocation of licenses for the maintenance of establishments for the propagation and preparation of virus, serums, toxins, antitoxins, and analogous products, applicable to the prevention and cure of diseases of man, intended for sale in the District, or to be sent, carried, or brought for sale from any State, Territory or the District, or from the United States into any foreign country, or any foreign country into the United States. Provided that all licenses issued for the maintenance of establishments for the propagation and preparation in any foreign country of any virus, serum, toxin, antitoxin, or products aforesaid, for sale, barter, or exchange in the United States, shall be issued upon condition that the licentiates will permit the inspection of the establishments where said articles are propagated and prepared in accordance with section 3 of this act.

"That the Secretary of the Treasury be, and he is hereby, authorized and directed to enforce the provisions of this act and of such rules and regulations as may be made by authority thereof, to issue, suspend, and revoke licenses for the maintenance of establishments aforesaid, and to detail for the discharge of such duties such officers, agents, and employes of the Treasury Department as may in his judgment be necessary."

The Disaster in Martinique.—The United States Government has acted with most commendable promptitude in despatching aid to the survivors of the volcanic eruption which destroyed the city of St. Pierre on the island of Martinique on May 3rd. The U. S. S. Cincinnati and Potomac which were stationed in the West Indies were immediately dispatched to Fort de France to render such temporary aid as lay in their power, and the Dixie a converted cruiser

was loaded with food and medical supplies at New York and dispatched to the island on May 14. About \$5,000 worth of medical supplies were sent down on the Dixie with a detachment of the hospital corps and the following: Lieutenant Church, Lieutenant Riley, and Lieutenant Clayton, of the medical department of the army. Lieutenant Church was with the Rough Riders in Cuba, and distinguished himself at San Juan.

The Tri-State Medical Society of Alabama, Georgia and Tennessee will hold its fourteenth annual meeting at Birmingham, Ala., on Tuesday, Wednesday and Thursday, October 7th, 8th and 9th. Further particulars may be learned from the secretary, Dr. Frank Trester Smith, Chattanooga, Tenn.

Dr. Ida E. Richardson died at her home in Philadelphia on May 9th, at the age of 47. Dr. Richardson was born in Philadelphia, educated at the Wesleyan College in Delaware and graduated from the Woman's Medical College, Philadelphia in 1879. She served for a time as instructor to Sanger (*Therapeutische Monatschrift*, of the founders of the West Philadelphia Hospital for Women).

The New Laboratories of the Medico-Chirurgical College, at Seventeenth and Cherry streets, Philadelphia, were informally opened on May 1st by a reception to the students. The new building, which is five stories high, has 100 feet front on Cherry Street and 78 feet on Eighteenth Street. On the fifth floor is the laboratory of anatomy and histology; on the third, that for chemistry; on the second, the dental dispensary; and on the first, the general medical and surgical dispensaries. The basement will be furnished as a gymnasium, college club and reading rooms.

A Prize for an Essay on the Dangers of Self-Drugging with Proprietary Medicines, suitable for distribution among the laity, is offered by the Colorado State Medical Society. The competition is open to all. The essay must be in English, contain not more than 3,000 words, and must be submitted before June 15th, 1902, each essay being designated by a motto and accompanied by a sealed envelope bearing the same motto, and inclosing the name and address of the author. Unsuccessful essays will be returned. Communications on the subject should be addressed to Dr. C. A. Graham, secretary, Steadman Block, Denver, Col.

The American Prodnologic Association will convene in the parlors of the United States Hotel at Saratoga Springs at 2 p. m. on Tuesday evening, June 10th. The preliminary programme which has just been issued contains the titles of eleven papers by the following authors: Dr. A. P. Buchman, Fort Wayne, Ind.; Dr. Howard A. Kelly, Baltimore; Dr. James P. Tuttle, Dr. George J. Cook, Indianapolis; Dr. Floyd W. McRae, Atlanta; Dr. William M. Beach, Pittsburg; Dr. Lewis H. Adler, Philadelphia; Dr. B. Merrill Ricketts, Cincinnati; Dr. A. Bennett Cook, Nash-

ville; Dr. George B. Evans, Dayton, O.; and Dr. Samuel T. Earle, Baltimore.

The Canadian Association for the Prevention of Tuberculosis held its annual meeting at Montreal during the week ending April 19. The following officers were elected for the ensuing year: President, W. C. Edwards, M. P.; Secretary, Dr. J. T. Small, reelected; Treasurer, J. M. Courtney, reelected; Vice-President, Dr. S. Strachan, president of the Ontario Association for the Prevention of Tuberculosis.

Council—Sir James Grant, Ottawa; Sir William Hingston, Dr. Lachapelle and Dr. Richer, Montreal; Dr. P. H. Bryce, Dr. Barrick, Toronto; Dr. Fagan, Victoria, B. C.; Dr. Bell, Winnipeg; Mayor Beck, London, and Dr. McNeil, Charlottetown. In addition to those His Excellency nominated the following: Dr. Roddick, M. P., Hon. Sydney Fisher, R. L. Borden, M. P., Dr. R. W. Powell, Berkley Powell, M. P. P., Hon. William Templeman, George H. Perley, A. W. Fleck, Dr. Montizambert, and Prof. Robertson. The reports of the committee contained some useful recommendations.

Dr. Skene's Sanatorium to Become a Home for Professional Workers.—The widow of the late Dr. Alex. J. C. Skene of Brooklyn has announced that she proposes to donate to Miss Mary A. Fisher the sanatorium conducted by Dr. Skene for the establishment of a Mary Fisher Home and Sanatorium for writers, artists, teachers and representatives of any of the professions. The property donated is located at 759 President street and is worth \$100,000. To her generous gift Mrs. Skene will add the endowment of a room in memory of her husband, this room to be always set apart for the use of some physician in need of a home. The erection of a hospital in Brooklyn for self-supporting women was planned some time ago by Dr. Skene, but death came before his plans could be put into execution. While the proposed donation of his widow is not solely in the interest of women, as both sexes are admitted to the Mary Fisher Home, under its present management, it is considered as being in the nature of a substitute for the hospital which Dr. Skene did not live to see erected.

The New Floating Hospital at Boston.—The plans have been completed for a new floating hospital for children for the city of Boston and promise the most complete thing of its kind yet attempted. The vessel is to be 192 feet long, 44 feet wide and with a hull 12 feet in dept. It will be provided with steam bilge pumps, a complete heating and electric light plant, and steam windlass and disinfecting plant, but will have no independent motive power, depending on towing. This ship is to have four decks. Forward of the main deck will be two wards with sixteen beds each, and between these wards the examining and treatment rooms. A little further aft will be a room for the preparation of babies' food. Other quarters on this deck will be doctors' state-rooms, dining-rooms for doctors, nurses and guests, shower baths and toilet-rooms, resident

physician's room and another for the superintendent of nurses, and an office, while all around the boat there will be a large space for patients to wait until assigned to their special wards. On the lower deck forward a number of contagious wards are provided for. Among other features of this deck will be an autopsy room and morgue, refrigerator, linen and sewing-room, dining-room for mothers and children and ample storage facilities. On the upper deck there will be four large wards forward and aft, with sixteen beds each, examining and treatment rooms, a pharmacy, an excellent system of dumb waiters to the decks below and the one above, so cleverly arranged that the one leading to the contagious wards does not come in contact with the others. Shower baths for older children, an operating room, a number of isolating wards with two beds each on both sides of the deck amidship are also some of the features of this deck. The deck above is to be called the out-patients' deck, and the entire aft portion will be utilized as an open ward for out-patients. Here also will be provided a laboratory, toilet rooms, captain's cabin and wheel house.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 10, 1902:

DISEASES.	Week end'g May 3.		Weekend'g May 10.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	29	10	23	14
Scarlet fever.....	420	25	402	41
Cerebro-spinal meningitis.....	0	4	0	3
Measles.....	612	22	450	20
Diphtheria and Croup.....	313	47	281	44
Small-pox.....	54	14	58	9
Tuberculosis.....	310	133	294	168

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending May 10, 1902:

Smallpox—United States.

Alabama.....	Birmingham.....	Mar. 1-31.....	11 cases.	
California.....	San Francisco.....	Apr. 20-27.....	3 cases.	
"	Stockton.....	Apr. 1-30.....	20 cases.	
Colorado.....	Denver.....	Apr. 19-26.....	7 cases.	
Illinois.....	Belleville.....	Apr. 26-May 3.....	5 cases.	
"	Chicago.....	Apr. 26-May 3.....	5 cases.	
"	Galesburg.....	Apr. 26-May 3.....	4 cases.	
Indiana.....	Evansville.....	Apr. 26-May 3.....	5 cases.	
"	Indianapolis.....	Apr. 26-May 3.....	8 cases.	
"	Muncie.....	Apr. 1-30.....	3 cases.	
"	South Bend.....	Apr. 26-May 3.....	4 cases.	
"	Terre Haute.....	Apr. 26-May 3.....	3 cases.	
Iowa.....	Ottumwa.....	Mar. 29-Apr. 20.....	18 cases.	
Kansas.....	Wichita.....	Apr. 26-May 3.....	4 cases.	
Kentucky.....	Covington.....	Apr. 27-May 4.....	5 cases.	
"	Lexington.....	Apr. 26-May 3.....	1 case.	
"	Louisville.....	Apr. 27.....	2 cases.	
Maine.....	Portland.....	Apr. 26-May 3.....		1 death.
Maryland.....	Baltimore.....	Apr. 26-May 3.....	1 case.	
Massachusetts.....	Boston.....	Apr. 26-May 3.....	28 cases.	4 deaths.
"	Brockton.....	Apr. 26-May 3.....	2 cases.	
"	Brookline.....	Apr. 26-May 3.....		1 death.
"	Cambridge.....	Apr. 26-May 3.....	1 case.	
"	Malden.....	Apr. 26-May 3.....	6 cases.	
Michigan.....	.....	Apr. 19-26.....	Present at 110 places.	
"	Ludington.....	Apr. 27-May 4.....	16 cases.	
Minnesota.....	Minneapolis.....	Mar. 29-Apr. 10.....	27 cases.	
"	Winona.....	Apr. 19-26.....	1 case.	
Missouri.....	St. Louis.....	Apr. 27-May 4.....	39 cases.	2 deaths.
Montana.....	Helena.....	Apr. 1-30.....	4 cases.	

Nebraska.....	Omaha.....	Apr. 26-May 3.....	30 cases.	
New Jersey.....	Camden.....	Apr. 26-May 3.....	4 cases.	1 death.
"	Newark.....	Apr. 26-May 3.....	80 cases.	5 deaths.
"	Paterson.....	Apr. 26-May 3.....	6 cases.	1 death.
New York.....	New York.....	Apr. 26-May 3.....	54 cases.	14 deaths.
"	Yonkers.....	Apr. 26-May 3.....	16 cases.	
"	Hampton.....	Apr. 27-May 3.....	3 cases.	
Pennsylvania.....	Lancaster.....	Apr. 26-May 3.....	19 cases.	
"	Johnstown.....	Apr. 26-May 3.....	3 cases.	
"	Philadelphia.....	Apr. 26-May 3.....	12 cases.	1 death.
"	Pittsburgh.....	Apr. 26-May 3.....	16 cases.	
Rhode Island.....	Providence.....	Apr. 26-May 3.....	4 cases.	
South Carolina.....	Greenville.....	Apr. 19-26.....	6 cases.	2 deaths.
Tennessee.....	Memphis.....	Apr. 27-May 3.....	9 cases.	
Utah.....	Salt Lake City.....	Apr. 26-May 3.....	4 cases.	
Vermont.....	Burlington.....	Apr. 27-May 3.....	2 cases.	
"	Rutland.....	Apr. 27-May 3.....	1 case.	
Virginia.....	Roanoke.....	Apr. 26-May 3.....	11 cases.	1 death.
Washington.....	Tacoma.....	Apr. 20-27.....	9 cases.	
Wisconsin.....	Green Bay.....	Apr. 27-May 4.....	3 cases.	
"	Janessville.....	Apr. 27-May 4.....	4 cases.	
"	Milwaukee.....	Apr. 19-26.....	9 cases.	

Smallpox—Foreign.

Brazil.....	Rio de Janeiro.....	Mar. 16-Apr. 6.....		21 deaths.
Canada.....	Hamilton.....	Apr. 26-May 3.....	1 case.	
"	Quebec.....	Apr. 19-26.....	10 cases.	
"	Winnipeg.....	Apr. 19-26.....	8 cases.	
China.....	Amoy.....	Mar. 8-27.....		Present.
Colombia.....	Panama.....	Apr. 21-28.....	50 cases.	5 deaths.
Egypt.....	Cairo.....	Apr. 1-8.....		1 death.
France.....	Paris.....	Apr. 12-19.....		5 deaths.
"	Rheims.....	Apr. 6-20.....	7 cases.	5 deaths.
"	Roubaix.....	Mar. 1-31.....		1 death.
Great Britain.....	Birmingham.....	Apr. 12-19.....	2 cases.	
"	Dublin.....	Apr. 12-19.....	1 case.	
"	Dundee.....	Apr. 12-19.....	4 cases.	
"	Glasgow.....	Apr. 18-25.....	7 cases.	1 death.
"	Leeds.....	Apr. 19-26.....	1 case.	
"	Liverpool.....	Apr. 12-19.....	5 cases.	
"	London.....	Apr. 12-19.....	328 cases.	42 deaths.
"	New Castle on Tyne.....	Mar. 30-Apr. 19.....	1 case.	
"	North Shields.....	Mar. 30-Apr. 19.....	27 cases.	
"	Southampton.....	Apr. 5-12.....	1 case.	
"	South Shields.....	Mar. 30-Apr. 19.....	21 cases.	
India.....	Bombay.....	Apr. 1-8.....		6 deaths.
"	Calcutta.....	Mar. 22-Apr. 5.....		13 deaths.
"	Karachi.....	Mar. 30-Apr. 6.....	3 cases.	
Italy.....	Bovino.....	Apr. 12.....		Epidemic.
"	Naples.....	Apr. 5-12.....	10 cases.	
Mexico.....	City of Mexico.....	Apr. 13-27.....	3 cases.	
"	Vera Cruz.....	Apr. 19-26.....	5 cases.	1 death.
Russia.....	Moscow.....	Apr. 6-12.....	5 cases.	5 deaths.
"	St. Petersburg.....	Apr. 6-12.....	10 cases.	2 deaths.
Spain.....	Cartagena.....	Apr. 15.....		Epidemic.

Yellow Fever.

Brazil.....	Rio de Janeiro.....	Mar. 16-Apr. 6.....		105 deaths.
Colombia.....	Panama.....	Apr. 21-28.....	5 cases.	2 deaths.
Costa Rica.....	Lort Limon.....	Apr. 14.....	3 cases.	1 death.
Dutch Guiana.....	Paramaribo.....	Mar. 1-31.....	3 cases.	1 death.
Mexico.....	Vera Cruz.....	Apr. 19-26.....	9 cases.	6 deaths.

Cholera—Insular.

Philippines.....	Manila.....	Mar. 20-29.....	84 cases.	65 deaths.
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Cholera—Foreign.

India.....	Calcutta.....	Mar. 23-Apr. 5.....		255 deaths.
Turkey.....	Djiddah.....	Feb. 19-Mar. 26.....	3000 estimated cases.	1300 deaths.

Plague—United States.

California.....	San Francisco.....	Apr. 20-27.....	1 case.	1 death.
Hawaii.....	Honolulu.....	Apr. 19.....		1 death.

Plague—Foreign.

China.....	Pokhoi.....	Apr. 25.....		Epidemic.
Egypt.....	.....	Apr. 7, 1901-1902.....	382 cases.	228 deaths.
India.....	Bombay.....	Apr. 1-8.....		830 deaths.
"	Calcutta.....	Mar. 22-Apr. 5.....		1239 deaths.
"	Karachi.....	Mar. 30-Apr. 6.....		100 deaths.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 10, 1902.

AMES, H. E., Surgeon. Detached from the *Massachusetts* and ordered to the *Kearsarge*.

BOYD, J. C., Medical Inspector. Detached from the *Olympia* and ordered to Washington, D. C., as a member of retiring and medical examining boards.

DIXON, W. S., Medical Director. Detached from duty on the retiring medical examining boards, Washington, D. C., and ordered to continue other duty.

HURD, I. N., Pharmacist. Detached from the *Wabash* and ordered to the Navy Yard, Portsmouth, New Hampshire.

MCCLEURG, W. A., Medical Inspector. Detached from the *Kearsarge* and ordered to the *Olympia* as fleet surgeon of the North Atlantic Station.

PAGE, J. E., Passed Assistant Surgeon. Granted leave of absence for two months on account of sickness.

PRYOR, J. C., Passed Assistant Surgeon. Ordered to the *Massachusetts*, May 14th.

SNYDER, J. J., Assistant Surgeon. Detached from duty with recruiting party and ordered to the Torpedo Station, Newport, Rhode Island.

STEELE, J. M., Surgeon. Detached from the Torpedo Station, Newport, and ordered to the *Massachusetts*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending May 10, 1902:

BARNEY, CHARLES N., First Lieutenant and Assistant Surgeon, is granted leave of absence for twenty days.

BLOCK, WILLIAM H., Captain and Assistant Surgeon, is granted leave of absence for one month.

COX, WALTER, First Lieutenant and Assistant Surgeon, will proceed with the detachment of the Twelfth Infantry ordered to Fort Douglas, Utah, and then to Washington.

DE NIEDEMAN, WILLIAM F., Major and Surgeon, is assigned to duty on the transport *Thomas*, to relieve DOUGLAS F. DUVAL, First Lieutenant and Assistant Surgeon.

DUTCHER, BASIL H., Captain and Assistant Surgeon, is granted leave of absence for four months, to take effect upon the arrival at Fort Hancock, N. J., of CLYDE S. FORD, First Lieutenant and Assistant Surgeon.

EWING, CHARLES B., Major and Surgeon, is detailed to represent the Medical Department of the Army at the eleventh annual meeting of the Association of Military Surgeons of the United States, to be held in Washington, from June 5th to 7th.

FORD, JOSEPH H., First Lieutenant and Assistant Surgeon, is relieved from further duty at Washington Barracks, D. C., and will report at the United States General Hospital at that post, for duty.

GLENNAN, JAMES D., Major and Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

GREGORY, JUNIUS C., Contract Surgeon, will proceed to Fort Myer, Virginia, for duty.

HARVEY, LUTHER S., Captain and Assistant Surgeon. The leave of absence granted him is extended one month on account of sickness.

HICKS, JOHN R., Contract Surgeon, is relieved from duty at Fort Screven, Georgia, to take effect upon the arrival at that post of CHARLES F. KIEFFER, Captain and Assistant Surgeon, and he will then proceed to Fort Wingate, New Mexico, for duty.

HORNE, WILLIS S., Contract Surgeon, will proceed to Fort Baker, California, to relieve ALVIN M. GUITTARD, Contract Surgeon, who will proceed to Fort McDowell, for temporary duty.

KELLOGG, PRESTON S., Contract Surgeon, will report to the commanding officer of Company C, Eighth Infantry, for duty with that organization while *en route* to Alaska.

LUDINGTON, PAUL H., Contract Surgeon, is assigned to duty as attending surgeon and examiner of recruits in Omaha, Nebraska.

LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon, is relieved from further duty in the Division of the Philippines and ordered to Fort McDowell, California, for duty.

MONCRIEF, WILLIAM H., Contract Surgeon, will proceed to Jefferson Barracks, Missouri, for duty.

MOUNT, JAMES R., Contract Surgeon, will proceed to San Francisco for temporary duty.

MUNSON, EDWARD L., Captain and Assistant Surgeon, is detailed as a member of the Army retiring board, appointed to meet in Washington.

QUINTON, WILLIAM W., Captain and Assistant Surgeon, will proceed to the Philippine Islands on the transport *Logan*.

RAFTER, JOHN A., Contract Surgeon, will proceed to Madison Barracks, N. Y., for duty.

SCHIER, ANTON R., Contract Surgeon, will proceed to Fort Worden, Washington, for duty.

STOTTS, ARTHUR F., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

STRAUB, PAUL F., Captain and Assistant Surgeon, will take temporary charge of the office of the chief surgeon at Headquarters, Fort Crook, Nebraska.

TWEEDIE, HEDLEY V., Contract Surgeon, is relieved from duty in the Department of the Columbia, and will proceed to San Francisco for duty.

VINA, JOSE LUGO, Captain and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

WAKEMAN, WILLIAM J., Major and Surgeon, is granted leave of absence for twenty-five days, with permission to leave the limits of the Department.

WALES, PHILIP G., Captain and Assistant Surgeon, is granted leave of absence for fifteen days.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned officers of the United States Marine-Hospital Service for the Seven Days ending May 8, 1902:

BORFORD, HUGH, Acting Assistant Surgeon. Granted leave of absence for two weeks from May 5th.

CARRINGTON, P. M., Surgeon. The Bureau order of April 30, 1902, detailing Surgeon CARRINGTON to represent the service at the American Congress of Tuberculosis is revoked.

FOSTER, A. D., Acting Assistant Surgeon. Granted leave of absence for fourteen days from May 17th.

FRICKS, L. D., Assistant Surgeon. Relieved from duty at Chicago and directed to proceed to Boston and report to the medical officer in command for duty and assignment to quarters, relieving Assistant Surgeon JOHN McMULLEN.

GASSAWAY, J. M., Surgeon. Leave of absence for three days, under paragraph 179 of the *Regulations*.

GUITERAS, G. M., Passed Assistant Surgeon. Relieved from duty at Matanzas, Cuba, and directed to proceed to Philadelphia and report to the medical officer in command for duty.

HOLT, F. M., Junior Pharmacist. Granted leave of absence for thirty days from May 2d, 1902.

HUME, LEA, Sanitary Inspector. Granted leave of absence for thirty days from May 1st.

LYDD, B. J., Assistant Surgeon. Relieved from duty at San Francisco Quarantine and directed to proceed to Nome, Alaska, for special temporary duty, assuming command of the service.

MASON, M. R., Senior Pharmacist. Relieved from duty at San Francisco and directed to proceed to Dutch Harbor, Alaska, and report to Assistant Surgeon C. W. VOGEL for duty.

MCCONNELL, E. F., Acting Assistant Surgeon. Relieved from duty at Havana, Cuba, and directed to proceed to Nuevitas, Cuba, relieving Acting Assistant Surgeon O. W. STONE.

MCDOWELL, A. B., Acting Assistant Surgeon. Relieved from duty at Havana, Cuba, and directed to proceed to Santiago, Cuba, relieving Assistant Surgeon R. H. VON EZDORF.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to Wilmington, Cape Fear Quarantine (Southport), and Beaufort, N. C., as inspector of unserviceable property at Wilmington and Cape Fear.

SPANGLER, L. C., Junior Pharmacist. Granted leave of absence for fifteen days from May 10th.

STONE, O. W., Acting Assistant Surgeon. Upon being relieved by Acting Surgeon E. F. McCONNELL, to proceed to Matanzas, Cuba, relieving Passed Assistant Surgeon G. M. GUITERAS.

STONER, G. W., Surgeon. Leave of absence for one day, May 2, 1902, under paragraph 179 of the *Regulations*.

VOGEL, C. W., Assistant Surgeon. The leave of absence for fifteen days granted him by the Bureau letter of April 18, 1902, is revoked.

Relieved from duty at San Francisco and directed to proceed to Dutch Harbor, Alaska, and assume command of the service.

VON EZDORF, R. H., Assistant Surgeon. Upon being relieved by Acting Assistant Surgeon A. B. McDOWELL, to proceed to Matanzas, Cuba, relieving Passed Assistant Surgeon G. M. GUITERAS.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for fourteen days from May 17th.

WALKLEY, W. S. Acting Assistant Surgeon. Granted leave of absence for seven days from May 7th.

WASDIN, EUGENE, Surgeon. Leave of absence for seven days from May 2d, 1902, under paragraph 179 of the *Regulations*.

WERTENBAKER, C. P., Passed Assistant Surgeon. Leave of absence for three days from May 3, 1902, under paragraph 179 of the *Regulations*.

Boards Convened.

Board convened to meet at the Marine-Hospital, Baltimore, May 5, 1902, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the Board: Surgeon H. R. CARTER, chairman; Passed Assistant Surgeon J. A. NYDEGGER, recorder.

Board convened to meet at the Marine-Hospital, New Orleans, for the physical examination of such officers of the Revenue Cutter Service as may present themselves, May 12, 1902. Detail for the Board: Passed Assistant Surgeon C. P. WERTENBAKER, chairman; Assistant Surgeon J. W. SCHERESCHEWSKY, recorder.

Board convened to meet at the Marine-Hospital, Boston, May 12, 1902, for the physical examination of such officers of the Revenue Cutter Service as may present themselves. Detail for the Board: Surgeon FAIRFAX IRWIN, chairman; Assistant Surgeon JOHN McMULLEN, recorder.

Births, Marriages, and Deaths.

Married.

COX—BULKLEY.—In New York, on Wednesday, May 7th, Mr. Edward Vermilye Cox and Miss Yula Bulkley, daughter of Dr. L. Duncan Bulkley.

GREGORY—IRWIN.—In Boston, on Tuesday, April 22d, Dr. Junius Claiborne Gregory and Miss Ethel Irwin, daughter of Dr. Fairfax Irwin, United States Marine-Hospital Service.

KISER—BUTTERFIELD.—In Ironton, Ohio, on Friday, May 2d, Dr. Jefferson D. Kiser, of Lexington, Kentucky, and Miss Jennie Butterfield.

SCHLENKER—NEWMAN.—In New Orleans, on Wednesday, April 30th, Dr. Milton A. Schlenker, of New York, and Miss Josie Newman.

Died.

BODENHAMER.—In New Rochelle, N. Y., on Saturday, May 10th, Dr. William Houston Bodenhamer, son of Dr. William Bodenhamer, in the sixty-second year of his age.

CHACOT.—In San Francisco, on Tuesday, April 29th, Dr. M. A. Chacot, in the sixty-eighth year of his age.

DAMKROEGER.—In San Francisco, on Tuesday, May 6th, Dr. Henry Damkroeger, in the thirty-seventh year of his age.

DICKERSON.—In Kansas City, Missouri, on Saturday, May 3d, Dr. D'Estaing Dickerson, in the sixty-seventh year of his age.

ELLIOT.—In Poughkeepsie, N. Y., on Monday, May 12th, Dr. John G. Elliot, in the thirty-first year of his age.

FEEHAN.—In St. Louis, on Thursday, May 8th, Dr. Laurence Feehan.

RICHARDSON.—In Philadelphia, on Friday, May 9th, Dr. Ida E. Richardson, in the fifty-seventh year of her age.

RIEDEL.—In Philadelphia, on Thursday, May 6th, Dr. Thomas F. Riegel, in the twenty-second year of his age.

THORNTON.—In Correctionville, Iowa, on Sunday, May 4th, Dr. J. A. Thornton, in the fifty-fourth year of his age.

VAN EMAN.—In Kansas City, Missouri, on Thursday, May 8th, Dr. John Howard Van Eman, in the sixty-second year of his age.

YEAGLEY.—In Lancaster, Pennsylvania, on Friday, May 2d, Dr. Henry C. Yeagley, in the seventy-fifth year of his age.

OBITUARY NOTES.

PROFESSOR HANS BUCHNER died at Munich on March 30th. Professor Buchner was one of the pioneers of bacteriology in Germany, and assisted Nägeli in his researches on bacteria. He published many valuable contributions in relation to bacteriology, infectivity, etc. In 1894 Buchner succeeded Professor von Pettenkofer in the chair of hygiene at Munich.

DR. BURGGRÆVE who died in January, at Ghent, in Belgium, at the age of ninety-five years, was the founder of the so-called "Dosimetric" method of practice, the essential principle of which consisted in the exclusive use of chemical substances of definite composition and of definitely isolated principles, glucosides and alkaloids, in place of the crude drugs and their preparations. These medicines were to be administered, separately or in alternation, without combination, and in such a way that a small but exact measured dose should be taken at frequent short intervals until the requisite physiological effect of the drug was attained without danger. Dr. Burggræve had held, in succession, the Chairs of Comparative Anatomy, Human Anatomy, and Surgery, at the University of Ghent.

DR. THOMAS MORE MADDEN died in Ireland on April 16th. Dr. Madden was born in Cuba while his father, Dr. Richard Madden, occupied the post of British representative, at Havana, in the International Congress for the Abolition of the Slave Trade. Dr. Madden entered on medical study by an apprenticeship to Mr. Cusack, surgeon-in-ordinary to Queen Victoria, in Ireland; he continued it at Malaga, in Spain, and at the University of Montpellier. In 1868 he adopted gynecology and obstetrics as his line of practice and became successively assistant-physician to the Rotunda Lying-in Hospital, Dublin, and obstetrical physician to the Mater Misericordia Hospital in that city. He held numerous appointments and honors in his specialty, and in 1890 received the degree of M. D. (*honoris causa*) from the Texas Medical College. His contributions to medical literature were numerous, including the article on Diseases of Pregnancy in Quain's *Dictionary of Medicine*. He was sixty-four years of age at the time of his death.

Pith of Current Literature.

The Boston Medical and Surgical Journal,
May 8, 1902.

The Patrol Ambulance an Adjunct to the Ambulance Service in Cities; A Substitute Therefor in Towns. By Dr. Francis D. Donoghue.

Therapeutics and the Drug Manufacturer. By Dr. Brace W. Loomis.—The author points out that the essentials of a sound therapeutic method are as follows: (1). Keeping in mind the tendency of self-limitation of pathological processes and the possibility of cure as a result of natural forces, never prescribe a remedy that will interfere with or upset the conservative efforts of the organism. (2). Keep the problem of treatment as simple as possible by the exhibition of few remedies, well selected. (3). Bear in mind the possibility of aggravating existing pathological conditions and introducing new ones, by injudicious or too heroic methods of treatment. (4). Remember that the benefit to be expected from remedies is generally offset or neutralized, when a large number of remedies is exhibited at the same time. (5). Try to remove the cause. This presupposes a careful study of the case, rather than a hasty prescription for this, that, or the other symptom. (6). Do not forget that most medicines are two-edged swords. The author regrets the fact that many physicians disregard these precepts and rely mainly upon a drug manufacturer's list and dose-manual as a help in prescribing.

A Case of Tetany in an Adult. By Dr. Edwin A. Locke.—Of special interest in this case are the presence of polyuria and albuminuria during the attack, few cases of either condition being recorded. They are much more frequently found in children than in adults.

Two Unique Cases of Hysterectomy. By Dr. W. P. Giddings.

Movable Kidney with Hæmaturia. By Dr. A. T. Cabot.

Congenital Hypertrophy of the Tibia. Osteitis Deformans. Osteo-arthritis of the Spine. By Dr. Joel E. Goldthwait.

Cicatricial Occlusion of the Trachæa. By Dr. J. P. Clark.

Two Cases of Acromegaly. By Dr. F. C. Shattuck.

Typhoid Fever; Perforation; Operation; Recovery. By Dr. R. B. Greenough.

Suprarenal Tumor; Operation; Death. By Dr. R. B. Greenough.

Intestinal Obstruction; Two Operations; Recovery. By Dr. C. B. Porter.

Philadelphia Medical Journal, May 10, 1902.

A Voluntary Board of National Examiners. By Dr. William L. Rodman.—The author sees nothing to prevent, or seriously in the way of a voluntary National Board of Examiners, whose examinations shall be of such a character and

high standard as to command the respect of the several States and cause them to issue a license to any one who has successfully passed such an examination. To fail to do so would make such State ridiculous. The author suggests that such a board consist of six members, viz., the Surgeons-general of the Army, Navy, and Marine Hospital Service, and three equally representative civil practitioners; two to be elected by the house of delegates of the American Medical Association and one by the American Congress of Physicians and Surgeons. A seventh might be added to represent the National Board of Examiners.

Diagnosis and Management of Some of the More Common Lesions of the Adult Knee. By Dr. V. P. Gibney.—The author calls attention to a severe type of rheumatic knee which is attended with deformity and yields to forcible correction. The rheumatic joints that are complicated by peri-arthritis involving the soft parts are all, in the author's judgment, amenable to relief, while those that are complicated by bony deposits about the joints, known as arthritis deformans, are very difficult to manage.

The Kidney Complications of Typhoid Fever. By Dr. James Ely Talley.—The author includes among these (1) albuminuria; (2) acute nephritis; (3) hæmorrhagic nephritis; (4) suppurative nephritis; (5) preexisting chronic nephritis; (6) hæmaturia. Albuminuria appears in twenty-nine per cent. of all cases. The sooner it appears, the longer it lasts, and the greater the quantity the more serious is its presence. Very late appearance or sudden increase is a bad prognostic sign. The appearance of nephritis is of bad prognostic significance—mortality, fifty per cent. according to Curshmann. It is doubtful if renal typhoid, as a distinct entity, has any existence.

Value of the Justus Test, with Report of Cases. By Dr. Henry Tucker.—This test is based upon the fact that mercury, given either by subcutaneous or intravenous injection or by inunction, will cause a diminution in the hæmoglobin of the blood. In the healthy individual Nature rapidly replaces this loss; in syphilitics the loss will not be compensated immediately, and after twenty-four hours a fall of from ten to twenty per cent. in the hæmoglobin will still be noted. The author, however, brings forward statistics which seem to show that this test has no practical value in the differentiation of venereal ulcers, since the reaction occurs with an almost equal degree of frequency in the non-syphilitic conditions with which syphilis occasionally may be confused.

The Justus Test for Syphilis, with Report of Cases. By Dr. William E. Huger, Jr.—The author's observation seems to demonstrate that this test is wholly unreliable.

Medical News, May 10, 1902.

On Adrenalin Glycosuria and Allied Forms of Glycosuria Due to the Action of Reducing Substances and Other Poisons on the Cells of the Pancreas. By Dr. C. A. Herter.

Sudden Death in Aortic Stenosis with Report of Two Cases. One Complicated with an Aneurysmatic-Like Dilatation of the Aorta at Its Root and Marked Stenosis of This Vessel Beyond the Dilatation. By Dr. James M. Anders.—The number of proved cases of aortic stenosis is small, because of the rarity of the concurrence of all of the characteristic signs. The author gives these signs as (1), a small, low, and somewhat tense pulse; (2), a systolic basic thrill; (3), an enlargement of the left chamber; (4), a harsh and musical systolic murmur over the aortic area, and a feeble aortic second sound. As to the occurrence of unexpected sudden death in aortic stenosis, the author believes it highly probable that, if pure cases only were considered, it would prove to be a not uncommon mode of termination of this exceptional lesion.

Remarks on the Diagnosis of Pregnancy in the Early Months. By Dr. Charles Jewett.—The author's estimate of Hegar's sign is that, while it is not inferior, when fully made out, to any of the other signs of the early months, its practical value is less than that of the shape and consistency of the corpus, for the reason that it is not so readily appreciable. Toward the end of the third month the impregnated ovum is lodged in the uterine mucosa most frequently at a point near one cornu. One horn or lateral segment of the body of the uterus is thus denser to the examining fingers than is the other. A longitudinal sulcus may be made out between the thicker and the thinner cornu upon either the anterior or the posterior wall or upon both, and it may extend over the fundus. Most easily available of the signs obtainable in the early months by the bimanual examination, are marked softening and lateral expansion of the body of the uterus. An apparently almost jelly-like consistency of the corpus, together with a width often two or three times its antero-posterior thickness, makes the diagnosis of uterogestation.

Diagnosis of Diseases of the Biliary Passages. By Dr. N. E. Brill.—The author believes that, with the recent advance in our knowledge of cholelithiasis, it is not enough for the physician to say that a patient is suffering with gallstones; he ought not to resent being called upon for the special pathological diagnosis underlying his general one of cholelithiasis. The only common subjective symptom of gall-bladder disease is pain. The objective signs, independent of those elicited by the examiner, are vomiting, jaundice, swelling in the right hypochondrium, and fever, with or without chills. Each and all may be absent, or they may be found just as often in diseases of the adjacent viscera. They are, however, suggestive under certain conditions. These conditions necessitate an intimate acquaintance with previous manifestations of disease in the patient, and, hence, in no province of clinical medicine is an accurate anamnesis so essential. These symptoms should be examined in all their details as to character, site, and intensity, and their interpretation should be made in the light of the data which the physical exam-

ination by inspection, palpation, and percussion reveals.

Empyema of the Gall-Bladder. By Dr. Lucius W. Hotchkiss.

The Surgery of Gall Stones. By Dr. Joseph A. Blake.

Medical Record, May 10, 1902.

Remarks on Arteriosclerosis. By Dr. I. Adler.—When it becomes possible to diagnosticate arteriosclerotic lesions, the process has already advanced to some considerable extent, and the utmost we can hope for is arrest of the progress of the lesion. When the toxic influences are known and where lead, syphilis, alcohol, nicotine, etc., are the underlying causes of the arteriosclerotic processes, the route is clearly indicated. In every case, however, the author urges the systematic use of the iodides. In prophylaxis, diet plays an important rôle. Our limited knowledge of the chemistry of arteriosclerosis unfortunately precludes any absolutely specific dietary or chemical measures. We are forced to fall back upon the general dietetic and hygienic laws as borne out by common sense and experience.

The Indications of Nephrectomy, with Report of Three Cases. By Dr. Joseph Wiener, Jr.—The author contributes an interesting article on this subject. He attributes the brilliant advances in kidney surgery, not only to the improvement in the technics of bladder and ureter examinations and of operative work, but also to the hearty cooperation of the physician. It is largely due to his early diagnoses that kidney surgery has advanced to its present position, and progress on the line of still earlier diagnoses will make the future of kidney surgery still brighter. He believes that the cystoscope and the freezing point of blood and urine will play an important rôle.

Resection of the Cervical Sympathetic Ganglia in Glaucoma; Its Present Status. By Dr. Wilbur B. Marple.—The author asserts that the operation of extirpation of the sympathetic ganglion is a safe procedure in the hands of a skilful surgeon. He believes it established that some of the glaucomatous cases have been improved for some months by resection; while in others the condition seemingly remains stationary. Apparently the operation does no harm. A considerable number of favorable results have been reported in chronic irritation or inflammatory glaucoma, as well as in simple glaucoma, in which pain is oftentimes abolished. The operation does not replace iridectomy, but may possibly supplement the latter, in case this is refused—or has already resulted disastrously in the other eye, or is contraindicated. Until our cases are observed more carefully and for a longer period of time, it will be impossible to arrive at positive conclusions as to the indications for the operation, or as to its permanent results.

The Journal of the American Medical Association, May 10, 1902.

Lesions of the Conus Medullaris and Cauda Equina. A Contribution to the Study of Spinal Localization. By Dr. Bertram W. Sippy.

Plastic Surgery, with Cases. Formation of New Cheek. By Dr. C. E. Ruth.—In the repair of skin or mucous membrane defects, direct approximation of edges, by undermining and stretching, fixed by sutures, is an easy method and one sure of satisfactory results if the tension is not too great. This method may be aided by lateral subsidiary incisions to facilitate sliding, the lateral clefts being left to granulate and cicatrize, or they may be closed by grafts placed at once, or as soon as good healthy granulation tissue has formed. Flap formation, with or without twisting of the pedicle, will serve a useful purpose in some cases. Marginal connection of flaps from a distant part of the body, released from pedicle connection later, has a very limited field. In all cases where the new skin can be made to rest upon an underlying, healthy fresh wound, free from blood, or upon a granulating surface throughout, the chances of success are good. The author records a case of interest.

New Method of Anchoring the Kidney—A Preliminary Report. By Dr. Byron B. Davis.—In the author's case an incision was made through the proper capsule from two centimetres below the upper pole to a point two centimetres above the lower pole. This incision was placed vertically on the posterior surface near the convex border. The capsule was stripped for three-quarters of an inch anteriorly and posteriorly to the incision. From the upper and lower extremities of the vertical incision a perpendicular incision, three-fourths of an inch long, was made, thus giving two flaps of capsule three-fourths of an inch wide by about two inches and a half in length. Then a small strip—the thickness of the little finger—being split away from the other border of the quadratus lumborum, an artery forceps was used to grasp and draw through the muscle slit the posterior flap of kidney capsule. The two capsular flaps were then brought together over the bundle of muscular fibres thus isolated from the border of the quadratus lumborum, and stitched.

The Work of the Digestive Glands (Pawlow) and Estimation of Pepsin Digestion by Modern Instruments of Precision. By Dr. Franz A. R. Jung.

A Voluntary Board of National Examiners. By Dr. William L. Rodman.—See abstract under *Philadelphia Medical Journal*.

The Neurologist's Art. By Dr. Joseph Collins.—The author concludes that the neurologist's art lies in recognizing that the vast majority of diseases that he encounters can be influenced by treatment; in having in his mind a clear picture of the pathological process; in observing the most scrupulous attention to detail in the application of measures that experience has shown to be of value; in using judgment and skill in the selection and application of these measures; and, finally, in realizing from the outset that a disease or disturbance of function which is either the expression of a prenatal defect or of many years' duration, can not be overcome in a few weeks, or even a few months, of treatment, even though the hand that administers it be both masterful and magical.

An Analysis of Fifty-Two Cases of Tetanus Following Vaccinia, with Reference to the

Source of Infection. 1839, 1902. By Dr. Robert N. Wilson. (*Concluded.*)

American Medicine, May 10, 1902.

On Adrenalin Glycosuria and Other Forms of Glycosuria Due to the Action of Reducing Substances and Other Poisons on the Cells of the Pancreas. By Dr. C. A. Herter.

A New Species of Hookworm (*Uncinaria Americana*) Parasitic in Man. By Ch. Wardell Stiles.—From the author's paper it is clear that at least two species of hookworms (*Uncinaria duodenalis* and *U. americana*) contribute to the disease uncinariasis in man. *U. duodenalis* is known to be an old-world form, and the indications are that it has been introduced into this country. *U. americana* is known to occur in Texas, Virginia, and Puerto Rico, and this wide geographical separation shows very clearly that in the new world we have a special, heretofore undescribed, parasite which causes uncinariasis. The new parasite appears to be a member of the group for which Molin proposed the generic name, *monodontus*.

Two Cases of Cancer of the Rectum Operated on by Murphy's Method. By Dr. Wilmer Krusen.—The author's operations were successful. The advantages of Murphy's method are: the sacrum and posterior bony wall of the pelvis are not disturbed; the field of operation is as extensive and the parts as accessible as in the trans-sacral operations; the diseased tissue is more accessible for inspection, and the extent to which the operation may be carried in an upward direction is as great as, if not greater than, by the sacral route; the peritoneum may be drained freely through the vagina; a perfect end-to-end approximation, either by suture or by the use of the button, may be secured; the sphincter is retained and the perineal body is restored; when the operation is complete the parts are practically in their normal positions.

A Case of Tuberculous Salpingitis from which the Tubercle Bacillus was Grown. By Howard S. Dittrick, M. B.—In this case the author was able to demonstrate the bacilli in the tissue of the Fallopian tube, to cultivate the organism found in this tissue, and to reproduce the same disease in guinea-pigs that had been inoculated with the bacilli from the primary lesion.

Report of a Case of Carcinoma of the Cæcum and a Case of Rupture of the Sigmoid Treated by Intestinal Anastomosis. By Dr. Eugene A. Smith.

Palmar Reflex (Preliminary Note). By Dr. John H. W. Rhein.

British Medical Journal, May 3, 1902.

Signs on the Skin of Certain Common Diseases. By Dr. J. Galloway.—In this article the author discusses the cutaneous signs of a few of the more common internal disorders. Various forms of skin lesions of evanescent character, and very often commencing as disorders of the skin appendages, such as sweat eruptions, arise in the course of Bright's disease, and most of these are of no serious importance. But another type of lesion is not common, and this reproduces in character the various types of

erythema multiforme with exudation. The occurrence of lesions of this nature is of much greater significance, and usually indicates serious renal and blood changes. If well developed, such an attack is of bad prognostic significance. This form of skin disease usually ends in desquamation of the epidermis to a greater or lesser extent, and in severe attacks the desquamation resembles an attack of acute exfoliative dermatitis. The last stage of Bright's disease is infinitely more trying when this complication appears. Conversely, when in cases of acute exfoliative dermatitis albuminuria or renal disease develops, the prognosis is almost inevitably fatal. There are two conditions of the skin to which the diabetic patient is prone. The various forms of circinate scaly eruption, now generally known as seborrhœic dermatitis, are very common in diabetic or "gouty" glycosuria. Circinate, scaly and erythematous patches may appear with great suddenness, and give rise to troublesome pruritus. Treatment is usually satisfactory and consists in (1) a proper dietary regimen, and (2) the use of warm medicated baths (sulphur, bran, tar, etc.). Diabetic individuals are also subject to dermatitis of the genitalia with pruritus. In males this may, if neglected, go on to the typical diabetic phimosis with severe balanitis. Atrophic alterations are brought about in the cutis and in the subcutaneous tissues, which, in their turn, produce pruritus, so that the disease becomes permanent and incurable. In females, owing to the larger area of mucocutaneous margin, the disease is severer and more difficult to cure. Most thorough gentle local cleansing with mild antiseptic solutions, the use of warm baths, and of mild dusting powders, are often of great service, yet in every case it is of the utmost importance favorably to alter metabolism by means of appropriate diet. In conclusion the author calls attention to a series of skin lesions which occur in persons with "low tension" circulation. There seems to be a fixed condition of depression of the vasomotor impulses, so that the whole of the capillary and venous area of the cutis is constantly flooded. Such patients suffer severely from chilblains, and also from a blotched or reticulated hyperæmia of dependent parts, especially the legs. Injuries to the skin are attended by much more serious results than in health. The skin frequently sloughs after slight injuries, repair takes place slowly, and the resultant scars are fine, soft, and bluish. These lesions often markedly resemble tuberculides of the skin, and give rise to an erroneous diagnosis. In these cases the one important point is to keep the patients in the best condition of nutrition, and the utmost care of the skin is necessary.

A Case of Chloroma, with Pathological Report and Some Notes Descriptive of the Disease. By Dr. G. H. M. Dunlop.—The author reports the case of a boy, aged five years, who suffered from that rare disease, chloroma. The illness had begun a year previously with ecchymotic cutaneous hæmorrhages, and gradually increasing swelling of the face. The boy became deaf, exophthalmos developed, greenish tumors formed over the corneæ, on the hard palate, and over the temples. Anæmia was extreme, and there was a marked lymphocytosis. The child gradually failed, the anæmia progressed, and he died of exhaustion about two months after

coming under observation. He suffered but little pain except toward the end. At the autopsy every part of the body and every organ, with the exception of the nervous system, was found to be the seat of tumor formation, or to be infiltrated with the new growth. The tumors were bright green in color and soft; in some situations they were almost jelly-like.

Chloroma is a very rare disease; the author has been able to collect only twenty-seven cases from the literature. The tumors have been variously described as green cancer, pigmented myxosarcoma, chloromyxosarcoma, and lymphosarcoma. They always originate from the bones of the head and face, and the growths in the other organs are secondary and originate by metastasis. The author does not accept the theory that the green color of the tumors is due to fatty granules of high refractivity, but thinks that the color is more probably due to some chemical product allied to lipochrome, which, on exposure to light, becomes oxidized and in the process of oxidation loses its color. Nearly every organ has been invaded by secondary growths, with the exception of the nervous system. Neither the brain nor the cranial nerves have been affected, although lying in the closest proximity to the primary tumor. The brain may even be compressed but is never invaded. The most characteristic pathological changes are to be found in the osseous system. The marrow may be transformed into a semi-liquid green material resembling pus. The consistence of the tumors varies according as they are associated with fibrous, muscular, or osseous tissue. They consist of large round or oval-shaped cells, a little bigger than a white blood corpuscle, containing numerous nuclei and occasionally nucleoli.

Chloroma is chiefly a disease of children and adolescents, the great majority of cases occurring in subjects under fifteen years of age. Boys seem to be more liable to be attacked than girls. There is a close resemblance between chloroma and leucæmia. In both conditions there is deafness, exophthalmos, grave anæmia, cutaneous hæmorrhages, epistaxis, and lymphocytosis. The termination is invariably fatal from exhaustion, the average duration being five or six months. The case here reported is the first one diagnosticated during life.

Tuberculosis of the Conjunctiva. By S. Stephenson, M. B.—The author reports two cases of tuberculosis of the conjunctiva occurring in infants aged seventeen and fifteen months respectively. In each case the lesion took the form of a shallow semi-circular ulceration on the inner surface of the lower eyelid. Scrapings from the ulcers showed the presence of scattered tubercle bacilli.

The author thinks that the rarity of tuberculosis of the conjunctiva has been overestimated.

On the Subcutaneous Injection of Paraffin for the Removal of Deformities of the Nose. By W. Downie, M. B.—The author reports two cases in which disfiguring deformities of the nose were entirely corrected by means of the subcutaneous injection of paraffin. The deformities were the result of syphilitic intranasal ulceration, with destruction of portions of both the bony and cartilaginous framework. The paraffin was injected in a fluid state, and

molded into shape while still warm. There was no pain or discomfort, or any rise in temperature.

On the Spread of Leprosy and an Examination of the Fish Hypothesis of Leprosy as Applied to Kashmir. By Dr. E. F. Neve.

Case of Epithelioma Complicating Lupus Erythematosus Treated by Scraping and Healed by the X Rays. By G. G. S. Taylor.

Lancet, May 3, 1902.

The Diagnosis and Treatment of the Various Forms of Goitre. By J. Berry, F. R. C. S.—The author divides all thyroid swellings into four groups:—

I. *Parenchymatous (Bilateral) Goitre.* The parenchymatous goitre, the common goitre of young people, is a disease of the whole gland, and affects all parts equally. It causes a bilateral uniform swelling, the thyroid nature of which rarely admits of any doubt. The only other thyroid swelling that presents all these characters is the goitre of Graves's disease, certain rare forms of inflammation, and malignant disease. A parenchymatous goitre is usually soft, but it may be exceedingly hard, so hard as to lead to mistakes in diagnosis. This hardness may be due in young adults to mere excess of thyroid secretion. This kind of goitre is very often associated with severe dyspnoea, and it is well to remember that energetic treatment with iodine or thyroid extract will usually cause absorption of some of the secretion, softening of the gland, and relief from the dyspnoea. Parenchymatous goitres tend, as they become old, to undergo various secondary changes, one of the most important of which is fibrosis. Goitres in young people, however hard, are never composed to any extent of fibrous tissue. The most extreme degree of hardness is met with in those goitres which have actually become calcified.

II. *Encapsulated Tumors (Solid and Cystic).* This is an extremely common form of goitre and one of the most important from a surgical point of view, since it is that which is most amenable to surgical treatment. Many common goitres, in Switzerland and elsewhere, consist wholly or partly of encapsulated tumours, adenomata which have developed in the substance of the gland. These adenomata have a marked tendency to undergo secondary changes; they either become cystic or undergo fibrosis, the tumour becoming converted into a mass of fibrous tissue. A swelling which is strictly unilateral, involving one or other lateral lobe exclusively, and which is not inflammatory or malignant, must, with certain rare exceptions, be an encapsulated tumour, either cystic or solid—one, therefore, which is capable of being removed by the operation of enucleation.

III. *Exophthalmic Goitre.* Structurally this form of goitre differs widely from all others, presenting to the naked eye a firm homogenous appearance on section, with no visible vesicles and with little or no colloid. The absence of any vesicular or cystic structure and the absence of encapsulated adenomata serve to explain the fact that exophthalmic goitre rarely attains a large size and rarely causes serious tracheal narrowing. Microscopically it is composed almost entirely of proliferating thyroid epithelium. The circumstances which would justify the removal

of an exophthalmic goitre are, in the author's opinion, exceptional. Mere rapidity of the pulse is not enough for the establishment of the diagnosis, especially if the goitre is unilateral and deeply seated in the neck. Graves's disease may become super-added to a previously simple form of goitre.

IV. *Malignant Disease.* When in the thyroid gland of a person over forty years of age a tumor appears which is hard, which steadily and rapidly increases in size, and which is not of an inflammatory nature, the malignancy of such a tumor should be strongly suspected. If the surface of the tumor is irregular and bossy and if there are likewise dysphagia and pain in the neck shooting up the side of the head or to the shoulder, then the diagnosis is strongly confirmed. There is a curious form of chronic painless inflammation of the thyroid not uncommon in elderly women, which may be very difficult to distinguish from a slowly growing form of malignant disease. Malignant disease of the thyroid is almost always characterized by its hardness, but there is a rare form of sarcoma which is quite soft, and is likely to be mistaken for a cyst or an abscess. There are two somewhat rare forms of malignant disease of the thyroid which stand apart from sarcoma and carcinoma and which run a much slower and less malignant course. One is the papilliferous cystic tumor, characterized microscopically by the presence of numerous delicate papillary, intra-cystic growths. The second is that which is commonly known as "malignant adenoma"; a tumor which, while apparently benign, reproduces itself in various parts of the body.

Treatment. The author considers extirpation to be the proper operation in parenchymatous goitre; where there are many cysts and adenomata it is generally to be preferred to enucleation. In the great majority of cases of parenchymatous goitre no operation at all is desirable. It is dyspnoea, and especially increasing dyspnoea that does not yield to medical treatment, that calls for operation. There are two classes of goitre in which dyspnoea is apt to supervene very quickly. One is the rapidly growing goitre of puberty, and the other is that in which there is a small deeply-seated swelling, lying behind the clavicle or the sternum, which becomes displaced into the upper opening of the thorax. Malignant disease of the thyroid is seldom seen early enough to permit of any operation for its removal.

The Ætiology of Typhoid Fever and Its Prevention. By Dr. W. H. Corfield (*The third of the Milroy lectures upon the above-mentioned subject*).

Note on the Relief of a Distended Joint by the Establishment of Subcutaneous Leakage. By T. P. Teale, F. R. C. S.

A Case of Fat-Embolism After Fracture, Where Fat was Present in the Sputum and Urine. By F. A. Southam, M. B.—The author reports the case of a man, aged forty-three years, who had had a compound fracture of the right tibia. On the following morning he became unusually drowsy and mentally impaired. Three days later fat globules were noticed floating on the surface of the urine, and examination of the blood-stained expectoration showed numerous fat-globules. The drowsiness and other mental symptoms gradually disap-

peared. The case is a good illustration of the condition described as fat-embolism, a complication occasionally observed in fractures, simple as well as compound, owing to absorption of broken-up fat globules by the blood vessels. It is believed that in consequence of the crushing or splintering of the bone, the fat-globules of the medulla gain access to the venous circulation through openings in the vessels in the neighborhood of the fracture, and that these, acting as emboli, are carried on by the blood-stream until they become arrested in the capillaries of various tissues and organs, the organs most commonly affected being the brain, lungs, and kidneys.

Some Statistics Regarding the Effect of Inoculation Against Typhoid Fever in South Africa. By Dr. A. Crombie.

An Undescribed Urinary Deposit: Monohydric Magnesium Phosphate. By Dr. T. R. Bradshaw.—The author reports the case of a man suffering from dilatation of the stomach, who had been taking magnesia in large quantities, whose urine deposited an abundant sediment consisting of sparkling crystals. The microscope showed these crystals to be extremely narrow, elongated needles. Qualitative chemical analysis showed them to be crystals of monohydric magnesium phosphate.

A Case of Ovarian Tumour with Spontaneous Rupture and Œdema of the Legs Simulating Malignancy. By S. Savage, M. B.

"Idiopathic," or Congenital, Hereditary, and Family Hæmaturia. By Dr. L. G. Guthrie.—The characteristics of idiopathic hæmaturia may be thus summarized: 1. It is hereditary, familial and congenital. 2. The hæmaturia may be persistent for many years. In some cases it may cease for a time but in all it is apt to recur or to increase in paroxysmal attacks or exacerbations. At these times the urine may resemble almost pure arterial blood. It is not "smoky" in appearance but it is "red," the color being due to oxyhæmoglobin, not to methæmoglobin. The amount of blood passed during exacerbations is always far greater than is ever seen in cases of nephritis, and resembles the blood passed in cases of renal calculus or new growth. 3. All cases are liable to paroxysmal exacerbations of hæmaturia, which are usually accompanied by slight pyrexia, malaise, headache, vomiting and slight muscular pains. The duration of these exacerbations is usually several days. Extremes of hot or cold weather seem to give rise to them. 4. Idiopathic hæmaturia is not associated with Œdema or ascites, or with the cardiovascular changes of nephritis. 5. The hæmorrhage is not due to the presence of uric acid or of oxalates. The amount of urea passed is normal. 6. The specific gravity of the urine is not unduly low. It varies from 1015 to 1030. The quantity passed is not above or below normal. The reaction is acid or neutral. The urine is nearly always albuminous, the albumin varying from one-twentieth to one-fourth of its bulk. None of the subjects of idiopathic hæmaturia have been "bleeders."

Scurvy Developing in a Ricketty Boy Aged Five and a Half Years. By Dr. G. Carpenter.

Presse médicale, March 22, 1902.

Genital Anomalies.—M. H. Roger records the case of an individual who posed as a man, but

whose genital organs were those of a true hermaphrodite. The figure was feminine and there was a good mammary development. There was a well developed penis, the urethra of which entered into a normal bladder. Behind and above the bladder lay a well developed uterus with a tube and ovary on the right side. The vagina was a blind cul-de-sac, terminating just below the bladder. The verumontanum was well developed, but contained no ejaculatory canals. The prostate and seminal vesicles were absent. Externally, then, the appearance was that of a male, while internally, the organs were female.

Experiments with Sero-Agglutination in the Tuberculous. By M. E. Rumpf and M. L. Guinard.

March 26, 1902.

Observations of a Morphinomaniac.—M. Debove records in charming style the observations of a victim of the morphine habit (a physician), upon himself.

Prophylaxis of Purulent Ophthalmia.—M. A. Trousseau recommends the suggestions of Pinard—to give each mother a card calling attention to the causes, symptoms, and dangers of ophthalmia neonatorum, to compel immediate notification of every case, and to attach an ophthalmologist to every maternity hospital, for directing the treatment of these cases and instructing students, nurses and midwives.

March 29, 1902.

Simultaneous and Independent Cancer of Both Lips.—M. H. Morestin, in recording such a case in which leucoplakia of the mouth seemed to be the origin, says that when such a rare combination of lesions is observed, a careful histological examination is the only criterion by which it can be decided whether the growths are independent or not. In the case reported, although the neoplasms were simultaneous in growth and in development, they were decided to be independent by the facts of the involvement of left and right, upper and lower lips, with different lymph supplies.

Aspirin and Its Therapeutic Properties.—By M. G. Guihal.

The Administration of Quinine.—M. A. Martinet, in discussing the properties of quinine, says that quinine diminishes the oxidizing power of protoplasm, it has the power of slowing protoplasmic movements, and has an antiseptic action, especially against infusoria and the hæmatozoa of malaria. Its antipyretic action is probably dependent upon the slowing of oxidation and of cellular motion. The action of the drug upon the circulatory system is still a matter of discussion, but upon the nervous system its effects are well-known, from exaltation to depression. Its effect upon the pregnant uterus as an excitant of involuntary muscles is generally recognized. It is also a probable stomachic as a bitter, and is therefore useful in some digestive disorders.

Wiener Klinische Wochenschrift, March 20, 1902.

On Döderlein's Method of Vaginal Hysterectomy.—Professor A. von Mars says that this method is not universally applicable, especially when the posterior wall of the uterus is attacked by carcinoma. The author believes that, in general, this method does not protect the operative field from infection by the uterine secretions. Advantages, however, are that the operation is easy and does not require the separation of the bladder; that the ligaments can be taken care of more easily than by any other method; and that it is especially serviceable in hysterectomy for fibroids, as very large masses can be brought through the posterior vaginal wall. It is admirably adapted to the removal of the pregnant uterus or the uterus immediately after delivery.

The Papillary Sensation Reflex.—By Dr. L. von Varady.

Acute Yellow Atrophy of the Liver and Accompanying Psychic and Nervous Disturbances.—By Dr. Karl von Wieg.

Experimental Transplantation of the Kidneys.—By Dr. A. von Decastillo.

March 27, 1902.

Four Hundred Operations for Vesical Calculi.—By Professor A. von Frisch (*Continued article*).

Operative Treatment of Rhinophyma.—By Dr. Paul Rusch.

Action of Bactericidal Immunizing Sera.—Dr. Friedrich Wechsberg says that he does not agree with Gruber's belief in the arising of anticomplements in the blood through immunization by means of bacteria. His experiments lead him to acknowledge the correctness of Ehrlich's and Morgenroth's work as to the mechanism of bactericidal action through hæmolysis.

Case of Repeated Extra-uterine Pregnancy.—Dr. W. Philipowicz describes the case of a woman who, two years previously, was operated on for a three-months' extra-uterine pregnancy on the left side, which had become a purulent sac containing a small foetus. Two years later, she reappeared with a pregnancy in the left tube, which was then extirpated. [In the former instance, no doubt, a tubal abortion had taken place which had later suppurated.]

Self-Working Hypodermic Syringe.—By Dr. S. Spiegel.

Münchener medizinische Wochenschrift,

March 18, 1902.

Total Abdominal Extirpation for Uterine Rupture.—Dr. J. A. Amann, in reporting two cases of rupture of the uterus, says that the treatment of uterine rupture may logically be summed up as follows: If there is *acute danger of hæmorrhage*, treatment must be resorted to immediately. If the surroundings are unfavorable, immediate delivery through the vagina is advised; also examination and compression of the rupture with the insertion of a drainage-tube. Tamponing may be tried, and later a Porro operation with

extraperitoneal treatment of the stump may be performed. If the surroundings are favorable, the author advises immediate cœliotomy with removal of the child, or total abdominal extirpation. If the tear extends along the uterus perpendicularly, in front or behind, the child may be delivered by way of the vagina and a vaginal hysterectomy may be performed. If the *hæmorrhage is but slight*, observation must be maintained after delivery and total extirpation of the uterus performed if there is any marked secondary hæmorrhage. The more quickly operative measures are resorted to, the more favorable are the chances of the patient's recovery. Incomplete ruptures with inconsiderable bleeding offer the best indication for drainage.

Aniline Dyes as Precipitates of Albumin.—By Professor Heidenhain. A preliminary communication.

Silicic Acid.—By Dr. Hugo Schulz.

Surgical Treatment of Spasm of the Cardia.—By Dr. Fritz Cohen.

Peculiar Stricture of the Small Intestine.—By Dr. A. Groth.

Pupura Hæmorrhagica in a Case of Genital Tuberculosis.—By Dr. Gossner.

Riforma medica, March 27, 1902.

A Tumor at the Base of the Cranium. By Dr. Giuseppe Muggia.—The case of a man aged fifty-six years, whose mother had died of pellagra, and who, in 1898, began to show symptoms of intestinal inflammation, diffused œdema, and cachexia, incontinence of urine and fæces, and mental confusion. The patient began to lose his sense of location, exposed his body in public, etc. There was an improvement in his mental state in 1899, but, in 1901, he was readmitted in a worse state than before. Cachexia, diarrhœa, and incontinence of fæces and urine persisted until his death, in spite of dietetic and medicinal treatment of every possible kind. On the day preceding death he became suddenly paralyzed in his lower limbs, and then fell into a state of coma. His head and eyes were forcibly drawn toward the left side; the sternocleidomastoid of the right side was firmly contracted, so that all attempts to replace the head in the median line were futile. Both of the lower limbs and the right upper limb were found paralyzed; while the left upper extremity was in a state of contracture. The autopsy showed the presence of a tumor at the base of the brain, growing out of the dura mater over the cribriform plate of the ethmoid and the median portion of the small wings of the sphenoid. The tumor compressed and destroyed the grey matter of the gyrus rectus, and the adjacent portions of both hemispheres. The tumor consisted of hard elastic tissue. This case presents many clinical features, such as the sudden paralysis, etc., which cannot be accounted for by the findings of the autopsy.

March 28, 1902.

Histological Observations Upon Infectious Granulomata. By Dr. Tomaso Secchi.—I. *Fungoid Mycosis.* According to the author, fungoid mycosis is a granuloma which is distinguishable

from other granulomata by the following features. The inflammatory nature of the lesion is very pronounced in fungoid mycosis, for, in addition to the presence of a leucocytic exudate, there is also a marked fibrinous exudation and a pronounced oedema. It is, therefore, due to an infectious agent which produces rather an inflammatory than a neoplastic reaction. In certain cases, however, a proliferative process may follow the exudative. This shows that the virus that is supposed to cause the lesion may become attenuated. The connective tissue reticulum is more evident in this granuloma than in others, a fact which testifies to a weak necrobiotic action on the part of the supposed serum. For the same reason, the lymphocytes in mycosis do not show those profound lesions which appear in other granulomata. The quality of leucocytes in these granulomata varies; for the most part they are lymphocytes, and mastcells. The oedema is apparent in the sections by the presence of markedly dilated capillaries, and the endothelium lining these vessels assumes an epithelial aspect, owing to the swelling and proliferation thereof. Fungoid mycosis may be distinguished from Kaposi's sarcomatosis by the abundance of plasma cells, in which respect the mycoses resemble the granulomata of syphilis and bubo, by the marked proliferative activity of the epithelioid cells, and of the connective tissue cells.

Roussky Vrach, March 30, 1902.

The Treatment of Inflammations of the Annexa by Means of Intra-uterine Injections. By Dr. A. P. Goubarieff.—Of recent years the old-fashioned method of treating diseases of the uterus and the annexa by means of intra-uterine injections has been revived. Formerly, Braun's syringe entered into the equipment of every gynaecologist, but the unfavorable symptoms which followed the use of this apparently innocent instrument have relegated this method of treatment to the background, while applications of medicinal substances, by means of a sound or applicator carrying cotton, have come to the fore. Of late, there has arisen the theory that injections of counterirritants (iodine, etc.) into the uterine cavity, not only act favorably upon the uterine mucosa, but also influence the progress of inflammations in the annexa. Acting upon this theory, it has been proposed by a number of gynaecologists to use such intra-uterine injections in the palliative treatment of salpingitis, etc., instead of employing the surgical means indicated. A number of cases ment has given apparently excellent results. The author shows by the citation of illustrative cases that this procedure is often dangerous and very often useless. In suppurative salpingitis all manipulations of the uterine cavity are contra-indicated, and even the dilatation of the cervix that is necessary in giving the intra-uterine injections, may be harmful. At the same time, there are a number of cases in which there is a swelling in the annexa which disappears without any trouble under almost any treatment, such as, for example, the varicoceles of the ovary. From a surgical viewpoint there cannot be any other treatment for a suppurative condition than the evacuation of the pus, and the results which can be obtained in the most favorable cases by intra-uterine injections are either accidental or due to

the mildness of the inflammation. The indications for the use of intra-uterine injections in inflammation of the annexa are by no means fully determined, and it is folly to apply this method in every case with the expectation of good result, or even with the assurance that the patient is safe under the treatment.

A Case of Infection with *Balantidium Coli*. By Dr. N. S. Solovieff.—In a former article the author has shown that, contrary to the accepted notion, the *Balantidia* are not harmless, and that, in autopsies performed as soon as possible after death, they have been found in the deepest layers of the intestinal walls. The patient whose case is here recorded was a woman, aged forty years, who had lived in Siberia for ten years. Three months before admission she began to complain of headache and severe pains in the stomach, and of repeated and violent vomiting recurring daily. On examination, she presented only sensitiveness over the stomach and the large intestine. The stomach contents showed absence of hydrochloric acid and presence of lactic acid, a considerable amount of mucus, pus, and blood cells; the chyme was very ill-smelling and contained a large number of balantidia. The patient then remembered having had diarrhoea to which she did not attribute any importance. The patient died after the lingering decline usual in such cases, and the autopsy showed cancer of the stomach, an ulceration in the pyloric end, chronic gastro-enteritis, with ulcerations in the intestines, balantidia in the contents of both stomach and intestines, and fibrino-sero-purulent peritonitis. The author concludes that the *Balantidium coli* is a cause of ulcerative enterocolitis; that it penetrates into the intestinal wall chiefly through fissures between glands, and does not require any preparatory lesions of the intestine for effecting its entrance; and that the parasite multiplies in the submucous layers, causing necrosis of the latter, so that the mucous layer is deprived of nutrition, necroses, and gives rise to an ulcerative process. Under favorable conditions, the balantidia penetrate into the stomach and small intestines, and entering the mucosa, give rise to ulcers, or by their movements so irritate the surface of the mucosa as to give rise to a catarrhal inflammation. Balantidia have not any tendency to penetrate through dead tissues.

The Action of Hedonal in the Animal Organism. A preliminary communication. By Dr. S. P. Lampsakoff.

Miscellaneous.

Mustard Applications Undesirable in Infantile Convulsions.—Professor Ausset, of the University of Lille (*Echo médical du nord*, April 20th) considers that mustard baths, sinapisms, mustard foot-baths, etc., are dangerous measures to employ with a patient whose nervous system is already in a state of superexcitation, and that it is better to avoid them. In tepid baths or baths at about 82° F., chloral, and chloroform, we possess an ordinarily sufficient armament without having recourse to measures capable of reacting against the patient.

Proceedings of Societies.

ASSOCIATION OF AMERICAN PHYSICIANS.

*Seventeenth Annual Meeting, Held in Washington,
on April 29 and 30, 1902.*

The President, DR. JAMES C. WILSON, of Philadelphia, in the Chair.

The President's Annual Address.—THE PRESIDENT reviewed the work of certain medical organizations that existed over a hundred years ago, and then cited the birth of the American Medical Association. Referring to his own association, he said that out of 164, 35 members had passed away. The rest of the address was taken up with eulogizing certain of these members and in making suggestions for the association for the coming year.

The Comparative Toxicity of Ammonium Compounds; a study in Auto-intoxication.—In a paper with this title Dr. B. K. RACHFORD and Dr. W. H. CRANE, of Cincinnati, reviewed, among other things, the toxic actions of salts and acids and their effects, especially the toxicity in mice of such salts as those of ammonium, potassium, sodium and magnesium.

An Estimate of the Amount of Toxine in the Blood of a Horse Infected with Tetanus.—Dr. B. M. BOLTON and Dr. CARL FISCH, of St. Louis, in a paper thus entitled, referred to the late epidemic of tetanus from the use of antitoxine. Their experiments had consisted in inoculating two horses with garden earth, which, it was understood by the results of tests upon small animals contained the tetanus organism; also in inoculating one horse with a culture that had produced tetanus in smaller animals. From all these horses the blood was drawn at intervals of twenty-four hours after inoculation, and the amount of toxine in the serum determined by injection of guinea-pigs and other smaller animals. The rapidity with which the toxine was taken up in various animals was also mentioned.

Dr. ABBOTT said that he had examined the blood of a child who had had tetanus, twenty-four hours after death, and injected it into white mice. In none of the animals was there any sign of infection.

The Ætiological Significance of the Acid, resisting Group of Bacteria and the Evidence of their Botanical Relationship to Bacillus Tuberculosis.—Dr. A. C. ABBOTT and Dr. N. GILDERSLEEVE, of Philadelphia, read a paper in which they said that the *Bacillus tuberculosis* would stand the effect of acid decolorization very much longer than certain other bacilli in the same group, and stand the effects of very much stronger acids. They had found that the whole group was decolorized almost instantly by the old staining process. None retained their stain more than a second or two. As to the study of nodules, there was no particular evidence of caseation or destruction of tissue, but as the nodule continued to grow, there was organization or supuration. There were ob-

served within these growing masses organisms not like the bacillus. The authors had made inoculations on the larger animals, such as calves and hogs. They got no results. At the point where the inoculations were made there was granulation tissue. There was no evidence of dissemination of the organisms. The injections were made into the jugular vein of the calves. It was questioned whether "tubercle bacilli" were properly named.

Dr. Flexner had gone over the specimens. They were pseudo-tubercles. They consisted of epithelioid cells, more or less lymphoid, and infrequently giant, but types of giant cells were regarded as foreign-body giant cells, not those of tuberculosis. This reminded one of granulation tissue.

Histological Alterations of Cystotoxic Intoxication.—Dr. SIMON FLEXNER, of Philadelphia, said in this paper that the studies of Bordet, Ehrlich, Metchnikoff, Van Dungen and others had proved that many kinds of body cells, when injected into alien animals, gave rise to the production of cystotoxines agreeing in many physiological properties with bacterial and other toxins. Among other effects, they seemed to act specifically upon cells of the kind from which they were derived. Thus far, the injurious action of cystotoxines upon cells had been little studied histologically and not at all upon the lymphatic organs, which would seem to be peculiarly adapted for demonstrating lesions of a toxic nature. Speaking of terminal infection, those having a chronic disease succumbed to bacterial infection. In this terminal infection there was a great reduction in the amount of complemental or circulating serum in the blood or absence of the normal complement. The authors cited had chosen for their investigation the bacillus of typhoid fever and the colon bacillus.

Dr. ABBOTT had made experiments with animals which had been given alcohol for varying lengths of time—three weeks and a month—and there was a reduction in the complementary substance of from 15 to 20 per cent. as compared with normal animals. So there were other things than disease which would produce this effect.

A Study of Bacterial Cells.—Dr. V. C. Vaughan, of Ann Arbor, read a paper which showed the result of some very careful experimentation. The author presented specimens of the various bacteria in question. His work indicated that bacterial cellular toxins contained two or more toxic groups, one of which was much more readily split off than the others. This explained the decrease in toxicity which had been generally observed in solutions of bacterial toxins on standing. The work also suggested a new theory concerning the action of antitoxines, and this might modify our conceptions of what constituted life in its unicellular manifestations. Life in its lowest unicellular manifestations was the association of matter with that form of energy which endowed the matter with the potentiality of assimilation, growth, and reproduction. One unicellular organism differed from another not only in the matter which made up the cell, but

also in the special form of energy with which the matter was associated. An attempt would be made to show that there was specialization of energy in different cells.

On Some Effects of Tobacco on the Tissues of Rabbits.—Dr. I. ADLER, of New York, said in this paper that the rabbits had been kept in box stalls filled with excelsior, which they would not eat, and so ate the food given them. The food consisted of fresh cabbage, chopped fine and mixed with an infusion of tobacco made from cigars. A rabbit killed after three weeks showed no trace of disease, but one killed after two months and a half showed an enlarged liver, giving a gritty sensation when cut with the knife. As the time increased at which the animal was killed, diseased conditions of the liver were more and more undoubted. In these experiments there was a distinct proliferation of the bile ducts.

A Case of Hæmatoporphyria.—Dr. JAMES TYSON and Dr. A. C. CROFTON, of Philadelphia, reported the case of a woman, fifty years of age, who had been taking from twenty to sixty grains of sulphonal nightly, frequently the larger quantity, for several years to produce sleep. Subsequently she had abdominal pain and tympany—so severe as to require hypodermic injections of morphine. Upon examination of the urine in the sick room, it was found to be dark-red. With the disappearance of the color, the patient recovered.

Pneumococcic Arthritis.—Dr. J. B. HERRICK, of Chicago, said that this complication with pneumonia was rare, very few primary cases having been found. Cave, in 1901, had found but thirty-one cases of pneumococcic arthritis. The author could add to these several, including three of his own. The course had generally been bad, because of the severity of the primary pneumonia, because of the accompanying bacteriæmia, or because some other more vital organ was simultaneously affected. While the treatment was generally surgical, it need not be of necessity the most radical, for there was a certain tendency toward spontaneous recovery or recovery under aspiration or after a simple incision, much as in pneumococcic pleuritis.

The Pathology of Herpes Labialis and of Herpes Zoster Occurring in Acute Croupous Pneumonia.—Dr. W. T. HOWARD, Jr., of Cleveland, said that in a case of croupous pneumonia in which death took place on the sixth day of the disease three days before death there was marked herpes of the upper lip and of the nose, most marked on the left side. Histological study of the Gasserian ganglia and of their branches showed as follows: In the left ganglion there was marked congestion of the veins about the superior maxillary nerve and its origin, with hæmorrhage into the capsule and into part of the ganglion nearest to this branch. Here, in addition to the hæmorrhage, there were cellular infiltration and proliferation, with compression and destruction of some of the ganglion cells. The right ganglion showed congestion of the same veins without hæmorrhage but with some cellular

infiltration of the ganglion tissues near the superior maxillary branch. No degenerations were found in the roots of the fifth nerves or in the superior maxillary nerves. In a second case of croupous pneumonia, several days before death there was a marked herpes zoster in the region of the sixth rib on the left side. A similar eruption was found, on the day of death, on the left side of the abdomen in the region of the eleventh rib. Only the lower portion of the cord and the lower spinal root ganglia could be removed at the autopsy.

As the lesions in the ganglion and in the skin in herpes labialis and nasalis and in the herpes zoster of pneumonia were the same, and as they had the same pathology as ordinary herpes zoster, it seemed probable that the various forms of herpes were identical.

A Diagrammatic Comparison of Types of Bacillus Diphtheriæ in Well Persons and Clinical Cases.—Dr. F. F. WESTBROOK, of Minneapolis, spoke in this paper of the varying degrees of virulence which occurred in the bacillus diphtheriæ and the endeavors which had been made to modify it, and of their relation to infection of well people with diphtheria and diphtheria-like bacilli. A series of diagrams was shown giving the distribution of different groups, or types, of diphtheria and diphtheria-like bacilli in various institutions and schools. These findings were compared diagrammatically, also, with the types of diphtheria which occurred in practice.

(To be Continued.)

Book Notices.

An American Text-book of Pathology. For the Use of Students and Practitioners of Medicine and Surgery. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology in Rush Medical College, Chicago, etc., and DAVID DIESMAN, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic, etc. With 443 Illustrations, 66 of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 1245. [Price, in cloth, \$7.50.]

This work is a distinct addition to the literature of pathology and should be the cause of just pride alike to editors, contributors, and publishers. A good, comprehensive text-book on pathology in the English language has long been desired, and we are glad to state that with the present work this want has now been realized. There are certain advantages and disadvantages in a book by many authors, but the range of this particular branch of medicine is so vast that the editors have carefully selected for their assistance authors thoroughly familiar with each particular subject. Thus, we find among the contributors names well known in nearly every branch of medicine, and the result is a most admirably complete and valuable work.

The section on general pathology occupies over 400 pages, and deals with general morbid processes, tumors, pathogenic microparasites, animal parasites, intoxications, the general pathology of fever, and teratology. The chapter on tumors is especially

well written and instructive. In discussing the ætiology of tumors in general, a very conservative view is taken between the Cohnheim theory, which may easily account for many of the benign tumors, especially the teratomata; and the parasitic theory, which is still far from being demonstrated. In this connection Ribbert's hypothesis for the development of aberrant cells into new growths is mentioned.

The classification of tumors is a subject upon which most of the recent writers have preferred not to dwell, as the difficulties attending such attempts have been recognized. The plan chosen for the present work will repay the attention of every pathologist. In the discussion of the fibro-epithelial tumors, in which connective tissue as well as epithelial elements takes part, a division into two principal varieties is made, for convenience of description, according to Ribbert's plan. To quote: "Those tumors in which surface epithelium, either cutaneous or mucous, participates, form one variety represented by the papillomas; while the neoplasms whose epithelium is derived from pre-existing glands or glandular remnants form the other main variety, the adenomas." The confusion existing between endothelioma and carcinoma is mentioned. Under endothelioma are classified angiomasarcoma, psammoma, myxosarcoma, perithelioma, and cylindroma. It has been our observation in obscure cases that where the general morphology distinctly points to carcinoma, careful examination of various portions removed from the periphery of the growth may be of the greatest service in the determination of the genetic relationship of its tissue. In this way many of the atypical carcinomata will be found to belong to the group of endotheliomata. The difficulty in distinguishing the gradations between a simple hæmangioma or lymphangioma and the various forms of endothelioma is also dwelt upon.

A clear account of our present knowledge concerning "deciduoma malignum" is given. The question of the development of the syncytium from maternal or foetal origin has not been settled; yet, on account of their epithelial nature these tumors belong, according to the writer, to the class of carcinomata.

The subject of microparasites occupies 100 pages, and most of the important details regarding bacteria and the diseases they produce are described. In discussing the bacillus of syphilis, the writer states that "there is not sufficient evidence at hand definitely to pronounce the bacillus of Lustgarten the specific cause of syphilis, although a strong tendency in this direction is manifested by those who have most carefully studied the subject." It is not stated whether this tendency is a recent observation or not. At any rate, this is in direct opposition to the views held during the past ten years or more.

The *Streptothrix pseudotuberculosis* described by Flexner and the *Sporotrix Schenckii* (Hektoen) are briefly considered. The pathogenic sporozoa are very fully described, as are also the hæmosporidia of birds.

The chapter on intoxications deals with mineral, synthetic, vegetable, bacterial, and animal poisons. Much valuable information to the pathologist and chemist, especially along the lines of forensic medicine, may be derived from this chapter. The general pathology of fever receives most careful con-

sideration, and the result of much valuable experimental work in this intricate and difficult subject is given.

Nearly 800 pages are devoted to the subject of special pathology. An extended review of this portion of the work would lead us too far. Most of the sections have received the full consideration they deserve, others are disposed of somewhat briefly. There is, however, a certain amount of evenness which makes the book most valuable for reference, while still retaining a certain amount of personality in each chapter. The book also has the decided merit of clear, logical, and concise statement. The illustrations are well chosen and clearly executed, and the work is a thoroughly modern text-book of great value, filling a distinct place in the literature of pathology. We commend it warmly.

A Text-book on Diseases of the Ear, Nose, and Throat. By CHARLES H. BURNETT, M. D., E. FLETCHER INGALS, M. D., and JAMES E. NEWCOMB, M. D. With Numerous Illustrations. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. xviii-716.

Text-books in the line of ear, nose, and throat disease are following each other so rapidly at the present day that the demand must be almost supplied; yet each publication has its own peculiarities that render it different from every other, and so all find readers. The present treatise at once recalls the two-volume publication covering the same ground put forth under Dr. Burnett's editorship several years ago. The arrangement of the present work is much along the same lines, but it is not an abridgement of the other, as it is entirely new, having been written by the author named within the last year or two. Dr. Burnett writes of the ear (pp. 1-212), Dr. Ingals, assisted by Dr. Otto Freer, of the nose and nasopharynx (pp. 221-458), and Dr. Newcomb of the pharynx and larynx (pp. 463-700). The authors being men who are engaged in active practice and frequent contributors to the literature of their respective departments, it naturally results that nothing essentially new is contained in the present treatise, except, perhaps, in regard to certain details of treatment suggested by the personal experience of the writers. One thing may be said of it with perfect truth, and that is that it is strictly up to date in its several chapters and affords to both practitioner and student a reliable and complete exposition of the present status of otology, rhinology, and laryngology. The book is clearly printed on good paper and the illustrations are models of clearness.

Neurological Technique. By IRVING HARDESTY, Ph.D., Instructor in Anatomy, University of California, etc. Chicago: University of Chicago Press, 1902. Pp. xii-183.

This is a most useful handbook and bears all the evidence of having been prepared by a practical laboratory worker thoroughly versed in the manipulation of the methods he describes. Most of the methods essentially adapted to the nervous system are given in full. For some reason Van Gieson's method has been omitted. The chapter on the outline for the dissection of the central nervous system

is extremely useful, and the anatomical nomenclature adopted by the Basel commission of anatomists is a very suitable adjunct for a book of this kind. It is a safe prophecy that every laboratory will acquire this handbook.

Die nervöse Schlaflosigkeit, ihre Ursachen und ihre Behandlung. Von Dr. MAX HEIM, Spezialarzt für diätetisch-physikalische Therapie in Bonn. Bonn: Friedrich Cohen, 1902. Pp. 59.

This little pamphlet considers from a comprehensive standpoint the nature and causes of insomnia and recommends appropriate treatment in the different varieties, laying special weight upon general measures as opposed to hypnotics.

Beiträge zur pathologischen Anatomie der graviden Tube. Von Dr. med. AUGUST PETERSEN, Kopenhagen. Berlin: S. Karger, 1902. Pp. 84.

The author of this monograph answers three essential questions as a result of his study of many cases and of the literature of the subject. The first problem is whether the catarrhal salpingitis which is usually found stands in any direct relation to the tubal pregnancy. He finds that there is no relation whatever between the two conditions, the catarrhal being in every instance the result of an ascending infection from the uterus, both tubes being simultaneously and similarly affected, as a rule. He reaches the conclusion, as a result of his study of his second question, that a primary salpingitis is a determining factor of great weight in inducing a tubal pregnancy. The fact that the ovum is usually deposited at the point where diseased merges into healthy tubal tissue is an element which speaks vastly in favor of this view. He concludes, thirdly, that the mucosa of any tube, healthy or the seat of an inflammation, is capable of becoming the seat of decidual formation and of thus forming a nidus for the developing ovum. The work is clearly and interestingly written, and embraces, as well, the author's clinical and histological observations.

Experimentelle und kritische Beiträge zur Händedesinfektionsfrage. Von Dr. RICHARD SCHAEFFER, in Berlin. Mit 12 Tabellen und 4 Abbildungen auf 2 Tafeln. Berlin: S. Karger, 1902. Pp. 7 to 110.

The numerous methods of hand disinfection are subjected to a searching criticism in this pamphlet. The result of the original investigations here embodied has shown that no one method is capable of rendering the hand, naturally or artificially infected, absolutely sterile, when judged by the most exacting standards of bacterial testing. The utmost attainable, therefore, is as great a scarcity of germs on the hand as possible, which for practical purposes should be regarded as sterile.

All the methods, conscientiously carried out, make an equally good showing, but the author is of the opinion that a thorough scrubbing of the hands with several changes of alkali soap-suds, followed by a like scrubbing with diluted alcohol (fifty per cent.) for ten minutes, is the best means of disinfection. The significance of antiseptics in the final step

of the technics of hand sterilization is not a question of germicidal action, but one of washing away with an antiseptic the germs liberated in the mechanical act of scrubbing. Such a confession stamps the author as guilty of that very sophistry which he would have other investigators abandon in a study of this question. The questions of practical concern are the degree of virulence of the residual germs in the quasi-sterile hand, and not their numerical preponderance; and what agents are capable of still further reducing their virulence and number. If gloves did not interfere so greatly with the tactile sense, the ideal would be attained in them, but the personal equation is the greatest element in the cleansing of the surgeon's hand, and the sterilization of hands therefore must be regarded as an art and not as a science.

Water and Water Supplies. By JOHN C. THRESH, D. Sc. (London), M. D. (Victoria), D. P. H. (Cambridge), Honorary Diplomate in Public Health, Royal College of Physicians and Surgeons, Ireland, etc. Third Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xv-527. [Price \$2.]

This edition differs but little from the second, published in 1896, but contains the following additions: A valuable chapter on the protection of surface water supplies, in which the author makes a good defense for the purity of surface waters; and a new chapter on water rates and their computation.

A Handbook of Diseases of the Nose and Pharynx. By JAMES B. BALL, M. D. (Lond.), Physician to the Department for Diseases of the Throat, Nose, and Ear, West London Hospital, etc. Fourth Edition. With Sixty-one Illustrations. New York: William Wood & Company, 1901. Pp. xii-439.

In this little volume Dr. Ball has struck a happy medium between the diffuse and complete reference book, and the very short manual, giving a book of moderate size and readable quality and of very considerable practical value. It is well written, and in it the subjects are well subdivided and classified and treated in a convenient and rational manner.

His descriptions of symptoms and his clinical pictures are clear and complete, and his outlines of treatment, while not so full as they might be, are still excellent and practical, the former quality making the book valuable to the higher student (for whom it is apparently specially intended), even if the latter makes it somewhat less so for the practitioner, who would be likely to seek larger and more extensive works. A little more space given to pathology would have increased its value very much to both classes. In the section on anatomy, while it is brief, the author has very clearly described the most important anatomical features of the regions under discussion, and has wisely refrained from going into too great detail. In the section on diseases of the nose and pharynx he has, again wisely, given most space to the more common affections, and has not overloaded the book with long descriptions of the more rare and unusual conditions.

Rather strangely in a book dated in 1901, the author has omitted, with one trifling exception, all

mention or discussion of suprarenal extract, either as a diagnostic agent, to shrink up the tissues in the nose, or as a therapeutic agent in the treatment of hay-fever, or in hæmorrhagic conditions, or as an aid, so valuable and practically indispensable, in operations on the nose, to prevent hæmorrhage. The only reference to it is in the treatment of epistaxis, where he says that a solution of suprarenal extract on a plug of cotton-wool "is also useful."

The book is fairly well illustrated with pictures showing the normal anatomy of the parts and various instruments and accessories necessary for treatment. On the whole, though containing nothing new, it is a good and useful book, because it is clear and brief.

BOOKS, ETC., RECEIVED.

The Operations of Surgery. Intended especially for the use of those recently Appointed on a Hospital Staff and for those preparing for the Higher Examinations. By W. H. A. Jacobson, M. Ch., Oxon., F. R. C. S., Surgeon to Guy's Hospital; and F. J. Steward, M. S., London, F. R. C. S., Assistant Surgeon to Guy's Hospital, etc. Fourth Edition. Volume I. Upper Extremity—Head and Neck—Thorax. Pp. xi-727. Volume II. Abdomen—Lower Extremity—Spine. Pp. vii-776. (Price, \$10.)

The Röntgen Rays in Medicine and Surgery as an Aid in Diagnosis and as a Therapeutic Agent. Designed for the Use of Practitioners and Students. By Francis H. Williams M. D. (Harv.), Visiting Physician at the Boston City Hospital, etc. With Four Hundred and Ten Illustrations. Second Edition, with Enlarged Appendix. New York and London: The Macmillan Company, 1902. Pp. xxxii-704. (Price, \$6.)

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume I. Twelfth Series. Philadelphia: J. B. Lippincott Company, 1902. Pp. viii-306.

The Surgery of the Rectum. By Charles B. Kelsey, A. M., M. D., Late Professor of Pelvic and Abdominal Surgery at the New York Post-graduate Hospital, etc. Sixth Edition. Illustrated by Two Hundred and Fifteen Engravings. New York: William Wood & Company, 1902. Pp. ix-402. (Price, \$3.)

The Study of the Pulse, Arterial, Venous and Hepatic, and of the Movements of the Heart. By James Mackenzie M. D. (Edin.), Burnley. New York: The Macmillan Company. Edinburgh and London: Young J. Pentland, 1902. Pp. xx-3 to 325. (Price, \$4.50.)

Hernia: Its Ætiology, Symptoms and Treatment. By W. McAdam Eccles, M. S. (Lond.), F. R. C. S. (Eng.), Senior Assistant Surgeon at the West London Hospital, etc. Second Edition. New York: William Wood & Company, 1902. Pp. xvi-233. (Price, \$2.50.)

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume V. Obstetrics. Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Gynæcology in the University of Michigan, and Henry F. Lewis, A. B., M. D., Instructor in Obstetrics and Gynæcology, Rush Medical College. Chicago: The Year Book Publishers, 1902. Pp. 3 to 233. (Price, \$1.25.)

Photographic Atlas of the Diseases of the Skin. A Series of Eighty Plates, comprising more than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By George Henry Fox, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, etc. Part XI. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. 141 to 154.

First Aid in Accidents. By Charles R. Dickson, M. D., Lecturer and Examiner, St. John Ambulance Association, etc. Chicago, New York and Toronto: Fleming H. Revell Company, 1902. Pp. 3 to 127.

Forty-ninth Annual Report of the Mount Sinai Hospital of the City of New York. January, 1902.

Annual Reports of the New York Eye and Ear Infirmary. Volume X. January, 1902.

Miscellany.

The Treatment of Cataract Without Operation.—According to the *St. Louis Medical Review* for April 26th a Bordeaux oculist has taken up with remarkable success the treatment of cataract without operation, by the application of baths of sodium salicylate. He is said to have arrested the progress of opacity in the crystalline lens for several years in numerous cases, and is sanguine of success if the treatment is begun at an early stage.

Testimony to the Medical Department's Work in Cuba.—The *Army & Navy Journal* for May 3rd says:

"Convincing evidence of the wholesome work accomplished by the medical department of the United States army in Cuba appears in the announcement that there will be no quarantine against vessels arriving at New York from Cuban ports this summer unless yellow fever actually appears in the island."

The Alimentation of Children with Goat's Milk.—M. Raillet *Médecine orientale*, April 25th) recently read a report before the Academy of Medicine of Paris in which he endeavored to rehabilitate the nourishment of infants on goat's milk. The objection raised on the score of disagreeable odor and an excess of casein, he said, did not apply to the milk from all goats. Special advantages, he asserted, lay in the facility of accommodating goats in towns, and of their special resistance to tuberculous infection.

The X Ray Foreshadowed in 1846.—The *American Electrotherapeutic and X-ray Era* for March cites the following from Vol. XXXI of the *Wiener Zeitschrift für Kunst, Literatur, Theater und Mode* for November 23, 1846, p. 938:

"The Human Body Transparent! The Greek physiologist Eseltja has, according to the *Athenæum*, made the announcement that he has succeeded, with the aid of the electric light, in seeing through the human body. He asserts that he has watched the disease processes in the intestines, also the digestive process, the circulation of blood and the movement of the nerves. If this 'Anthroposcope,' as he calls it, is more than a cheap advertisement, the old proverb, which says that no one can see into the heart of man, has been set at naught."

A French View of United States Hospitals.—M. Brouardel (*Médecine orientale*, April 25th) recently read before the Academy of Medicine of Paris a report from M. Kahn relative to his visit to the hospitals of the United States. M. Kahn considers that the best hospitals are those founded

by private benefactions. The public hospitals are not in general well found. But the admission to the first class of hospitals is difficult and only obtainable by recommendation. The author studied also the nursing staffs, their recruiting, working, and admirable organization, of which, he said, France might be envious.

Colon Bacillus Infection of the Female Genital and Urinary Systems.—At a meeting of the New York Obstetrical Society held on April 8th Dr. Albert H. Ely read a paper narrating certain cases which had come under his observation, in which the colon bacilli had been the cause, either directly or indirectly, of the trouble. The virulence of the infection from the colon bacilli seemed in most cases to depend upon their associated pyogenic organisms, for we found the colon bacilli present in great numbers in the urine at times, without giving any symptoms.

Again, when the other pyogenic organisms had disappeared, the colon bacillus would remain as the organism which produced a most intractable type of disease. Hence we concluded that a suitable nidus was necessary for its propagation and action, which gave us the clinical symptoms of infection and disease of the tissue. Many of the cases which were designated as auto-infection, sapræmia, and septic intoxication might be due, in a measure, to infection from the colon bacillus, or could be illustrated by cultures taken from what appeared, and the later process showed, to be a mild degree of wound infection. These cases were observed in cœliotomy wounds, especially where there had been injury of the intestines during the progress of abdominal operations. An analogy was pointed out also to cases which showed a mild form of infection coming on after sixty hours from the time of a normal labor, especially where opportunity was given for the infection directly from the fæces.

From these mild forms of infection we passed to severe types illustrated in the most pronounced degree of infection, where the colon bacilli were found associated with streptococci and staphylococci, only the proportion between the number and virulence of the organisms showed that it was the colon bacilli that had played the chief rôle in causing the fatal peritonitis and abscesses, nephritic, hepatic, and subphrenic.

Dr. Ely's conclusions were as follows:

1. There exists as much necessity for thorough cleansing and rendering as aseptic as possible the rectum and colon as the field of operation, especially when that operation is performed per vaginam. In all cases of election, the routine treatment of mild mercurial catharsis, followed with a saline and irrigation of the colon with salt or boric-acid solution, should be employed.

2. The best results can be obtained when the intestines receive the minimum degree of trauma from handling and especially with the absence of careless use of retractors, where for cosmetic effects or fear of herniæ too small incisions are made to permit of operation by sight rather than touch.

A New Method of Performing Gastrostomy.—A. Depage (*Journal de Chirurgie*, November, December, 1901, *Medical Review*, February 1, 1902), having found that the gastric juice escaped after all the usual methods of gastrostomy, devised the following operation which he has successfully performed in the case of cancer of the upper part of the œsophagus when solid food could not be taken: A vertical incision, 7 or 8 centimetres long is made, a little to the left of the middle line and at the seat of election. After opening the abdominal cavity a portion of the stomach is drawn out and separated from the peri-

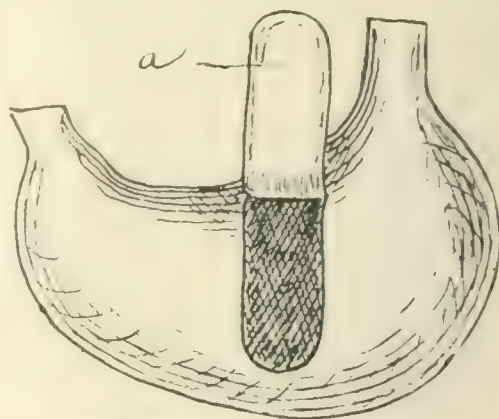


FIG. 1. Depage's Gastrostomy. a. The flap raised from the anterior wall of the stomach.

toneal cavity by a continuous suture which unites the wall of the organ to the edge of the peritonæum. A flap with its base upward is then cut out of the anterior wall of the stomach (Fig. 1.) This can be easily done by pinching up a piece of the wall between pressure-forceps and cutting along the blades.

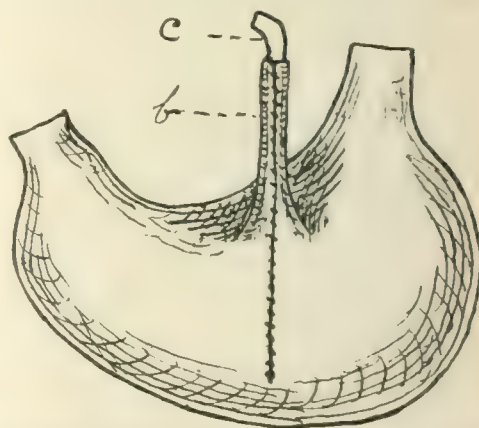


FIG. 2. Depage's Gastrostomy. The edges of the incision sutured together, and the flap transformed into a canal (b) through which a sound (c) is passed.

The flap is then turned upward and the incision in the stomach is closed by a continuous suture, carried first only through the mucous coat. The serous layer is sutured in the same way. Each of the sutures is continued on to the flap, which is in this way transformed into a canal (Fig. 2). The canal thus made, is fixed to the abdominal wall, or, if long enough, it may be drawn through a parietal tunnel to near the xiphoid cartilage. The abdominal incision is then sutured and a sound is introduced into the canal, and may be left there or inserted before each meal.



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Original Communications.

THE PATHOLOGY OF THE TISSUE CHANGES CAUSED BY THE RÖNTGEN RAYS, WITH SPECIAL REFERENCE TO THE TREATMENT OF MA- LIGNANT GROWTHS.*

By CARL BECK, M. D.,

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While the treatment of malignant growths by the Röntgen rays has not yet gone beyond the experimental stage, it has established a series of new and most important facts which are well worth attracting the attention of the medical profession. It was obvious that the integumental changes which manifested themselves after prolonged exposures to the Röntgen rays, generally called "x ray burns," suggested their therapeutic utilization. In considering the pathology of these changes, conclusions can be drawn for the therapeutic *modus operandi*.

Some time ago (*Medical Record*, January 18, 1902) I suggested that there might be distinguished three different degrees, just as in ordinary burns, the first degree being characterized by the symptoms of hyperæmia, the cutis being infiltrated and the temperature somewhat higher. Exfoliation takes place in small scales. The most pronounced subjective symptom is a tormenting itch in the skin. Effluvium capillorum, which manifests itself, as a rule, without showing any visible signs in the integument, belongs to the same category. It seems that there is a regressive metamorphosis (atrophy) of the differentiated elements of the skin, viz., the glands, hairs and nails.

The main feature of the second degree consists in the formation of blisters, the clear or yellowish contents of which lift the corneous from the mucous stratum of the rete Malpighii. The inflammatory signs are well pronounced, the tension is

considerable, and the pain is intense accordingly. After the removal of the blisters the corium is exposed as a red and sore surface (bullous form of Röntgen-ray dermatitis).

The third and gravest degree is characterized by the escharotic destruction of the irradiated tissues. They show the signs of dry gangrene, and their appearance is brownish-black. If they exfoliate by a slow suppurating process, or if they are removed, as they should be, by surgical interference, a granulating ulcer remains the cicatrization of which may take months (necrotic form of Röntgen-ray dermatitis).

The most characteristic difference between ordinary burns and the integumental changes produced by the Röntgen light is the fact that the latter do not manifest themselves before the lapse of a period of incubation, as a rule, after about two weeks.

This stage, which we may properly call the latent, lasts about ten days in the simple type of Röntgen-ray dermatosis. Then the integument becomes hyperæmic. At first there is a light, later dark, redness, and finally the skin becomes brown and scaled. After a few weeks there is complete recovery. Sometimes slight pigmentation of the integument remains.

In the bullous type of the Röntgen-ray dermatitis, after an incubation of about two weeks, intense reaction takes place. This is of a subjective as well as an objective character, and lasts about as long as the period of incubation. Then cicatrization takes place. If the area of irradiation was covered with hairs, depilation occurs. The process of regeneration of the hair is slow. Pigmentation and teleangiectasis nearly always remain. The necrotic type of the Röntgen-ray dermatitis, as a rule, develops a few days later than the bullous form, and requires months for its cure.

The terra-cotta-like hands of skiagraphists demonstrate the chronic type of Röntgen-ray dermatosis. Their integument is wrinkled, shrivelled, vulnerable, and partially cracked, the nails are horny and also cracked, and the phalanges are so much thickened that there is tension while motion is exercised. The elasticity is lessened and the sensibility increased. Effluvium capillorum is an invariable companion. Undoubtedly there is a cumulative influence.

* Read at the ninety-sixth annual meeting of the Medical Society of the State of New York, held at Albany, January 29, 1902.

Examination of the integumental changes in men as well as in lower animals shows a disturbance of nutrition in the walls of the blood-vessels, just as in ordinary burns, the main difference consisting in the slower development of the process. The peculiar chemical influence of the Röntgen light on the



FIG. 1.—Lupus erythematoses.

tissues is so exerted that the nutrition of the cells is impaired.

It is only when this impairment has reached a greater degree that the signs described above manifest themselves. And these signs are again influenced by the power and amount of the Röntgen light. It must also be considered whether the tissue is normal or diseased (compare reaction of cancerous areas). A greater or lesser susceptibility must also be admitted.

The fact that in some individuals dermatitis has supervened after a few exposures, while others have remained free for years, suggests the existence of such an idiosyncrasy as, for instance, was, in spite of the freest manipulation of my armamentarium, never affected by the rays, so that I was inclined to imagine at last, that I was blessed with a certain immunity. But when one day I was handling powerful tubes in connection with high tension, I noticed an intense burning sensation at the dorsum of the right hand, the surface of which I used to turn toward the Röntgen tube while the strength

of the light was tested through my own wrist. The burning sensation was accompanied by a most distressing tension, which was intensified by every motion. At first the hand appeared erythematous. Later on it became terra-cotta-like, and then the epidermis exfoliated in small scales, so that it resembled leather. Perspiration ceased entirely. During the sultry days which came in such an unwelcome number last summer, the distress was especially great; this I would explain from the stimulation which rendered the hardened follicles functionless. I then substituted the left hand for the fluoroscopic control, and protected the right one with a tin-foil glove. The violent symptoms disappeared. Soon, however, the same signs developed at the dorsum of the left hand in a somewhat milder degree, so that I was finally condemned to complete abstention from the Röntgen rays. Since restricting myself to the most necessary manipulations only, and observing a fair distance from the light as long as fluoroscopic control could be dispensed with, no disturbances have been felt by me, and the appearance of



FIG. 2.—Lupus erythematoses. After the twentieth irradiation.

my hand was again perfectly normal until a short time ago, when, after extensive exposure, I had a slight new attack, from which I am still suffering.

The same idiosyncrasy exists among animals. To my previous report (*Medical Record*) on my experiments on lower animals I may add that one of

the mice with which I am experimenting at present is still alive after being irradiated forty-two hours now—on an average of two hours a day in succession. Depilation started after thirty-eight hours of moderate irradiation, and is still of a very slight nature.

We may assume that, if in chronic inflammatory processes constriction of the vessels takes place, the papillæ starve. A hair extracted after prolonged irradiation is found to have lost its structure. It ends in a point instead of showing a root. Integumental specimens show thickening of the tunica intima of the small blood-vessels, a process which tends to narrow their calibre. Fibrous tissue in reticular arrangement is deposited. The tunica muscularis and tunica adventitia are affected in the same manner.

The influence of the rays on integumental disease is similar. In regard to hypertrichosis, favus, eczema, psoriasis, roscea, acne vulgaris, prurigo, etc., I refer to my previous publication (*Text-book on Fractures, with an Appendix on the Practical Use*

rosis may be the result. Thus we understand the curative influence on lupus, carcinoma, and sarcoma, especially if these neoplasms are confined to the integument.

Successful treatment of lupus is reported by many. To the cases published by me previously I



FIG. 3.—Lupus erythematoses. After the twenty-fifth irradiation.

of the Röntgen Rays, Philadelphia and London, 1900).

The tissue change taking place in neoplasms is also of the nature of a chronic inflammation. The nutrition of their superficial strata is disturbed, the cells starve, and if overirradiation is continued, nec-



FIG. 4.—Lupus erythematoses. Cicatrized.

may add one of facial lupus erythematoses in a woman of twenty-five years (Fig. 1), who was irradiated fifteen times before reaction occurred. It was not until the twentieth exposure that the redness decreased (Fig. 2) and some of the nodules began to shrink. After the twenty-fifth exposure the ulcerations had cicatrized (Fig. 3), the scabs had disappeared, and no nodules were found. The redness still persisted for six weeks. It was treated with unguentum zinco-salicylicum. The cure is perfect (Fig. 4.) The patient has a history of tuberculosis. A brother as well as a sister died from pulmonary tuberculosis. She had three children, of which one was still-born, and another one died from meningitis (tuberculous?). The third is healthy.

The curing influence of the Röntgen rays on carcinomatous tissue can also be no longer doubted. Morton, Allen, Pussey, Williams, Weigel, and others, besides myself, have reported cures in epithelioma. All integumental forms of carcinoma are accessible to Rönt-

genotherapy, also the tongue and the cervix uteri at an early stage. In spite of this fact, I should regard it as extremely unwise to leave to the rays what can be done much quicker and more effectively with the scalpel, namely, by extensive removal.

But irradiation should be considered in the after



FIG. 5. Adenocarcinomatous area not affected by the Röntgen rays.

treatment as well as in "inoperable" cases. Even after a thorough operation, carcinoma cells are often left in the deeper strata which cannot be reached by the surgical knife. We must consider that in the majority of cases the recurrence of carcinoma is caused by the epithelial cells of the primarily affected area—and but rarely by those of the secondary foci. Local recurrence, the most frequent form, is always produced by the carcinomatous cells which were left back at the operation, while the indirect type originates from such neighboring tissue, which at the time of the operation appeared to be normal, but in fact carried the embryonic elements of carcinomatous infection.

A carcinomatous portion however left at the time of operation must not necessarily always be the cause of further infection. The *vis medicatrix naturæ* often attempts to secure a natural protection by surrounding cancer alveoli with giant cells, which, as microscopical examination shows, starts a regressive metamorphosis analogous to the well known healing processes in tuberculosis. It is the abundance of the epithelial toxins which prepares the soil for the new invasion and further development of the carcinoma-cells. This also explains the rare occurrence of blood-metastasis in carcinoma. If these cells could not really be destroyed, but if only a regressive metamorphosis was induced by the rays, a great advance in the treatment of this horrible disease would be made. I have so far

treated five cases of recurrent carcinoma mammaræ after the operation. In all of them decided improvement could be observed. In a case of adenocarcinoma, recurring three months after most extensive removal by an excellent surgeon, a large infiltrated mass, reaching from the sternum to the axilla, had formed within another three months. The supraclavicular region, the shoulder, and the whole upper extremity of that side were œdematous to the utmost. Near the sternum was a small ulcerating area. The patient suffered temporary pain of great intensity. I did not believe then that there was a possible chance even of improvement, but the husband urged me to try irradiation nevertheless. The whole area was exposed then, first at intervals and then every day on an average of twenty minutes. There have been sixteen exposures altogether up to the present time. After the fourteenth exposure the infiltrated area began to shrink and the œdema disappeared entirely. The recurring growth had reached the pleura, as was evident from the presence of a pleuritic effusion, which was aspirated. A specimen taken from the irradiated area showed colloid degeneration, the adenoid character having disappeared. This seems to some extent to show the mode of cell metamorphosis which the cells undergo after irradiation. The microscopical examination, made by Dr. H. Kreuder, at St. Mark's Hospital, revealed the fol-

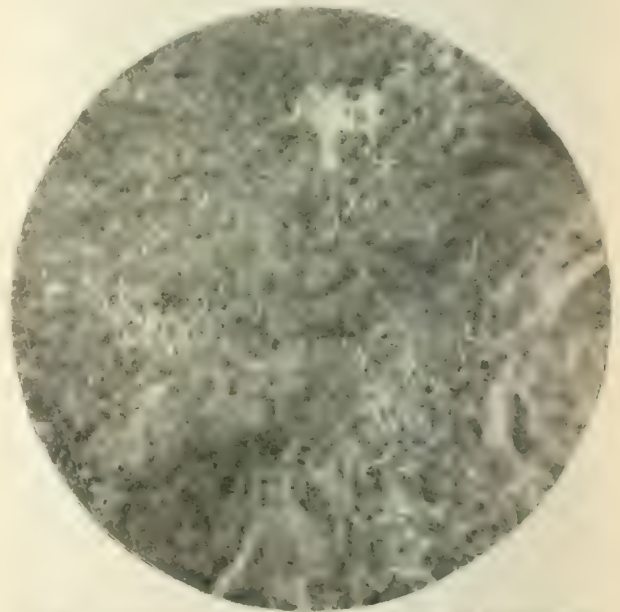


FIG. 6. Adenocarcinomatous area, showing colloid degeneration after Röntgen ray treatment.

lowing condition: Adenocarcinoma with beginning colloid degeneration. The tumor shows a resemblance to glandular structure, in most parts the alveoli are completely filled with epithelial cells, so that in some places they appear like aveolar carcinoma (Fig. 5).

Some areas have undergone degeneration; their

epithelial cells, in size and the degenerated area, except the nuclei, appear coarsely granular (Fig. 6). Changes of the same nature are observed in the epithelium of the skin covering the tumor (also due to the action of the rays). In some parts of the necrotic area a large amount of dense connective tissue and marked vascularity are noted. The patient is at the present time free from pain and her appetite has increased. A few days ago the superficial layers around the ulcerating area were shed as scabs. While the final outcome will hardly be averted, the very powerful influence of the rays in this desperate case appeared to me to be marked.

In such cases hard tubes must be chosen, while in neoplasms confined to the skin, soft tubes are preferable. My observations suggest to me that irradiation should be begun as soon as union is perfect after the removal of neoplasms, and should be kept up for a period of several weeks.

As to the technics of Röntgenotherapy, it is advisable to expose for five minutes first, and after a week for about ten minutes. If, after a third exposure (two weeks after the first exposure), no reaction follows, the patient apparently shows no idiosyncrasy. Then he may be irradiated every second or third day, at last daily, unless intense reaction shows.

During the tentative exposures the distance of the tube should be four inches, later on it may be one inch only. Some patients like the direct contact with the tube, and I have seen no harm from it in resistant individuals.

A shield of lead must be fastened around the area to be irradiated in non-malignant disease and especially if the face is concerned. It may be attached by a bandage. To the uneven surface of the margin tin foil or a piece of cork may be added. Corresponding with the area to be irradiated, a hole is cut in the shield. In the treatment of neoplasms, however, the use of a shield is improper, since it is intended to have the influence of the rays extend as far as possible. During the intervals xeroform salve (1 to 10 of lanolin) should be employed.

As first shown by me (*Münchener medicinische Wochenschrift*, May 6, 1901; also see *New York Medical Journal*, November 16, 1901), the effect of the rays is also well marked in integumental sarcoma. In a case of melanosarcoma a decided local cure was effected, although the patient died later on from metastasis. There is no doubt that the course proved the efficiency of the rays on the integument, and if the patient had been subjected to earlier treatment by me a local cure would probably have been effected before metastasis could take place. Microscopical examination of the growth showed well developed large sarcoma cells. The pigment was chiefly seen in the form of streaks, but

by higher magnification could be recognized as fine granules contained in cells in the connective-tissue framework of the tumor. In some places they resembled netting. Few cells in the alveoli of the sarcoma cells were pigmented, but some portions of the section, especially the necrotic areas, showed a great amount of pigment. One of the specimens was colored with hæmatoxylin and eosin, the second with Van Gieson's fluid.

ALBUMIN IN THE URINE:

A NEW WAY OF APPLYING NITRIC ACID AND OTHER REAGENTS.

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The value of nitric acid and many other of the reagents to be referred to later has long since been well known to all interested in uranalysis. One is scarcely warranted in referring to the relative merits and demerits of the various so-called "contact methods" for the recognition of albumin in the urine, but it may be safely stated that this method, suggested by Heller, has an unlimited field of usefulness. Many writers have modified slightly the original method of applying this test, while others have sought to find a reagent that would equal, if not excel, it. In view of these facts it has been deemed of possible value to make a comparative study of the relative accuracy of these reagents when applied according to the methods suggested by various authors, and also by that adopted by the writer. It has been asserted of certain of these reagents that they react only in the presence of serum-albumin. This has not been the writer's experience, but, on the contrary, they have been found to possess in common the properties of reacting with urines containing albuminous bodies, as mucin nucleo-albumins), globulin, albumoses, and peptones, as well as their reactions dependent upon the presence in the urine of certain resinous substances and the pigments derived from bile and blood. While inorganic substances, as uric acid and urea, when present in excess, cause fairly characteristic changes with a portion of these reagents, it has been further noted that often the *reaction* of the urine changes materially the results obtained by a given reagent. For example, urines containing $\frac{1}{2}$ per cent. of serum-albumin in combination with a large amount of hæmoglobin gave a decided reaction when highly alkaline, the result of standing. But when rendered neutral or slightly acid by the addition of both dilute nitric and acetic acids the reaction was misleading, and in a few instances absent. The study of a series of urines containing a large amount of bile pigments has shown conclusively that the

contact methods for the detection of albumin are valueless in such urines and especially apt to mislead the inexperienced. The albuminous bodies referred to above are less commonly found than is serum-albumin, yet they may be encountered in combination with this body (mixed albuminuria). It has been the writer's privilege to study this condition throughout its entire course in the case of a private patient, a man, aged thirty-three years. It is, therefore, advisable to employ special tests other than those herein given, whenever the question may arise as to the identity of any albumin-like body occurring either singly or in combination with serum-albumin. The method commonly employed for the application of Heller's test is to place a quantity, from 10 to 15 cubic centimetres of concentrated, chemically pure nitric acid in a test tube. A portion of the filtered urine to be analyzed is lifted by means of a pipette and allowed to flow along the side of the tube, so as to form a layer above the acid.

Albumin causes a white cloud to appear in the form of a ring, at the zone of contact of the two liquids. This test, when carefully applied, must be regarded as one of great value, and it is not the writer's motive to underestimate in any way this test, but to show how want of time to accomplish a given amount of work has necessitated his applying the principles of the test in a slightly different manner, at the same time obtaining results more satisfactory than by any other method for the detection of serum-albumin.

Original Method of Application.—(1) A pipette is filled for a distance of from one inch to one inch and a half with the urine to be tested. Then this pipette is either carried under a stream of water and then dried by a towel, or all urine is removed from its surface by a damp towel.

(2) This pipette, with its contained urine, is placed near the bottom of a bottle containing pure nitric acid, when the pressure of the index finger is lessened and the acid allowed to flow gradually up into the pipette (Fig. 1).

(3) When the pipette is seen to contain about the same amount of the acid and of the urine, the finger is again pressed firmly and the pipette removed from the bottle and held toward the light, on a level with the eye, and, if albumin is present, a distinct white cloud in the form of a ring appears at the zone of junction of the urine and acid (Fig. 2). This ring is often intensified by placing the pipette in different lights or against a dark background. The hand when placed back of the pipette and carried slowly above and then below the level of the ring, serves this purpose.

The time occupied in performing this test is very slight, necessitating but a few seconds. Its ease of

execution, the fact that the albumin ring is not affected by the jarring of the pipette, due to its being formed in a tube of small calibre, the small quantity of both urine and reagent needed, and the unnecessary use of test tubes, renders this method of application of extreme practical value to both the general practitioner and the laboratory worker.

At times it may be preferable to apply the nitric



FIG. 1.

acid with the addition of heat, in which case the acid is placed on a test tube and heated to the desired temperature; then a pipette containing the urine to be tested, as before described, is carried to the bottom of the tube and the acid allowed to slowly enter the pipette. The pressure of the index finger should not be entirely removed until the acid has forced the column of urine up into the pipette, so as to make its superior surface on a plane above that of the acid occupying the space between the outer surface of the pipette and the inner surface of the test tube (Fig. 3).

By this method the urine and reagent may be set aside and examined at intervals. The ring is not affected by returning the finger pressure at the tip of the pipette and carrying the reacting specimen about the room for class demonstration. Through the courtesy of Professor George H. Meeker, of the Medico-surgical College, I have been provided with a testing pipette which serves well in this capacity. This method of keeping the nitric acid in contact with the urine for several hours is of special value in the estimation of uric acid, but it is necessary that the column of urine extend for fully two inches and a half above the zone of contact of the

urine and the acid. The ring caused by the excess of uric acid is not unlike that produced by albumin in color, but always occurs high above the zone of contact.

Appearance of the Reaction Ring and its Significance.—Here the object has been to elucidate as nearly as possible the value of the reaction obtained by the analysis of urines containing certain-named substances. An important fact in this connection is not to overestimate many of the less common of these reactions. It is ever to be borne in mind that more than one substance capable of producing color and other changes, may be present in the same urine, thereby confusing the results. The ring due to serum-albumin and other albuminoid bodies is fairly constant in its general characteristics, and comprises what the writer has been forced to accept after five years of daily application, as a most trustworthy test.

Normal Urinary Pigments.—In highly colored urines a reaction may be detected at or near the zone

amount of albumin present in the specimen under observation.

Globulin, albumoses, and peptones may also cause a small ring at the zone of contact. In the aggregate, it may be said that the ring caused by these bodies is less clearly outlined by distinct margins so characteristic of serum-albumin. However, where these bodies are suspected, from 10 to 20 cubic centi-



FIG. 1.

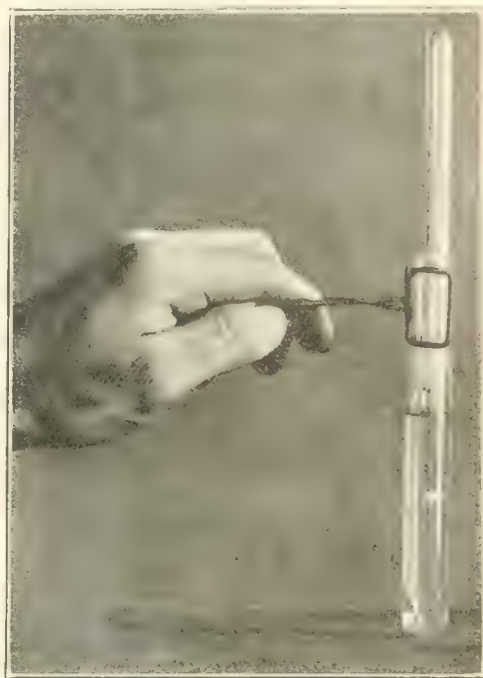


FIG. 2.

of contact, which produces a more or less distinct cloud varying from a pink tint to a dull brick color.

Serum-albumin.—When this body is present in quantities of pathological moment the ring is seen at the zone of contact as a whitish band, the thickness of which varies in different specimens. Such variations are influenced (1) by allowing the acid to enter the pipette too rapidly, and (2) by the

metres of the urine should be placed in a test tube and heated to the boiling point. These bodies cause a cloud to appear when the urine is nearing this temperature, but if the boiling point is continued, the cloud disappears, except when due to globulin, to reappear after the urine has been kept at the room temperature for a few minutes. The rarity with which urines containing these bodies are encountered does not warrant an elaborate description of the technique necessary for their study. The cloud of albumin may be slightly colored at times by the pigments present in the urine. Most notable is this feature in connection with biluria and hematuria.

Mucin (Nucleo-albumin).—When present in sufficient amounts this produces a ring which resembles that of serum-albumin in color, but never presents a clear pearly-white tint, and, on the whole, this ring is less perfect than is that of serum-albumin, when of the same thickness, and, in striking contrast to albumin, it appears some distance above the zone of contact.

Urates.—Urates may cause a distinct ring, varying in intensity from a slight reddish tinge to a deep cherry or brownish red. This ring occurs very near, but above, the zone of contact, and often it requires

close inspection to detect the thin zone of urine between the ring and the superior surface of the reagent. In some specimens the ring forms from one eighth to one half an inch above the zone of contact.

Biluria.—Bile pigments, when present in considerable amounts, cause a decided play of colors at the zone of contact. The ring of serum-albumin in such urines is apt to be colored, as is also the ring produced by mucin. After all known methods had been employed to remove these two bodies (albumin and mucin) from such urines, it was found that there was still a decided reaction-ring about one quarter to one-half an inch above the zone of contact. Ridding such specimens of albumin and mucin lessened materially the display of colors. From these results it would appear that nitric acid and the other contact reagents have not proved to be reliable tests for serum-albumin when in connection with bile pigments.

Uric Acid.—Uric acid seldom causes a ring, and, when seen, is situated some distance above the zone of contact, and often higher than the ring produced in the presence of mucin. It is seen after the urine has remained in contact with the acid for some time, and resembles the ring caused by albumin. Rarely, urines are seen where a large part of the column becomes cloudy almost immediately on contact with the acid, but the clouding, which extends from some distance above the zone of contact and downward, cannot be mistaken for the reaction of albumin. Nitric acid is the only reagent of this series that produces distinctive changes with uric-acid urines.

Indican.—Here, too, color changes are observed, which assume a violet hue and vary in intensity with the amount of indican present. This change is seen slightly above the zone of contact.

Resinous Bodies.—These are occasionally precipitated by nitric acid, but seldom confuse the reaction for albumin. It was not observed with all the reagents.

Reagents and their Relative Values.—In estimating the true worth of thirteen reagents, a given specimen of urine was tested with each reagent, and careful notes made concerning the changes observed. For some years I had endeavored to detect any difference between the results obtained from the use of nitric acid and the nitric-magnesium solution; therefore the results derived from the use of other reagents were compared with results given by these solutions when employed under the same conditions.

The urines used in this series were selected from the specimens examined at the clinical laboratory of the Medico-chirurgical Hospital during the past eight months. Fifty urines, all of which contained variable amounts of serum-albumin, two containing albumoses, one of mixed albuminuria, and three containing peptones, were examined. Many urines

in which no albumin could be detected were also carried through all the tests. To albumin-free urine containing an excess of uric acid, oxalates, phosphates, and glucose, a small quantity of urine known to contain a certain percentage of albumin was added, and, after being thoroughly mixed, the tests were applied. In color, the specimens varied from that of a brownish black (carbolic-acid poisoning, and the changes caused by blood and bile), to those clear as water. The specific gravities ranged from 1,042 to 1,004. Ten specimens showing a specific gravity of 1,010 or lower, were found to contain a large amount of serum-albumin. The quantity of albumin was estimated in each case by the Esbach method, and was found to vary from a quantity too small to be estimated accurately, to .055 per cent. (mixed albuminuria). In specimens to which albuminous urines had been added, the quantity must necessarily have been very small.

Nitric Acid (Concentrated, C. P.).—Nitric acid gave a cloud in every albuminous specimen of acid urine analyzed, at times becoming distinct only after a few seconds, and increasing to a ring after standing for a time. The ring was seldom colored by the urinary pigments, and always presented a faint characteristic band at the point of contact of the acid and urine. It was never found necessary to add heat, and filtering of the urine was found to be of service only in about one fourth of the specimens; in a few cloudy specimens, however, it was necessary. Acid, neutral, and moderately alkaline urines reacted equally well, while a high degree of alkalinity interfered at times by causing marked effervescence in which case the urine had to be rendered feebly acid by the addition of a few drops of acetic acid. The effervescence occurring after such urines were acidulated was not found to complicate in any way the method of application herein described, and at no time was it possible to detect albumin by any other means where nitric acid did not show the presence of this body when contained in pathological amounts, and while this method may demonstrate more easily a small amount of albumin, it cannot be regarded as more delicate than where nitric acid is employed as originally suggested by Heller, all jarring of the test tube being avoided. Biliary urines may give a reaction for mucin after albumin and mucin have been previously removed.

Nitric-magnesium Solution.—Sir William Roberts, in introducing this solution, stated for it that it was more sensitive than cold nitric acid, when applied according to Heller's method. It is composed of pure concentrated nitric acid, 2 ounces; saturated solution of magnesium sulphate, 10 ounces. The reaction is equally sensitive when used in the proportions of 1 part of acid to 9 parts of magnesium sulphate solution. In these studies I have found

the strength as suggested by Roberts, 1 to 5, to give results unequalled by those obtained from the use of any other reagent. When applied in the pipette, it was always found to display a clearer and more compact ring in the presence of albumin than any other member of the series. While the ring was much narrower than that produced by nitric acid and other of the reagents, it was never found to give a reaction in the absence of albumin in some form, nor was it possible to detect any change resembling that of albumin with urines containing an excess of phosphates. Except where the degree of alkalinity was noted to be very high, acidulating to the point of neutralization or a feebly acid reaction, by the addition of acetic acid, was found to exercise slight, if any, influence upon the test. Urines containing a large amount of calcium carbonate to which a small amount of albuminous urine had been added, gave an unmistakable reaction with this solution, and with but two other members of the series (sodium tungstate and sulphosalicylic acid), while yet strongly alkaline, this agent, nitric-magnesium, failing to produce the decided degree of effervescence noted with the other tests. Such urines when acidulated, as before mentioned, gave an unquestionable reaction for albumin with but five reagents, namely, nitric-magnesium nitric acid, acidulated brine, sodium tungstate, and sulphosalicylic acid. Blood, hæmoglobin and other coloring matters found in the urine caused no confusion, except in biliary specimens, where a reaction for mucin was noted after several attempts had been made to separate this body. The reaction with biliary specimens was found to be more satisfactory with this than with any other test.

Picric Acid Test.—This solution, suggested by Sir George Johnson, was found to be exceedingly sensitive, but needed to be applied with the urine below. There was always a tendency for the entire column to become clouded, both in the stratum above and in that below the zone of contact. The solution is made by saturating distilled water with picric acid, from 6 to 7 grains to the ounce being the amount required. This test possessed the disadvantage of being of a cherry color and had no special value in qualitative work.

Potassio-mercuric-iodide Test.—This test, commonly referred to as "Tanret's test," is also an exceedingly sensitive reagent. It was especially liable to mix with the urine, thereby preventing a distinct zone of contact, except with urines containing a large amount of albumin. In color, this reagent approaches that produced by normal urinary pigments, a decided disadvantage. It is composed of mercuric chloride, 1.35 grammes; potassium iodide, 3.32 grammes; acetic acid, 20 cubic centimetres, water, 66 cubic centimetres.

Sodium Nitroprussiate.—A concentrated solution of sodium nitroprussiate was suggested by Nya, and serves as a fairly delicate contact reagent for albumin. It was found to possess two features which placed it at a great disadvantage; the urine to be tested must be rendered acid, and the reagent deteriorates on exposure to the light. It did not react in the presence of serum-albumin or the albumoses where the urine had contained carbonates in excess, even after such urines had been acidulated, and on the whole it was found to be of limited practical value.

Stutz's Solution.—The constitution of this reagent is mercuric chloride, 2 drachms; sodium chloride, 2 drachms; citric acid, 2 drachms; distilled water, q. s. to 6 ounces. In a few instances this reagent displayed no ring with urines highly albuminous. Mucin, carbonates, bile, and phosphates were found to complicate, and at times to produce a reaction in the absence of serum albumin.

Spiegler's Test.—It was found that this reagent, which consists of mercuric chloride, 8 grammes; tartaric acid, 4 grammes; sugar, 20 grammes; and distilled water, 200 cubic centimetres, gave a reaction in every instance with serum-albumin, and reacted with specimens of mixed albuminuria. It has been stated that peptones are not precipitated by it (Purdy). The ring of reaction caused by this solution was less clearly outlined than that of the other members of this series. Urines containing carbonates reacted feebly, both before and after acidulation.

Millen's Reagent.—Heat was found necessary to secure a reaction with this reagent. It has for its composition, mercury, 1 part; nitric acid, 2 parts; distilled water, 6 parts. An unmistakable reaction for serum-albumin was seldom obtained with Millen's solution, while it gave a questionable reaction with albumin-free urines.

Salicylsulphonic Acid.—Roch, in 1891, proposed this substance as a valuable reaction for albumin, and, later, MacWilliams modified slightly Roch's method of application. In this series of comparative tests a saturated aqueous solution was employed, and was found to possess many features of special value, both to the practitioner and the laboratory worker. The reactions obtained with salicylsulphonic acid were pronounced, clearly outlined by well-defined margins, rarely colored by urinary or other pigments, and according to results thus far obtained, did not appear in the absence of albumin or albuminoid bodies. A moderate degree of alkalinity did not interfere with the reaction. It has won favor in the hands of the writer when applied according to the method herein outlined.

Sodium Tungstate.—A solution of sodium tungstate, 1 part in 4, acidulated with phosphoric or

acetic acid, has been recommended by Sonneschin, and later by Oliver, as a trustworthy test for albumin, when applied according to the usual contact methods. It reacted with albuminous bodies and resinous substances as well as with certain pigments, and has been shown in this connection to be a delicate test for serum-albumin when employed in accordance with the writer's suggestion. The ring of albumin was deeper than that produced by nitric-magnesium or sulpho-salicylic acid, but not so distinct and was more liable to appear in connection with resinous bodies than are reactions with the two latter named solutions.

Trichloroacetic Acid.—Raah was first to introduce this reagent as a delicate test for albumin, and recommended that a saturated solution be used. Where the urine was of low specific gravity, the application of this reagent corresponded to the technique herein given, but ordinarily the urine was placed below. It has proved unsatisfactory in this series of tests.

Acidulated Brine Test.—The reagent employed in this test has for its composition hydrochloric acid, C. P., 1 ounce, saturated solution of sodium chloride, 16 ounces. As the name implies, this reagent is of value only when used with acid urines. It was found to react with albuminous and resinous bodies but proved a fairly reliable test for albumin. Carbonates and phosphates did not influence the reaction after acidulating such urines. The ring due to albumin was noticed to be distinct, and, while rather narrow, was always bounded by raised margins.

Phenic Acetic Acid.—Mehu suggested this reagent, when employed with alcohol, for the quantitative estimation of albumin. Later, Millard brought forth the following modification: Acid phenic (glacial) 95 per cent., 2 drachms; acid acetic (pure), 6 drachms; liquor potassæ, 6 drachms, water 2 ounces. For qualitative work this solution possessed the disadvantage of being of a dark cherry color. It was found to react only with urines varying greatly in the same specimens under similar circumstances. Albumoses, peptones, and mucin known to contain large amounts of albumin, at times gave questionable clouding of the reagent at the zone of contact, and it has been said to react with alkaloids. As is the case with all other agents of this series, clouding due to these substances disappeared on boiling, while that of serum-albumin remained unchanged or was increased. The phenic-acetic acid test, however applied, was of questionable value as a qualitative test for serum albumin.

This brief abstract, taken from the laboratory notes, constitutes only the facts deemed of practical interest, and makes no attempt at a study of many substances found in combination with those mentioned, which were of limited importance in this

connection. The nitric-magnesium and nitric-acid tests were found to be the most reliable, yet sodium tungstate and sulpho-salicylic acid gave results which were highly gratifying.

The application of Fehling's solution as a test for glucose, by means of the pipette, was found impracticable.

SUPRAPUBIC PROSTATECTOMY.*

By FLOYD WILLCOX MCRAE, M. D.

There is no more pitiable surgical condition, nor any suffering more nagging, continuous, or prolonged than that endured by the victims of senile enlargement of the prostate. The hope of permanent relief which surgeons hold out to the victims of this dreadful disease is so small, compared with the risk incurred by the measures suggested for its relief, that few old men are willing to accept the chances; and most of them go from bad to worse under the so-called palliative treatment, dying the most painful deaths.

The treatment of enlarged prostate by other than radical removal or complete prostatectomy has, in my hands, and in those of the majority of surgeons with whose work I am familiar, proved so unsatisfactory, that I feel sure many of the measures resorted to for the relief of this condition are mere makeshifts. The mortality from the so-called simple operations is altogether out of proportion to the magnitude of the operations and the resultant benefit.

The suprapubic fistula gives permanent relief in rather less than one third of the cases. Vasectomy has a large mortality, with a small percentage of permanent relief, and is frequently followed by marked psychical disturbance. Orchidectomy has a mortality of more than twenty per cent. It is very often followed by insanity or marked psychical phenomena. I believe the cases in which vasectomy or orchidectomy are indicated are very few indeed. The probable benefit is too small to justify the risk incurred by these operations. The suprapubic fistula is a continued source of disgust to the patient. The bladder frequently does not empty itself completely through the fistulous opening, and, unless great care is exercised, the residual urine becomes exceedingly foul, setting up a very aggravated form of cystitis. The prostate goes on enlarging, seemingly with greater rapidity than before the fistula was made. I have had occasion to operate the second time on three patients who had carried these fistulæ for several years. In every one of these cases the bladder was divided into a

*Read before the Southern Surgical and Gynecological Association at its fourteenth annual meeting, November 13, 1901.

large and a small pocket by the prostate, which had enlarged until it pressed upon the anterior wall of the bladder where it was in contact with the abdominal wall. A small quantity of urine would find its way, from time to time, into the urethra through the smaller of these pockets, giving rise to the most intense pain, and setting up a great deal of urethral irritation. The larger pocket, or that portion of the bladder above the prostate, had lost to a great extent its contractility, seemingly from the presence of the large foreign body interfering with normal muscular action.

With the Bottini operation I have had no personal experience, but have followed the work of others with much interest. Theoretically, and from a pathological standpoint, I am not favorably impressed with the operation, notwithstanding the reported good results obtained. The reported successes following this operation, even in the hands of the most skilful operators, have been made too early to convince me that the resultant relief was permanent. The tendency of modern surgery is toward the adopting of more radical measures early in the course of this disease, before the bladder has become profoundly affected or the function of the kidneys has been seriously interfered with. The operation of complete prostatectomy, which has heretofore been done only as a last resort, promises to be adopted early by general surgeons who are capable of doing this class of work. Quite an impetus has been given to this procedure by the acrimonious discussion on the clinical lecture of Mr. P. J. Freyer, published in the *British Medical Journal* for July 27, 1901. Mr. Freyer professes to remove the prostate, including the glandular and fibrous tissue, entire, without interfering with the urethra, by an original method. Mayo Robson, Nichols, and a number of other English surgeons contend that it is only a modification of the McGill operation for enucleation of the prostate, and very like that suggested and practised by Dr. Eugene Fuller, of New York. The pathological reports of the specimens removed by Mr. Freyer showed them to be almost pure adenomata. As a result of this discussion, a number of unpublished cases have been given to the profession. The results of these operations, in the hands of many surgeons, in very aggravated cases have been most gratifying.

In America, Fuller, Alexander, Keyes, and Guitéras have contributed liberally to the literature on prostatectomy. Horwitz, Lewis, Guitéras, Meyer, and others, have reported long series of Bottini operations. That so many operations are being done and new methods suggested for the relief of this condition, is sufficient evidence that surgeons are not agreed as to the best method of treatment. No single operation is applicable to all cases, and bad re-

sults follow improper selection. It is the duty of every surgeon who has done any work along this line to give his results to the profession. Personally, I am convinced that the general adoption of complete removal of the prostate early in the course of the disease will be the practice of the future. I believe, instead of resorting to palliative treatment, vasectomy, orchidectomy, suprapubic fistula, or the Bottini operation, surgeons will resort earlier and more frequently to complete prostatectomy by either the suprapubic or the perineal route. The cases which I present, together with the pathological reports of the specimens removed, are brought forward solely with the idea of giving my results and inviting discussion on this most important subject. The only originality in the operations is in the manner of removing the prostate and the method of draining the bladder. I incise the mucous membrane and outer capsule of the prostate over the most prominent point of each lobe and remove each lobe separately. I then put in a retention catheter and a suprapubic drainage tube, made from an ordinary rectal tube so that it is also self-retaining. The bladder is then closed snugly around this tube, the structures of the abdominal wall closed accurately with a small strip of gauze down to the bladder surface to take care of the slight leakage of urine that takes place immediately following the operation. This gauze is removed in from twenty-four to forty-eight hours, when the tissues contract snugly around the tube, preventing any further leakage. In two of the three cases reported, there was absolutely no leakage of urine around either tube after the first few hours. The drainage in all of these cases was most satisfactory and convenient. The bladder was washed out with great facility and readily kept clean. The catheter left in the urethra produced exceedingly little irritation and seems to me a most valuable adjunct to the operation.

The freedom from pain following the operation was a revelation to me. In two of the three cases, no anodynes or hypnotics of any kind were required. The shock was very small and the reactionary temperature almost *nil*. Hæmorrhage was not excessive or difficult to control. The urine was allowed to drain into an ordinary bed urinal and the patient allowed to lie on the back or on either side at will. The time elapsing since the operation in Cases II and III is too short to tell what the permanent results will be, but the present condition is most promising. I hope to keep these patients under observation and report permanent results later.

Reports received subsequent to the meeting indicate that in Cases II and III apparently perfect cures have been effected. The patient in Case IV has been operated on since the meeting. The pathological report of specimens removed in Case IV is more

complete and should be read first. I am indebted to Dr. H. F. Harris, pathologist of Atlantic College of Physicians and Surgeons, for most excellent reports on the specimens removed in Cases II, III, and IV.

The accompanying photographs illustrate the preparation of the tube and the method of draining the bladder.

CASE I.—Mr. A. A., fifty-six years old. European Jew. Merchant.

Never sick until about ten years ago, when the urine began to produce a stinging sensation in the urethra. This gradually grew worse, and the stream diminished in size and freedom of passage; later he had pain with desire to urinate; passed pus in urine; there was a contracting sensation at the neck of the bladder. This continued so until February, 1899, when he had total obstruction and the catheter could not be passed. He was aspirated



FIG. 1.

FIG. 2.

FIG. 3.

twice and a suprapubic cystectomy was then done, followed by permanent drainage through a silver tube. Very little urine passed by the urethra after operation. Drainage was a constant source of annoyance, as patient had to empty the bladder frequently, each evacuation being accompanied by the contracting pain in the prostate. In March, 1901, he went to bed with "rheumatism" in both legs. Began passing much pus through the tube, which often became occluded; he had almost constant griping pain in the prostate. In the latter part of May he had severe hæmorrhage from the bladder. Slight bleeding with much pus continued until operation.

Operation, May 15, 1901. Gas-ether. Suprapubic drainage, opening enlarged, and bladder found red and beefy; mucous membrane pocketed and feeling like coils of intestine. Bladder incised over each lobe of prostate, with bistoury; the right lobe slipped out easily; middle and left removed piecemeal. Hæmorrhage not severe, and readily controlled by hot water irrigation. Scar tissue of

drainage wound removed, and incision closed with silk-worm gut to upper angle, where No. 30 F. (McR) retention catheter was placed. Retention catheter (No. 22 F.) also placed in urethra, being passed antero-posteriorly by a probe and a silk thread. Suprapubic tube was long enough to pass along penis and enter urinal with urethral catheter. Rectal bag. Three P. M. temperature 98° F. Pulse 75. Temperature remained between 99.4° and 99.8° F. Pulse 80 to 95.

No pain, slept well. Drainage complete into urinal, mostly through urethral catheter. Bladder irrigated daily with 1-6000 per manganate solution. On May 19th, dressing dry; urethral catheter removed, having caused no irritation, and a No. 16 F., straight one, placed in. This was kept in, off and on, until the 29th when it remained in only six hours. Urine passing by catheter until this date, when some passed by urethra and suprapubic tube was removed. May 31st., suprapubic opening plugged and most of the urine passed by the urethra. On June 3rd., No. 25 F. catheter left in urethra six hours. Thereafter, urine passed by urethra and wound closed rapidly. Patient for some two or three weeks irrigated bladder once daily, but there has been no pus or irritation since closure. Patient says today (November 6th) he has had no pain or trouble whatever since operation; has gained forty pounds; passes urine every two to four hours, according to amount of water taken, and can control flow about half an hour after desire to urinate begins. Urine normal in color and free from pus or mucus. Bladder holds eight ounces (measured) and he can project stream 4½ feet. (measured).

CASE II.—Mr. J. C. D., fifty-seven years of age, American. Farmer.

Six years ago, urine, in the morning, began passing in teaspoonfuls until bladder emptied; had no trouble during remainder of day. Continued thus for a year when he had a sudden stoppage. A catheter was passed and urine voided. Catheter had to be introduced every second or third morning for about three years. For the past two or three years he has had pus; pain at neck of bladder and catheter has been passed regularly and frequently to withdraw urine. First of this year, in Balto., castration was advised. In June, Bottini operation was done in St. Louis. Since this was done, he has suffered constant pain; has had frequent desire to urinate, having to use the catheter every two or three hours, much blood and pus passing each time. Sometimes, when bowels moved he passed small amount of urine, with, however, considerable pain. Examination at office, October 2nd. Prostate very much enlarged; urine heavily loaded with blood, pus and uric acid masses.

Admitted to St. Joseph's Infirmary, October 7, 1900. Temperature 98.8° F. pulse 70.

Operation, October 10th. Gas-ether. Vessels from skin to bladder numerous and bled freely. Bladder considerably thickened, and as soon as opened, hæmorrhage from its surface was profuse and continued so until prostate was removed. Transverse cut made in bladder with scissors, after catheter had been fixed in urethra. Gland removed with much less difficulty than was expected. Hæmorrhage not controlled by hot irrigation. Wound

closed with silkworm gut about drainage tubes, which were placed as in case I. Iodoform gauze carried by tube to bladder. Hæmorrhage continued for twenty-four hours, once blocking both tubes; this was relieved by irrigation, and drainage remained good. No rectal bag used. Considerable bloody leakage about upper tube. Irrigated daily with saline solution, and hæmorrhage gradually diminished, but always a little, while irrigating through urethral catheter. Drainage remained good, greater portion of urine passing through upper tube. Mucus gradually increased, forming a thick layer in urinal. When the gauze about the tube was removed, on the sixth day, a considerable amount of mucus escaped from wound. Two days later, there was considerable leakage about upper drainage on account of both being stopped by mucus. Stitches were removed, slight separation resulting at point of drainage. On the ninth day, tubes closed by mucus. Urethral catheter removed. No irritation; and a No. 27 F. straight catheter introduced, which caused slight bleeding from bladder. Some urates had accumulated, with increase of mucus until the eleventh day, when the amount of both was very large. Suprapubic catheter was taken out and bladder irrigated with sodium bicarbonate. Urethral catheter in only part of the time. The mucus gradually disappeared under silver nitrate irrigations, but urates continued to deposit about the wound, forming several masses just within the suprapubic wound, which were removed by forceps. Urethral catheter could be kept in but a short time on account of nervousness of patient and contraction near the meatus, which resulted from the Bottini burn, and continually caused him pain. Some urine passed by the urethra on the twenty-second day, and then a little each day until the twenty-eighth day, when, on withdrawing No. 25 F. catheter, introduced after the meatus had been dilated, there was a small flow of solution. On this date, a large mass of urates was removed from internal portion of suprapubic wound, which had closed about the McGuire plug introduced first on the twenty-fourth day. On this, *November 7th*, the twenty-eighth day, some urine has passed by urethral catheter in urethra part of the time; McGuire plug in suprapubic wound, but does not completely control flow of urine, as the wound is not yet tight about it; urine free from pus and mucus; considerable formation of urates, but less than before; it is a difficult matter to get the patient to drink sufficient water to hold them in solution.

CASE III.—*Mr. W. R. fifty-nine years of age. American. Farmer.*

About eighteen years ago, urine began to flow slowly. This became more marked and the stream slowly became smaller. From 1890 to 1895, was in buggy greater portion of his time and condition became much worse. Urine voided often, and with each desire to urinate had heavy pain at neck of bladder, which passed off only when bladder was emptied. This continued with pus, and the need of urinating every hour or two, until February, 1899, when he had bleeding from the bladder. He began using permanganate irrigations and blood and pus soon subsided. Catheter was used and aching in prostate and down thighs continued; urine was retained from four to six hours. In June, 1901,

while withdrawing catheter, he noticed pus at the meatus. In a few days he was in bed, to remain two weeks with considerable fever and pain, until the abscess of prostate ruptured into rectum, when he was relieved. Use of catheter continued; size reduced, however, from No. 32 to No. 16 F. Pain in prostate and in legs continued, and some pus now and then by rectum until two weeks ago, when last passed.

Admitted to St. Joseph's Infirmary, *September 13, 1901*. Temp. 97.5° F., pulse 76. Passes catheter every four to six hours; has heavy aching in prostate when bladder is full; pus follows catheter out, though urine is almost clear. Prostate is very large, and a band one inch wide passes from prostate along right rectal wall, causing lumen of rectum to be reduced in its lateral diameter. In good physical condition.

Operation, October 17, 1901. Gas-ether. After bladder had been filled with saline solution and a catheter fixed in urethra, a suprapubic opening was made in bladder, without hæmorrhage from its sur-



face, the wall being in good condition. A transverse cut was made across base of bladder and the middle lobe removed piecemeal and with considerable difficulty. Also fibrinous tissue, size of index finger, the remains of fistula, which passed backward to rectum, removed. The two other lobes enucleated, with but little trouble. Wound closed with silkworm gut and catheter placed as in case No. 1, except that the one above was in middle of wound and incision was closed firmly about it, save for two small pieces of drainage gauze to the deeper tissues. No rectal bag used. Two fingers of assistant were placed in rectum. *October 18th to 19th*, no bleeding; drainage perfect; dressing dry. Irrigated with permanganate. Drainage perfect, mostly through urethral catheter. Irrigated daily with 1-6000 potassium permanganate; no irritation about stitches or catheters. Urine remained clear until fifth day when some mucus was noticed in irrigating fluid. This increased until both catheters were removed on the eighth day, when it rapidly subsided. Catheter has been kept in urethra part

of each day since the eighth day. On the eighteenth day, when catheter was not in, urine passed by suprapubic opening. On eighteenth day, McGuire plug was put in opening; this has allowed leakage when catheter is not in or bladder emptied by catheter, until today, *November 7th*, the twenty-first day, when, upon removing large catheter (used for irrigating) from urethra fluid passed freely from urethra and has continued to do so.

Since the November meeting of the association, I have the following cases to report:

CASE IV.—Mr. J. D. R., fifty-three years old. American. Farmer.

No sickness until about twenty years ago, when upon passing urine, after considerable riding, he would have tightness at the neck of the bladder. This continued until about four years ago, when, after a hard day's work, he had blood in urine and deep urethral pain for four days. For a year following, urine contained blood at times. Since first passage of blood, he has had prostatic tenderness; varying amount of sediment; increasing frequency of micturition; not complete emptying of bladder, and, after a hard day's work, urine flows in very small stream, or dribbling only. Catheter was used once every three or four months, when urethra became occluded; the flow would then continue all right. No pain, only burning in urethra, until a month ago, when he passed urine every two hours, this being preceded by much aching and heaviness about prostate. For past three weeks, he has had much pain when the bladder filled; passed blood and pus and used catheter two or three times a day. Condition has grown rapidly worse for the past week; having to use catheter every hour; passing much pus and blood; catheter eye frequently becomes plugged by a small calculus and pain becomes so severe that patient's face becomes covered with beads of perspiration and he shakes like a leaf.

Office examination, *December 6th*; urine heavily loaded with blood, pus, and phosphates; patient in continual pain, spasm very severe when bladder fills; catheter No. 15 F. used every hour, or oftener, and nearly the whole length of the catheter necessary to draw urine; catheter eye, each time, contains a concretion; pus stands in meatus each time catheter is needed; severe pain when bowels act, and prostate fills anterior half of rectum (about $2\frac{1}{2} \times 2$ inches). Temperature 99-103° F.

Admitted to St. Joseph's Infirmary *December 6th*. Irrigated twice daily with 1-4000 permanganate solution through catheter; blood and rigors ceased after second day; pus cleared, so that on the ninth day, urine contained but very little and catheter was used only once or twice in twenty-four hours; residual urine, however from three to four ounces. Until the 17th, prostate was soft, massage causing pus to flow from meatus.

On account of infection of my lip and nose, I was unable to operate until *December 26th*. In the meantime, patient was kept very comfortable, being irrigated twice daily. Temperature, however, remained between 98.4 and 102° F.

Operation, December 26th. Gas-ether. A prostatic catheter was introduced, and after being emptied, the bladder was filled with a 2 per cent boric solution; the catheter clamped and left in

urethra. Rectal bag was introduced, when the bladder came well forward. An incision was made through much fat and thick muscle to bladder, which, being anchored by two silk sutures, was opened. Its cut surface bled freely and was half an inch thick. The upper portion of the viscus was markedly dilated, and its anterior surface touched by a prostate as large as a good-sized orange; velvety to feel and necessitated a long catheter to empty bladder. Transverse cut of mucous membrane and capsule, allowed middle lobe ($2 \times 1\frac{1}{8}$ inch) to be enucleated easily; right ($1\frac{3}{4} \times 1$ inch) with more difficulty, and left ($1 \times \frac{3}{4}$ inch) easily. Retention catheter placed in urethra and blood clots flushed out with saline solution until water came clear. Wound, including all tissues, closed with silkworm gut, bladder stitched over with No. 1 catgut; retention catheter placed in middle of wound and small gauze drain by its lower side.

That afternoon and the following morning, bladder irrigated with saline solution; solution returned "brick-dust" in color at first. Drainage perfect; flow equal through both tubes. Patient relieved of pain and slept well. No leakage whatever about tube. Gauze drain removed on second day with escape of some fatty material, which also came from between the lower two sutures. This ceased in a few days, and, when sutures were removed, on the eighth day, wound was healed.

Patient drank plenty of water; drainage remained perfect and urine clear. Bladder irrigated once daily. Suprapubic tube removed on eighth day; was perfectly clean, and urine continued to pass by urethral drain until the eleventh day, when it was removed without having caused any irritation. Urine then passed by fistulous opening until the thirteenth day, when a little passed by urethra. Amount, by urethra, increased daily as suprapubic opening closed; irrigation every second day, and a 32 F. prostatic catheter passed every third day until today (the thirty-first day), when he passed a full stream by the urethra with ease. There is only a small amount of leakage, principally at night, from a capillary sinus, and he enjoys perfect comfort.

He remained in good condition, temp. 99-100° F until the fourth day, when he developed a slight hypostatic pneumonia, which has given him a temp. of from 99 to 102° F. and a slight cough; but very little discomfort or apparent interference. This remained until he was allowed to get up, on the sixteenth day, when it soon disappeared.

The second case, that of Mr. J. C. D., was hard to control. On *November 8th*, the twenty-ninth day, a large mass of urates was removed from suprapubic opening. This frightened him, and from then he drank from half to one gallon of water daily, having no more trouble from urates, and was out of bed from this date. He passed more and more by the urethra and there was but little leakage from the wound. *November 18th*, he felt stone (?) impacted in prostatic cut. On *November 20th*, the bladder was cocaineized and investigated, but no stone was found. With enlarged suprapubic opening, he continued to pass urine by the urethra.

He was irrigated (permanganate) and sounds were passed (20 to 29 F.) every third day, from November 20th to December 2nd. On December 2nd, the fifty-fourth day, he was passing urine entirely by the urethra; a good stream with ease, and only slight leakage at night. He went home in much better mental and general condition, being entirely relieved of his prostatic trouble.

The patient writes, on December 11th: "Wound has completely closed and am passing urine all right. No other trouble."

The third patient, Mr. W. R., improved rapidly. The wound closed rapidly around a small McGuire plug, and the amount of urine by the urethra increased daily. He left the infirmary on the twenty-ninth day with a very small fistulous opening. Remained in the city until November 22nd, the thirty-sixth day, during which time he was irrigated every second day, the fistula becoming very small, valve-like, and leaking only upon lateral motion of the body; the stream became large and he was able to project it some four feet. He writes, December 6th: "Am feeling well in every respect; my wound is entirely closed and I can 'drapp' my urine five feet from my toes with ease," etc.

Fig. 1 is a rather stiff rectal tube, twenty inches long and the size of a 32 F. catheter. At its conical end, this tube is cut into quarters; incisions beginning a quarter of an inch from the end and continuing for one inch, should be made with a sharp knife, one side cut at a time, while the tube is pressed flat between the thumb and finger. Thread a needle with a medium size rubber band (one-quarter of an inch wide) and pass it through near the end of a band (Fig. 3, a) and bring out at the other end (Fig. 3, b). Do the same with the opposite "quarter." Now draw one end of each band until the segments assume form of Fig. 3.

Fig. 3 is the tube photographed in Case IV.

Fig. 2 is a Pozzer's self-retaining catheter, No. 20 F.

The accompanying photograph (Fig. 4) is of the patient in the fourth case, Mr. J. D. R., and represents the tubes as used in each of the other three.

A silk suture is passed by a needle through the surface of the catheter in the urethra, at time of operating, then through the eyes of catheter (Fig. 2). When the former catheter is drawn into the bladder, the permanent catheter is carried with it. The bladder is irrigated through this, when the suprapubic wound is closed tightly about tube (Fig. 3), at its middle. A gauze dressing with cotton is placed on the wound about this tube, and is held by two adhesive strips; an abdominal binder is placed over all, the tube coming between its ends. The suprapubic tube rests along the penis, which is wrapped with two or three folds of gauze; the

gauze is also carried over the suprapubic tube and is then pinned to the lower border of binder to prevent slipping. Both tubes are then placed in a urinal containing an antiseptic solution. The patient may rest on the back or on either side, the urinal being changed to accommodate. The irrigating fluid may be introduced by either tube, returning by the other without leakage at the wound. Simple traction on catheter for removal.

Pathological Report No. 1.

January 24, 1902.

Dr. F. W. McRae, City.

My Dear Doctor:—

I beg to submit the following report concerning the specimen of prostate recently sent me from Mr. J. D. R.

The tissue, as received, was contained in three bottles, which were marked "first piece, middle lobe," "second piece, right lobe," and "third piece, left lobe," respectively. The tissues in all three of the bottles were of greyish color, quite hard and irregularly formed; the largest single specimen was contained in the bottle marked "first piece," which was about 5 centimetres long, and 2 centimetres in diameter at its widest portion. The smallest piece was from the specimen marked "third piece," which was about 2 centimetres in length and 1 centimetre in diameter. The tissues contained in these bottles weighed $17\frac{1}{2}$ grammes, $7\frac{1}{2}$ grammes, and 5 grammes respectively. The specimens were prepared in the usual manner, and, on microscopic examination, showed the following changes:

The tissues are found to be composed of glandular structures, and interstitial tissue that consists of voluntary muscle, white fibrous tissue, and a very small amount of elastic tissue. These constituents vary considerably in different situations; in the tissues from the "middle lobe" of the viscus, glandular structures somewhat predominate, while, in other localities, the interstitial elements are usually in excess. On close inspection it is found that the tubules of the gland are for the most part considerably dilated, the dilatation being so extreme in some instances that veritable cysts are formed, the diameters of which sometimes reach 2 millimetres. In the slightly and moderately dilated tubules there is invariably a greatly increased number of epithelial cells, which oftentimes form distinct stratified layers. Under these circumstances, the cells lining the tubules present the usual appearance observed in those situations where stratified epithelium is normally found, *i. e.*, the cells lying next to the basement membranes are small and oval shaped, while those that form the outermost layer in the lumina of the glands are typically cylindrical. All of these cells usually stain in a perfectly normal manner—a vesicular nucleus being present toward their basal portions, and, above this, a mass of faintly acidophilic protoplasm which is usually quite transparent. The lumina of the glands contain the degenerate remains of desquamated epithelium, which is found as finely granular, acidophilic masses, intermingled with which there are occasionally desquamated epithelial cells in all states of degeneration. There are

also sometimes present in the moderately dilated tubules oval, rounded, or irregularly-shaped masses—the so-called corpora amylacea; these bodies are usually decidedly basophilic, and do not give the reaction for amyloid material. In the more widely dilated tubules the degenerate remains of many epithelial cells are found, along with numerous amyloid bodies. The epithelial cells lining the enlarged glands are, in these instances, usually cubical, and there is, as a rule, only one layer of them present. In all of the dilated glands, fluids were evidently present in the fresh state, as they are never entirely filled by the structures just described. In several instances there were found in the sections wedge-shaped areas containing dilated tubules, such as were recently described by Chechanowski.¹ These areas have their bases directed toward the external portion of the glands, and their apices centre in the region where the excretory ducts of the viscus empty into the urethra. No bacteria were ever discovered in the contents of the dilated tubules.

As has been before stated, a variable but considerable amount of interstitial tissue is present in the specimens; in some situations this is made up almost entirely of unstripped muscle fibres, between which there are minute fibrils of elastic tissue, and in others this is composed almost entirely of white fibrous tissue. Immediately surrounding many of the tubules, especially those showing catarrhal change, small collections of lymphoid cells and plasma cells (fibroblasts) are encountered; in some instances the plasma cells largely predominate, and under these circumstances there can be no doubt that the formation of fibrous tissue is rapidly progressing. It is not uncommon to encounter areas consisting of compressed tubules which are so small that they are scarcely recognizable, surrounded by numerous bands of circularly arranged, newly-formed fibrous tissue. As Chechanowski points out, the nuclei in such masses of scar tissue are oftentimes elongated, and have quite frequently been mistaken by investigators for the nuclei of muscle tissue, though by proper staining their true nature is easily recognized. There are scattered throughout the tissues everywhere numerous, rather small mucinoblasts. There are very few vessels in this specimen, none of which show alteration.

From the foregoing it is seen that this specimen presents the typical appearance observed in almost all instances of so-called prostatic hypertrophy. I must confess that the more I have examined the sections from diseased prostate, the more I am inclined toward the views of Chechanowski, who maintains that, as a rule, enlargement of the prostate is not the result of an increase of the tubules (adenoma), nor is it produced by an over-development of muscular tissues (myoma), but that it is the result of the formation of fibrous tissues near the mouths of the secretory ducts, with the subsequent alteration of these channels and a consequent enlargement of the gland from retention of its secretion within the tubules, thus producing a variety of retention cyst. It is certainly the case that, neither in their clinical, nor in their histological

appearance, do these enlarged prostates present the typical appearances observed in true tumors.

Diagnosis. Enlarged prostate, probably the result of an inflammatory occlusion of its secretory ducts.

Pathological Report No. 2.

I beg to submit the following report of the examination of the prostatic tissues of J. C. D., which you sent me October 12th:

The specimens consisted of three pieces of unequal size; two of these being irregularly rounded, the larger having a diameter of 1.5 centimetres in one direction, and 1 centimetre in the other, while the second is 1.4 centimetres by 8 centimetres in diameter. The larger of these is double convex, and is 6 millimetres in thickness in the centre; the smaller is concavo-convex and is 5 millimetres thick. The third specimen appears to be merely a thin sheet of fibrous tissue, such as the capsule of the gland might be, to which a few small masses of tissue are attached. The specimens weigh 0.5, 0.25 and 0.15 of a gramme respectively. The tissues composing all three of these specimens are of grayish color and are exceedingly tough. In this report the three pieces of tissue will be respectively designated as *a*, *b*, and *c*.

Microscopical Examination.—(*a*). The structures composing this piece of tissue consist of unstripped muscle fibres and connective tissue, and gland-like bodies in about equal amount. The muscular tissue considerably exceeds the connective tissue in quantity, and consists of unstripped fibres of diameter at their widest portions of from 5-7 μ and of a considerably greater though variable length, some of them being as much as 75 μ in this dimension. These structures show absolutely nothing abnormal. The white fibrous tissue exceeds in quantity the elastic tissue to a considerable extent, though the latter, as exceedingly delicate fibrils, is quite a conspicuous structure in properly stained specimens. The white fibrous tissue is found almost entirely in the vicinity of the gland-like bodies above referred to, and intermingled with it there is always a certain amount of elastic tissue. Lying between the muscle fibres, there are here and there minute collections of lymphoid cells and an occasional plasma cell (real fibroblast). Between the fibrils of connective tissue that lie around the gland-like bodies, similar collections of cells are generally present, and in some instances have almost replaced the preexisting tissues of the part. The plasma cells (fibroblasts) are here in many instances quite abundant, and there can be no question that a new formation of fibrous tissue is going on, and the process could therefore be looked upon as what is commonly called inflammatory. In addition to the above mentioned cells, there are a few fixed connective tissue cells lying here and there between the masses of fibrous tissue. The elastic tissue is also seen to form the basement membrane of the glandular bodies, as is always the case in other structures of a similar kind. The tissues are numerously supplied with blood vessels, none of which shown any alteration.

The gland like bodies vary very greatly in size, some of them being as much as 1 millimetre in diameter, while others measure no more than 50

¹Chechanowski, Anatomische Untersuchungen über die sogenannte Prostatohypertrophie in verwandte Prozesse. *Monatsh. f. klin. u. Grenzgebieten der Medicin u. Chirurg.*

in sections they appear oval or rounded, and only occasionally present irregularities of outline indicative of pressure from newly formed connective tissue. These glands are lined for the most part with columnar epithelial cells, though in many instances they are cubical, and in some cases even somewhat flattened. Piled up upon the cells that form the basal layer, there are generally quite a number of irregularly shaped cells which give the appearance of stratified epithelium. The epithelial cells of the basal layer vary very considerably in size, and as a general rule they are from 5 to 15 μ in height and about 5 μ in width. They contain a single vesicular nucleus, which is placed near their bases, and in which are one or more nucleoli. Those cells that lie above the basal layer vary so much in form that it is impossible to give their dimensions, though their cubic contents would probably average about that of the cells just referred to—the former being evidently desquamated examples of the latter that have not yet been expelled from the tubules, and that have not as yet undergone complete degenerative change. These shed-off cells contain nuclei and a protoplasm that in every way resemble that of the cells lying next to the basement membrane. In the central portions of these gland-like bodies there is generally a fine, granular debris, which is for the most part acidophilic—though there are many very minute basophilic particles; these masses evidently represent degenerate and completely broken up epithelial cells. There are also not uncommonly present in the lumina of the glands corpora amylacea, all of which are decidedly basophilic. Some of these gland-like bodies so closely resemble those that occur in the prostate gland that there can be but little doubt that they are practically normal structures, though, even in these, so-called catarrhal changes were undoubtedly present, as is evidenced by the unusual proliferation and desquamation of the epithelial cells lining them. A certain amount of secretion must have occurred in most of them for, in addition to the corpora amylacea, and granular debris above referred to, many of them contain considerable quantities of some liquid substance, the collection of which has produced a very considerable degree of dilatation of their lumina. No bacteria were found in any part of the tissues, though it is not unlikely that they were present somewhat earlier.

(b and c.) The structures composing these masses of tissue resemble in every way those just described, and a separate description is therefore unnecessary. It may, however be marked that in c a cystic dilatation of one of the gland-like bodies is found that measures 2 mm. in diameter.

The connective tissues have considerably increased, but the presence of considerable numbers of lymphoid and plasma cells (fibroblasts) in the areas where this is principally occurring, would make it appear that this process is really one which is related to the so-called chronic inflammations, and is not the result of true tumor formation. In addition to this, while it is true that the epithelial cells in adenomata are very frequently found lying loosely in the lumina of the glandular structures, it is equally the case that changes of a similar kind occur in what is called catarrhal inflammation, and it seems to me not unlikely that the entire process

may have originated as a result of the entrance of bacteria into the glandular structure of the prostate with the production of catarrhal change, and later the so-called inflammatory change in the surrounding tissues. While it is by no means certain that irritations brought about by bacteria are capable of setting up true tumor formation, facts are not wanting that point toward this occurring in some instances, and it should be at least considered as a possibility in these cases.

Pathological Report No. 3.

I beg to submit the following report on the results of the examination of the tissues of W. R., which you recently sent me:

Two of the specimens received were said to consist of prostatic tissue, while the third was thought to have been scar tissue from the site of an old healed up sinus. The specimens from the prostate were about equal size, each weighing about 0.25 gramme; they are lenticular in form, both measuring about 8 millimetres in diameter and about 4 millimetres at their thickest portion. They consist of grayish, quite solid and tough tissue, and, upon one side of each, their tissues are condensed into what appears to be a capsule. The specimen from the healed up sinus is irregular in form, weighs 0.5 gramme, and in its physical peculiarities resembles the tissues just referred to.

Microscopical examination.—On microscopical examination it is found that the sections from the pieces of tissue from the prostate consist entirely of unstriated muscle fibres and connective tissue there being no glandular structures in any of the specimens examined. By far the greater part of the tissues composing these specimens consists of unstriated muscle; the fibres are from 5-7 μ in width at their thickest portion, and taper toward their extremities, and are from 40-75 μ in length. Intermingled with the structures just referred to there is a fine, delicate stroma of elastic tissue, and here and there are a few masses of white fibrous tissue. In addition to the structures just described, there are scattered through the tissues lymphoid cells, and in addition to these a connective tissue cell is sometimes encountered. The tissues are quite vascular, there being quite a number of small arteries and a great many minute veins; the latter show no alteration, but the outer portion of the walls of the former is in many instances decidedly thickened, as a result of the formation of white fibrous tissue and a small amount of elastic tissue.

The piece of tissue said to have been removed from the site of a healed up sinus shows all the changes that have just been recorded as being present in the other specimens, with the addition that there are found within it a few gland-like bodies. In sections, these are rounded or oval in form, and vary in diameter from 50-100 μ . Attached to the elastic tissue basement membrane there is always a layer of epithelium which consists of columnar or cubical cells from 5-15 μ in height and about 5 μ in thickness; all of these cells contain near their bases vesicular nuclei in which there are one or more nucleoli. Lying upon this stratum of epithelial cells there are usually present one or more irregularly shaped cells of the same kind that have evidently desquamated from the basal layer; these

are exceedingly irregular in form, but resemble in other ways the cells that have just been described. In the lumina of these gland like bodies there are not uncommonly detached epithelial cells, intermingled with a considerable amount of debris, and corpora amylacea are sometimes found. The detritus in the glands is almost entirely acidophilic, though, here and there, there are present a few basophilic granules. In addition to the solid structures, these glands evidently contained a considerable quantity of watery fluid. Around these glandular structures small collections of lymphoid cells are sometimes found, intermingled with which there is an occasional plasma cell (fibroblast).

The histological examination of these specimens would indicate that the new formation of unstriped muscle fibre, and, to a much less degree, connective tissue, has occurred without any appreciable increase of the glandular structures of the part. It may, however, be the case that the primary alteration consisted in an increase of the parenchyma of the organ, and that it has later been replaced by the interstitial structures, as is thought to be sometimes the case. In the two pieces first described, the glandular structures have evidently been replaced by muscular tissue. None of the tissues exhibit any marked evidence of so-called inflammatory change, though the presence here and there of a few lymphoid cells would indicate a mild degree of irritation in the parts, and the thickening of the walls of the arteries is of like significance. Everything points, however, to the conclusion that the alteration in this instance is not inflammatory, but the result of genuine tumor formation.

Diagnosis.—Leiomyoma of the prostate.

Respectfully submitted,

H. F. HARRIS.

TRACHEAL INJECTION IN THE TREATMENT OF BRONCHIAL AND LUNG DISEASES,

By LARUE D. ROCKWELL, M. D.,

UNION CITY, PA.

Notwithstanding the rapid strides in medical science during the last two decades—strides which are unparalleled in the history of medicine—and our advance in pathology, histology, and bacteriology, the treatment of diseases of the respiratory organs is still an unsolved problem. The various forms of bronchitis we have carefully studied and most elaborately classified. We have studied with anxiety at the bedside, and with care at the autopsy, and we have searched diligently our medical literature and libraries, but we are not satisfied. We still approach a case of pneumonia with trembling, and we are worn out by the persistent harassing cough of chronic or tuberculous bronchitis which we cannot satisfactorily relieve except by opiates, and we send pulmonary consumptives to the mountains, where they may breathe easier, as we certainly do when they are gone.

For very many years we relied wholly on expecto-

rants, either stimulating, sedative, anodyne, or nauseating, in the vague theory that they would in some way deplete the congestion and wash away the disease.

Later we added the effort at local treatment by inhalation of volatile or vaporized medicines, for their healing effect.

Recently, however, we have accepted the bacterial nature of disease, and it leads us to new methods and more satisfactory results.

But when we have undertaken germ destruction, through the general system, by the traditional method of exhibiting remedies, namely, by the stomach, we have often met with a serious obstacle in the disturbance of digestion, which is an indispensable function in maintaining Nature's forces, and without which we are helpless.

The hypodermic method has been used with some success, but it is also somewhat remote in lung troubles, except in the injection of pulmonary abscesses, which, by Bruns and Hanot, was found to be quite promptly effective.

While the treatment of bronchial and lung diseases by inhalation has been in use more or less for many years, especially since the development of bacteriology and the general use of germicidal remedies, and has proved of much value in a class of cases, it is only recently that it has been thought feasible or even possible, to medicate the lungs by *tracheal injection*.

The reason for this has been undoubtedly that our physiologists have always taught us that the invasion of the larynx or trachea by any substance except its proper aerial element, is a matter of danger, and indeed every one has at some time experienced a violent spasm of coughing from a few drops of fluid "swallowed the wrong way."

But as the restless energy of the surgeon has penetrated with impunity every cavity of the human body, so the physiologists and therapeutists have been aggressive, and have found that the larynx is an open door, under proper restrictions, to a new field of medication.

More than twenty years ago Dessault, by accident, threw a quantity of broth into the trachea instead of the œsophagus of a patient with aphagia, whom he was endeavoring to nourish; the broth was absorbed and did no serious damage.

In 1889, Botey, of Barcelona, after elaborate experiments on animals, and subsequently on himself, became convinced of the plausibility of tracheal medication and practised it with success.

More recently, however, Dr. Henri Mendel, of Paris, has made tracheal injection a special study, and considers it both rational and practical.

The medicines used are volatile substances of thoroughly tested germicidal power, and are held in so-

lution by sterilized olive oil, which, when thrown into the trachea, spreads itself over the broncho-tracheal walls, giving a considerable surface for volatilization, and thus the currents of respiration are constantly loaded and carry these germicidal vapors into all portions of the lungs where the air penetrates. The solution is then absorbed and reaches the deeper structures. Being taken into the circulation, it reaches all parts of the system, and produces a secondary effect in its elimination, as the breath of the patient is found loaded with the odors of the medicines, and the odor is also detected in the urine.

Collin found, in experimenting on a horse, that the medicines in solution injected into the trachea were found in the blood of the jugular vein three minutes afterward, and in eight minutes were found in the urine.

I was led to adopt the tracheal method by the assurance of Dr. Mendel that the procedure was harmless when practised with care, and from the fact that the application of a remedy directly to the seat of the disease is always desirable.

Why should we make the stomach the sole distributing point for remedies intended for all parts and organs of the body, when we can have the right of way over a shorter route?

In the summer of 1900 I began to use the tracheal injection method, following Dr. Mendel's directions, and have since treated a variety of cases, and am convinced that it is a safe and valuable means of treating pulmonary affections. I quote the following:

CASE I.—B. B.—, aged 50 years, manufacturer in wood, and much exposed to wood dust. Ordinary health good. In August, 1900, he suffered from a severe attack of la grippe, with which he was confined to the house for two weeks, and when he was able to go out there remained a bronchitis, with a very harsh, persistent cough, worse at night, so that, as he expressed it, he coughed all night long and every night.

He came to me on November 10th to "get something for that distressing cough," as all ordinary remedies had failed. Knowing the obstinacy of this class of cases, I advised the tracheal treatment, and using a syringe with a capacity of 4 c. cm. and a tube of the proper length and curve, I threw into the larynx three successive syringefuls of a solution of oil of eucalyptus, oil of thyme, oil of cassia and iodoform, in sterilized olive oil. The solution descended directly into the trachea without producing any irritation or cough, and was followed by a good night's rest. I repeated the treatment daily (with frequent interruptions of a day or two), for seven weeks, giving the patient comfortable nights, constant improvement in strength, and finally disappearance of the cough.

CASE II.—T. R.—, aged sixty-three years, has been having winter cough with asthma for eight years, and with each fall exacerbation has grown

worse, until his health was much broken. He has had pneumonia two or three times, and the winter of 1899-1900 he spent at Kane, Pa., where the elevation and the natural gas heat made the winter bearable. After a poor summer the asthma came on early in the fall of 1900, and, with the cough, grew worse, until it culminated in a mild pneumonia early in December, which confined him to bed for two weeks and seriously reduced his strength.

He came to me December 25, 1900, greatly debilitated, and with a stuffy asthmatic cough with frequent severe paroxysms and a temperature of 99° F., appetite poor, and very little rest at night on account of the cough. I commenced giving him the tracheal treatment, the same as in the previous case, except with the addition of a little bromoform to the solution. Relief was felt after the first treatment. *December 29th*: Has been resting better and the appetite is improved. *January 4, 1901*: His appetite is very good, temperature normal, he can sleep half the night without coughing, and he feels stronger. The treatment was continued daily, with an occasional interruption of two or three days, until about April 1st, when he was feeling quite well and strong, and had no paroxysms of asthma for two months. During the summer of 1901 he has been quite actively engaged in business and has had better health than for five years previous.

Similar cases to the above we frequently meet with, and they are often quite troublesome. I am confident that the tracheal injection is a most direct and effective means of treating them.

The Treatment of Vaginismus and Pruritus Vulvæ by Resection of the Internal Pudic Nerve.

—Although this operation was originally recommended by Simpson, as far back as 1861, it does not appear to have been practised to any extent. Tavel (*Revue de chirurgie*, February; *Edinburgh Medical Journal*, April) has performed it twice with highly satisfactory results. He employed and recommends a sagittal incision—from eight to ten centimetres in length—which passes from before backward across the ischio-rectal fossa, midway between the anus and the ischial tuberosity. The anus lies opposite the middle of the incision. After dividing the integument, the dissection is made toward the inner aspect of the ischium, care being taken not to damage the inferior hæmorrhoidal nerve. On passing the finger over the fascia which covers the obturator internus, the internal pudic artery can be felt pulsating as it passes through Alcock's canal. The inner layer of the fascia forming the canal is divided, and the nerve isolated from the vessels. The inferior hæmorrhoidal and the anal branch of the deep perineal are hooked back and the muscular branches isolated. They are recognised by the fact that, when they are pinched, the muscles contract. The branches which supply the muscles implicated are divided and avulsed after the method of Thiersch. The wound is closed without drainage. In this paper is incorporated a full description of the anatomy of the perinæum by Professor Strasser.

Therapeutical Notes.

Calcium Iodide as a Substitute for Iodoform is recommended by William Mackie (*Zeitschrift der Oesterreicher Apotheker Verein*). He has used it with very good results in both powder and saturated solution as an antiseptic, in place of iodoform. It diminishes suppuration in wounds and has proved useful as a deodorant and antiseptic mouthwash.

Quinine Phospho-Hydrochloride ($C_{20}H_{24}N_2O_2 \cdot HCl \cdot 2H_3PO_4 \cdot 3H_2O$) is prepared by dissolving 35 grammes of quinine hydrochloride in a warmed solution of 70 parts of phosphoric acid and 9 parts of ten-per-cent. hydrochloric acid, and setting aside for crystallization. (Coblentz). According to Bocquillon-Limousin (*Formulaire des médicaments nouveaux*, 1902), it is a clear, syrupy liquid, of a slightly greenish color which, after a few hours, precipitates bitter crystals soluble in two parts of water. The preparation contains 50 per cent. of quinine, and has been used with success in malarial diseases and nervous headaches.

Enemata in Hyperemesis Gravidarum.—Condamin (*Lyon médical*, February; *Edinburgh Medical Journal*, April), strongly recommends the treatment of this condition by saline enemata. It has yielded highly satisfactory results in eight cases in which he has employed it. From five to seven pints are injected daily, half a pint being administered at frequent intervals. No food is administered by the mouth at this time. The procedure should be followed for six days, when a little soup can be administered. The appetite gradually improves, and the patients improve rapidly; and so far no return of the hyperemesis has occurred. In cases where the rectum is intolerant, a few minims of tincture of opium should be administered in each enema, and if the irritation still continues, subcutaneous injections of saline fluid are indicated.

For Cardiac Gastralgia.—Vallentin (*Thèse de Paris*, 1901; *Medical Review of Reviews*, March, 25th) recommends the following during the attack:

℞ Chloroform water.....4½ ounces
Cocaine hydrochloride.....7½ grains
Orange flower water.....1½ ounces
Distilled water.....3 ounces

M. From one to three teaspoonfuls in soup at the beginning of the attack.

Copper Oxide as a Remedy in Tapeworms. Doerr (*Therapie der Gegenwart; Pharmaceutisches Zeitung*, February 8, 1902) uses copper oxide as a safe and efficient anthelmintic in adults, employing the following:

℞ Black copper oxide.....90 grains
Calcium carbonate.....30 "
Levigated white bole.....180 "
Glycerin.....enough to make a mass
M. Make 120 pills.

Two pills to be taken three times daily, avoiding sour substances in the food. After a few days, when the treatment has been finished, a dose of castor oil should be taken.

For Mercurial Ptyalism.—The *St. Louis Medical Review* for April 26th gives the following prescription:

℞ Tincture of myrrh.....1 drachm.
Potassium chlorate.....6 drachms.
Camphor water, enough to make 16 ounces.

M. To be shaken. Use as a mouth wash every two or three hours, to check secretions and harden the gums.

For Epididymitis.—Chevillot (*Médecine orientale*, April 25th) recommends friction of the scrotum every three days with the following ointment:

℞ Methyl salicylate.....150 grains.
Extract of belladonna.....45 "
Lard.....450 "
M. ft. ungt.

After friction the scrotum should be enveloped in cotton wool and a suspensory bandage applied. At the end of some hours the pains are said to cease and the patients can get about at their occupations in two or three days. Cure is effected in from eight to twelve days.

Dieulafoy's Treatment for Exophthalmic Goitre—The *Revue médicale* for April 26th quotes the following from the *Gazette hebdomadaire de médecine et de chirurgie* as Dieulafoy's method:

℞ Powdered ipecacuanha.....12 grains
Powdered digitalis leaves.....6 "
Extract of opium.....1½ grain
M. fit pil xx.

Two, three, or four pills may be given every day at sufficient intervals, according to the tolerance of the patients. It is necessary to stop short of inducing vomiting, the very slightest nausea is the fullest allowable exhibition of physiological action. The number of pills, the quantity of ipecacuanha remaining the same, may be lessened; or inversely the dose of ipecac may be increased, its administration being properly distributed. Such methods in short may be tried as will avoid passing the limit of tolerance. This treatment, modified according to circumstances should be continued uninterruptedly for some months. M. Dieulafoy also associates ammonium valerianate and hydrotherapy with this treatment.

For Cystitis.—The *Maryland Medical Journal* for April ascribes the following to Chauvet:

℞ Oil of turpentine.....½ an ounce
Camphor.....15 grains
Extract of hyoscyamus.....½ a grain

M. ft. massa. Sig. Take a piece the size of a cherrystone, morning and evening.

An Ointment for Vulvar Diphtheria, Consequent on Puerperal Infection.—The *Rassegna d'Ostetricia e Ginecologia* for April gives the following:

℞ Zinc sulphate.....15 grains
Sulphuric acid.....5 drops
Indigo blue.....75 grains
Borated vaseline.....10 drachms
Linolin.....6 "

M. ft. unguent. To be smeared on the parts after thorough antiseptics

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TEMPORARY SURGICAL OCCLUSION OF THE CAROTID ARTERIES.

The bloody character of major operations on the head and neck not only of itself constitutes an added danger, but also increases the obscurity that invests many of these operations, which the possibility of controlling, by means of a tourniquet, the main arterial supply in the limbs and other more accessible portions of the body dispels. An article entitled "An Experimental and Clinical Research on the Temporary Closure of the Carotid Arteries," published in the April number of the *Annals of Surgery*, by Dr. George Crile, is, therefore, a distinct advance in the surgery of this region. When to the two points before named, viz., safety from the immediate danger of hæmorrhage and avoidance of the technical difficulties entailed, is added also a lessening of the remoter peril of pneumonia, the importance of his work must be acknowledged. The permanent closure of one or both common carotids by ligature has not only a high mortality, but also a large percentage of grave sequelæ, in the shape of hemiplegia, mental disturbance, cerebral disorders, etc. Dr. Crile was moved by these considerations to a series of experiments upon nineteen dogs, which showed conclusively that temporary closure of one or both common carotids with a properly devised clamp, continued for various periods, could be effected without any serious consequences to the vessels, the results being modified by the amount of pressure exerted, the absence or presence of wound infection, and the length of time the clamps were allowed to remain on the artery. As to the physiological effects upon the organism, an increase in blood pressure naturally followed the closure of one carotid, but a restoration of the normal level soon

ensued; the respiration was not affected, and when both common carotids were clamped the rise of blood pressure was greater, but, as in the former case, it soon resumed its normal condition; in some cases there was a slight decrease of respiratory action, but no striking results were noted. When the animals were allowed to recover, no effect upon them due to the clamping was observed, and the circulation was readily reestablished, even after twenty-four hours of complete closure. No clotting, embolism, or thrombosis resulted.

The instrument used by Dr. Crile consisted of a clamp so constructed that its blades could be adjusted by means of a set-screw. The spring end of the clamp was so arranged that the blades, when approximated so as to close the vessel without compressing its walls, were parallel to each other. The lower blade was longer than the upper one, and was turned up at its free end, so that the grasp of the artery might be secure. Pieces of rubber tubing were stretched over the blades to lessen the risk of damage to the artery.

Twenty minutes prior to making the incision a hypodermic injection of 1-100 of a grain of atropine was given where the vagus or superior laryngeal was likely to be affected, to prevent their irritation inhibiting the heart. Where blood might enter the pulmonary tract, the Trendelenburg posture should be adopted; this also possesses the further advantage of partly compensating by gravity for the lowered cerebral blood pressure. The patient should, however, be restored to the horizontal position before the carotids are released from the clamps.

Dr. Crile reports a series of eighteen operations, performed between 1897 and 1901, on patients ranging in age from seven months to sixty-nine years, in ten of which both common carotids were temporarily occluded; in five, one common carotid; and in three, one external carotid. The operations were: (1) removal of a large fibrosarcoma of the roof of the mouth; (2) removal of a large congenital tumor of the neck; (3) partial resection of the tongue, with removal of the floor of the mouth, the submaxillary, sublingual and parotid glands, the superficial and deep cervical lymphatic nodes on the left side, excision of the jugular vein, and resection of the buccal aspect of the inferior maxillary bone; (4) removal of a sarcoma of the parotid and ligation of

the external carotid and the jugular; (5) excision of the tongue, the left floor of the mouth, the middle half of the jaw, the glands of the neck, submaxillary, and a portion of the parotid glands, *en bloc*, for carcinoma; (6) excision of a carcinoma from the parotid duct; (7) excision of the tongue, epiglottis, left tonsil, floor of mouth, lower jaw, submaxillary and parotid glands, left jugular vein and left external carotid artery and the vagus nerve; (8) angeiosarcoma of the cheek and neck in an infant; (9) carcinoma of the septum nasi; (10) excision of half the tongue, the floor of the mouth, the submaxillary and an entire chain of lymphatic glands, and of the jugular vein; (11) removal of a carcinoma of the floor of the mouth and of the anterior part of a tonsil; (12) excision of the upper jaw for sarcoma of the antrum; (13) removal of a cavernous angioma of the orbit; (14) excision of an epithelioma involving the tongue, the floor and side of the mouth and the tonsil; (15) excision of a carcinomatous gland at the angle of the jaw, with removal of one-third of the lower jaw and of a primary sarcoma in front of the tonsil extending to the floor of mouth; (16) excision of the upper jaw for sarcoma; (17) excision of the right superior maxilla and intermaxillary bone; and (18) removal of the left common carotid artery, the jugular vein, all overlying soft parts, the submaxillary and parotid glands, half the lower jaw, and the corresponding portion of the floor of the mouth. In fifteen of the eighteen cases recovery ensued; in the other cases the operation was recovered from, but the patients died, respectively, from hæmorrhage on the thirteenth day, from pneumonia on the seventh, from cerebral softening on the tenth, the second and third cases occurring in alcoholics. In no case could death be attributed to the temporary closure of the arteries.

The advantages allèged for this procedure are: The smaller quantity of anæsthetic required, lessening of the time of operation, a clear field of operation, diminution of the loss of blood, lessened danger from hæmorrhage into the respiratory tract, and ease and speed of the procedure.

One noticeable point is the fact that, in two cases, owing to the irritation induced by handling of the vagus, which had been insufficiently paralyzed by atropine, signs of cardiac inhibition occurred; but the packing of the nerve with cotton saturated with a two-per-cent solution of cocaine caused prompt

cessation of the symptoms, which did not recur, even though the nerve was later subjected to more severe handling than before.

VOLCANIC ACTION AND EPIDEMIC DISEASE.

The recent terrible volcanic explosions in the West Indies inevitably call to mind much that has been written suggesting a relation between volcanic activity and epidemic disease. As early as 1801, Dr. Noah Webster made a medical report on the connection of earthquakes with epidemic disease. Further important communications on the subject were made by Dutrouleau and Gounet, of Paris, in 1843, and in 1851 by Dr. John Parkin, a Fellow of the Royal College of Physicians of Edinburgh, whose interest in a subject which he himself pursued with great zeal (*The Remote Cause of Epidemic Disease*, 1851) led him to found the Parkin Prize for the best essay on Volcanic Action as a Cause of Outbreaks of Epidemic Disease. This prize was won, in 1900, by Dr. Noel Bardswell, with an essay bearing the foregoing title, which was published in the *Edinburgh Medical Journal* for October, 1901.

Dr. Bardswell finds, from a review of eleven of the principal volcanic areas (in which, however, the West Indies are not included, the nearest approach thereto being Mexico), with respect to the prevalence of epidemic diseases therein, that typhoid fever is prevalent in five, malaria in three, dysentery, cholera, and diarrhœal diseases in two each, and epidemic pneumonia, enteritis, leprosy, and phthisis in one each. Most of the author's observations relate to earthquakes, which are included in the term volcanic action, and a careful consideration of results leads the author to the conclusion of "an increased death-rate from malaria, enteric, etc., with a lessened death-rate from phthisis, in areas associated with volcanic activity, as compared with the non-volcanic regions." But he counsels caution in ascribing this increased death-rate to the volcanic phenomena, rather than to other local conditions, and enforces this caution by the history of Yokohama, a city especially subject to earthquakes, in which, however, the occurrence of typhoid epidemics after seismic disturbances has become a rapidly vanishing quantity with new systems of water supply and sewage removal, so constructed as to guard against injury to the pipes from earth vibrations. In Nice, Cannes, and Mentone, on the Riviera, after the earthquake

of 1887, the death-rate from typhoid rose from 66 in the preceding year to 115 in the following year, declining successively to 84, 42, and 25, in subsequent years. Various neuroses have been observed to follow earthquakes; functional disturbances, such as nausea, vomiting, headache, vertigo, diarrhoea, frequent micturition, hystero-epilepsy, and disordered sensation; abnormal mental conditions, such as nervous apprehension, depression and prostration, moral irritability, mania and other forms of insanity; and functional paralyses of the limbs and railway spine. The author cites largely from the works of American authors, Stuart, Porcher, Guitéras, and Moore. As to the effects of volcanic gases, although numerous instances of death have occurred from their inhalation, the instances in which they appear to have caused disease, other than irritation of the air passages, seem to be few. Without however, counting on epidemics of pestilence, of which the daily press expresses particular dread, it is clear that in diseases dependent on nervous causes, diarrhoeas and kindred troubles, and respiratory irritative affections, there is likely to be considerable need of medical aid in the stricken islands for some little time to come, possibly, as often in the case of railway accidents, later on rather than immediately following the catastrophe. There will also be afforded a better opportunity than has ever before occurred for a systematic investigation of the relations, if any, between volcanic action and disease, especially epidemic disease.

A CONGRESS OF FRENCH-SPEAKING PHYSICIANS OF NORTH AMERICA.

In connection with the celebration of the semi-centennial of Laval University, and in the buildings of the university, there will be held in Quebec on June 25th, 26th, and 27th the first congress of the Association of French-speaking Physicians of North America. The congress will be divided into four sections—that of surgery and the specialties; that of medicine, including nervous and mental diseases; that of gynaecology, obstetrics, and pædiatry; and that of hygiene and professional interests.

The lists of officers of the congress and of the sections embrace the names of so many well known physicians, not all of whom are of French descent, that we do not doubt the success of the meeting. We are glad to note that in the list of directors there

are the names of thirteen gentlemen who are in practice in the United States, in the States of Connecticut, Massachusetts, New Hampshire, Rhode Island, Vermont, Minnesota, and Maine. It will be noticed that all these States are not far distant from the Canadian frontier, and are those into which numerous French Canadians have migrated. There is a large French-speaking population in Louisiana, and we may suppose that in further congresses of the sort the Louisiana physicians of French descent will be well represented.

The printed announcement, signed by the president-general and by the secretaries-general, says: "We do not doubt that on the approaching occasion of the congress there will be established closer relations, which will assure our real progress, among the different groups of French-speaking physicians scattered amid populations often hostile to their language and to their aspirations." We are sorry to learn that there are any populations that are inimical to the *doux parler français*, as the announcement phrases it, or to the prestige of the French in medicine or their efforts to maintain the honorable position that has long been conceded to them. France is one of the nurseries of our science, and we believe that the French-speaking physicians of North America are worthy to share in the renown of their fellow Frenchmen. It is not to be doubted that the congress will be successful.

ARSENATE OF QUININE IN LARGE DOSES IN MALARIA.

Dr. Bénakz, physician to the hospital of St. Charalambé, at Smyrna, makes (in *Médecine orientale* for April 25th) a strong plea for the wider use of quinine arsenate in malarial diseases. Arsenic has long been used in various forms in certain cases of malarial disease, especially when quinine seems to have no effect. The likely reason for the neglect of this particular salt Dr. Bénakz attributes to exaggerated ideas of its toxicity, based upon purely theoretical considerations of the great proportion of arsenic that it contains. He points out, however, that, so far back as 1870, Baccelli demonstrated by many experiments its innocuousness, and showed that it ought to be considered as a quinine preparation, susceptible of use under similar conditions and dose with the sulphate. Dr. Bénakz has himself used it largely, and considers it a quinine preparation superior in efficacy to all others. The maximum dose that he has used has been eighteen grains daily

(1.20 gramme), in the form of cachets or pills, taken in three or four divided doses at hourly intervals, and at a time as far removed from the expected access as possible, when that can be ascertained. A good result has, however, often been obtained with doses of 10, and even $7\frac{1}{2}$, grains (divided, of course, as before). Ordinarily, he says, one or two administrations are sufficient to check the access, and occasionally it has been unnecessary to renew its use. It has succeeded well in cases when all other preparations of quinine have proved impotent. The drug, in his experience, combines the febrifuge and antiperiodic effects of both arsenic and quinine, and is better tolerated than any other arsenical preparation. In no case has he ever seen symptoms of arsenism—nausea, vomiting, diarrhoea, stomach pains, constriction of the throat, or diminished urine. Some patients, with great enlargement of the liver and spleen, have been able to continue with impunity its use in the same doses for several days in succession. Its innocuousness he attributes to the fact that the physiological antagonism of arsenic and quinine is at equilibrium in the proportions in which these substances are combined in the arsenate of quinine. Baccelli has shown that the toxic effects of arsenic are prevented in animals to which quinine hydrate is administered in time. A further proof that the salt may be regarded as a quinine preparation he finds in the fact that, in cases where other quinine preparations produce hæmorrhages, the arsenate, even in a small dose, has the same effect.

The dose of quinine arsenate mentioned by the author is so very far in excess of that usually considered safe ($\frac{1}{8}$ to $\frac{1}{2}$ a grain says Martindale's *Extra-pharmacopæia*) that we feel bound to counsel caution in the investigation of his method; but the statements of his own experience are so positive, and his reasoning so antecedently probable, that we think the method deserves a trial, feeling one's way step by step.

A GENEROUS RESPONSE TO A CALL FOR AID.

Some little time ago Dr. William Smyth, in charge of a dispensary district in a remote part of County Donegal, Ireland, lost his life in consequence of attendance on a poor peasant, and an appeal was made through the medical and lay press on behalf of his widow and children, who were left in very straitened circumstances. Dr. S. Nelson Irwin calls our attention to a clipping from the *Belfast Weekly News* for May 3rd, from which, and from the *British Medical Journal* for May 3rd, we learn that a total sum of upward of £7,668 (about \$38,340) has been promptly collected, and the entire sum placed in the Bank of Ireland to the credit of trustees of the fund, among whom are the Duke of Abercorn and the

president of the Royal College of Surgeons of Ireland. The terms of the trust deed assign the interest on one half of the whole sum to Mrs. Smyth for her life. The interest on the other half is assigned for the present to the maintenance of the children. The trustees have the power to use a proportion of the capital sum for the further advancement of the children, as they may from time to time deem advisable. The foregoing facts indicate the power for good that may be wielded by the press, and are creditable to the generosity of the British public and profession.

THE ANTHRACITE STRIKE AND THE SMOKE NUISANCE.

It is to be hoped that, even under the threatened anthracite famine, the sanitary authorities of New York will not allow the atmosphere of the city to be defiled by the smoke from soft coal, but will rigorously enforce the law calling for the use of smoke-consumers in all cases where soft coal is used.

POISON IVY IN NEW YORK.

A gentleman who has almost daily occasion to walk through Sedgwick Avenue assures us that in the neighborhood of the new Roman Catholic Orphan Asylum there are numerous luxuriant specimens of *Rhus toxicodendron* growing in the roadway. Surely this noxious plant ought not to be tolerated in the streets of New York, especially in the vicinity of an institution in which so many children are to be sheltered. The proper authorities should exterminate it at once.

A PROPOSED CONGRESS ON TUBERCULOSIS IN ST. LOUIS.

Dr. George Brown, of Atlanta, thinks that another great congress on tuberculosis should be organized; that it should be cosmopolitan in character, and that it should be held in St. Louis during the exposition of 1904. The occasion seems to us to be a suitable one, and certainly for the present we cannot have too many great conferences on the evil of tuberculous disease. The profession in St. Louis might properly take the initiative in organizing such a congress as Dr. Brown proposes, and we believe they would meet with world-wide cooperation.

THE IRRESPONSIBLE INGENUITY OF A PERIPATETIC PHYSICIAN.

A curious case is recorded by Dr. John A. Sutcliffe, in the *Medical and Surgical Monitor* for March. An Irishman had consulted a travelling doctor for "gravel." The doctor undertook to cure

him for a dollar, and "pushed something down deep into his urethra, well out of sight, and left it there; telling him to fill up well with beer, and then go over to Tomlinson's Hall and listen to the speeches." (It was during Bryan's first campaign.)

The patient did as he was told, the doctor pocketing his fee and disappearing from the town. After a few hours the patient began to suffer serious pain, which grew progressively worse until Dr. Sutcliffe was summoned the following day at noon. He found the patient unable to urinate and wild with pain, the bladder being greatly distended. He succeeded in withdrawing, with some force and by means of urethral forceps, a piece of sole leather, 8½ inches long, roughly trimmed into the form of a bougie. The patient had a stricture 4½ inches behind the meatus, and at a corresponding point on the leather was a deep constriction occasioned by the stricture, the swelling that had taken place elsewhere in the leather failing to overcome the resistance of the stricture.

As Dr. Sutcliffe points out, the inventive but irresponsible practitioner doubtless acted on the theory that the leather would swell and thus dilate the stricture, and that the free imbibition of beer would result in the washing away of the leather when its work of dilatation was accomplished.

AN ENLARGED FIELD OF USEFULNESS FOR THE DIAZO REACTION.

Any resource that adds to what we possess of the positive in diagnosis and prognosis will everywhere be hailed as a precious reinforcement of our powers. It appears from certain recent researches by Helledall (*Beiträge zur klinische Chirurgie*, xxxii, 2; *Centralblatt für Chirurgie*, April 5th) that the diazo reaction promises to prove a notable increment of our resources in other fields than those it has hitherto figured in. He finds that in aseptic surgical affections, apart from neoplasms, there is no diazo reaction, and with few exceptions it is absent even in cases of malignant growths. In acute purulent and very infectious forms of inflammatory disease it is very commonly present. It disappears with the subsidence of a progressive process and appears anew with its recrudescence. Syphilis rarely shows the reaction, but in actinomycosis it is very intense and constant. It is most significant in tuberculous disease, not from the diagnostic, but from the prognostic point of view. In general, its intensity corresponds to the severity of the process. Its constant absence indicates mildness, while its continuous presence in a decided degree shows that the disease is severe. When it disappears definitely, recovery is to be expected. It is of particularly unfavorable prognostic import if it continues after operative procedures.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 26th.—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, May 27th.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, May 28th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield); Philadelphia County Medical Society.

Milk Inspection.—A rigid system of milk inspection has been inaugurated by the city board of health, the inspectors examining carefully every can of milk brought into the city.

Dr. Joseph B. Carley, of the Woman's Hospital, Newark, N. J., was struck and seriously injured by a trolley car on the 17th inst. He was taken to St. Bartholomew's Hospital.

Osteopaths Lose in Massachusetts.—The bill authorizing the Boston Institute of Osteopathy to confer the degree of doctor of osteopathy has been defeated in the legislature of Massachusetts by a vote of 50 to 63.

Brooklyn Doctors Banquet.—About seventy-five members of the Brooklyn Medical Society attended the annual dinner of the society at the Bushwick Club on May 7th, Dr. William H. Hayes acting as toastmaster.

Doctors in the French Chamber of Deputies.—According to the Paris correspondent of the *London Times*, there are forty-three physicians in the new French Chamber of Deputies. Twenty-eight of them have been reelected and fifteen are neophytes.

The Alumni Association of St. Luke's Hospital.—At a recent meeting of this Association the following officers were elected: President, Dr. J. Arthur Booth; vice-president, Dr. William H. Sherman; treasurer, Dr. J. Bentley Squier; secretary, Dr. W. Scott Schley.

The Safe Administration of Chloroform.—We learn that among the exhibits at the annual soirée of the Royal Society, of London, one that attracted considerable attention consisted of a process for administering chloroform with exactitude of measurement.

The Remuneration of the President's Physicians.—The *British Medical Journal* for May 10th referring to the amount asked for in the Sundry Civil Appropriation bill, says: "That amount is 25,000 dollars (£5,000), a sum which we agree with our American contemporaries in thinking ungenerous and inadequate."

Dr. William Tod Helmuth, professor of surgery in and dean of the faculty of the Homœopathic Medical College and Hospital and surgeon to the Flower Hospital, died at his home, in New York, of heart disease on May 15th at the age of seventy-four.

A Dinner to Canadian Veterans.—On May 7th a dinner was given by the medical profession of Montreal to Dr. J. P. Rottot, dean of the medical faculty of Laval University; Dr. D. C. MacCallum, emeritus professor of medicine at McGill University, and Sir William Hingston, professor of surgery at Laval University, all of whom have been engaged in the practice of medicine for over fifty years.

Changes of Address.—Dr. L. Bolton Bangs, to No. 20 East Forty-sixth Street, New York; Dr. Bennett S. Beach, to No. 112 West Forty-eighth Street, New York; Dr. C. P. Kornreich, to No. 228 East Tenth Street, New York; Dr. James Pedersen, to No. 20 East Forty-sixth Street, New York; Dr. Henry Reiter, to No. 84 State Street, Brooklyn, N. Y., and Dr. J. Bentley Squier, to No. 20 East Forty-sixth Street, New York.

The International Association of Railway Surgeons held its annual meeting in St. Louis during the first week of May. Indianapolis was selected as the next place of meeting and the following officers were elected: President, Dr. A. W. Candler, of St. Louis; Dr. A. L. Wright, of Iowa; Dr. John B. Brule, of St. Louis; Dr. J. C. Wysor, of Virginia; Dr. E. E. Kitchener, of Canada; Dr. W. M. Jamieson, of Texas, and Dr. R. Ortego, of Mexico; secretary, Dr. Louis J. Mitchell, of Chicago; treasurer, Dr. James A. Duncan, of Toronto.

The New York Post-graduate School and Hospital.—At a meeting of the Board of Directors of the New York Post-graduate Medical School and Hospital, held May 5th, the following appointments were made in the faculty:

Dr. Carl Beck, professor of surgery; Dr. Henry Ling Taylor, professor of orthopædic surgery; Dr. Simon Baruch, professor of hydro-therapeutics; Dr. Grace Peckham Murray, adjunct professor of diseases of women, and Dr. John B. Rae, adjunct professor of diseases of the ear.

A New Surgical Building for Johns Hopkins University is to be erected at a cost of \$100,000. The new structure is to take the place of the amphitheatre on the hospital grounds, fronting on Monument street and facing Hopkins avenue. It is to be 112 feet long by 100 feet wide and will have five stories and a basement. It will be built of brick, in harmony with the other hospital buildings. The entrance for accident cases and students will be on Monument street.

The Women's Medical Association of New York.—The annual meeting of the Woman's Medical Association was held at the Academy of Medicine on Wednesday, May 21st, at 8.15 p. m. After the presentation of patients and of specimens the paper of the evening was presented, on 'The

Value of the Microscopical Examination of the Blood as a Means of Diagnosis; as shown by a Resumé of Four Years Work in the Woman's Hospital of Philadelphia," by Dr. Ella B. Everitt and Dr. Adelaide Ward Peckham.

The Resignation of a Hospital Staff.—The entire medical staff of the Jamaica Hospital, at Jamaica, Borough of Queens, has resigned, because the women board of managers has refused to rescind a resolution providing for a staff including homœopathic as well as regular physicians. The nine physicians who have resigned are Dr. C. K. Meynan, Dr. Philip M. Wood, Dr. A. J. Blanchard, Dr. T. J. Flynn, Dr. S. D. Hendrickson, Dr. W. Scovill, Dr. H. M. Auger, Dr. E. T. Jones, and Dr. Samuel D. Nutt. The retiring physicians after sending in their resignations, organized a Jamaica Medical Association.

The Association of Military Surgeons of the United States will hold its eleventh annual meeting at Washington on June 5, 6, and 7. The arrangements for the meeting are in the hands of a committee of which Dr. Major George Henderson is chairman. The members of the association are especially invited to bring with them the ladies of their families, as arrangements are being made to provide entertainment for them. A reduced rate of one fare and a third on the certificate plan has been made by the railroads, but to secure this rate travelers must obtain certificates from the agent from whom they purchase tickets.

The Shah's Physician: A Correction.—The *British Medical Journal* for May the 11th contains a statement from Sir Hugh Adcock, C. M. G., Consulting Physician-in-Chief to H. I. M., the Shah of Persia, to the effect that a paragraph recently quoted by the *British Medical Journal* from our issue of December 21, 1901, relative to the appointment of Dr. M. Elezarian Randolph as physician to the Shah is incorrect, as "the gentleman in question has not been appointed to any position near the Shah." We regret the misstatement contained in our previous issue, which, so far as it regards the appointment, was made to us by the gentleman in question in a communication from Teheran.

The Summer School in Philanthropic Work conducted by the Charity Organization Society in New York will open its fifth annual session on June 16th, continuing six weeks. The course consists of a series of discussions and visits each morning combined with practical work in the afternoon that are intended to introduce the students to life among the poor in New York and the best means toward improving their condition. Graduates from colleges or universities or who have had one year's experience in charitable work are eligible to membership. The registration fee for the course is \$10, and residence during the course can be secured at the settlements at \$7 per week. Philip W. Ayres, Director of the School, 105 East Twenty-second Street, New York, will furnish any further information desired.

A Memorial Tablet has been presented to the College of Physicians and Surgeons, Columbia University, by the alumni in memory of the graduates who died during the Spanish war. The tablet bears the names of John Blair Gibbs, class of 1882, assistant surgeon, U. S. N., killed at the battle of Guantanamo, July 12th, 1898 (the first American officer killed during the war); George Washington Lindheim, class of 1898, assistant surgeon, Eighth Regiment, N. G. N. Y., who died of typhoid, September 16th, 1898, and Harry Augustus Young, class of 1895, quartermaster's sergeant, Company B, Eighth Utah Light Artillery, who was killed at Manila, February 6th, 1899.

A Dinner to Dr. Sternberg.—A committee of twenty-six physicians have tendered a dinner to Dr. Sternberg on the occasion of his retirement from the army after forty years of active service, during nine of which he has been the surgeon general of the army. Dr. Hermann M. Biggs, 5 West Fifty-eighth street, is acting as treasurer of the committee, other members being Dr. Henry D. Holton, Dr. Frank Billings, Dr. Simon Flexner, Dr. A. C. Abbott, Dr. James Tyson, Dr. J. C. Wilson, Dr. W. H. Welch, Dr. G. M. Kober, Dr. S. B. Ward, Dr. R. H. Fitz, Dr. F. C. Shattuck, Dr. Maurice Richardson, Dr. Harold C. Ernst, Dr. Victor C. Vaughan, Surgeon-General Rixey, Dr. H. M. Hurd, Dr. Roswell Park, Dr. Lewis S. Pilcher, Dr. John A. Wyeth, Dr. Abraham Jacobi, Dr. Edward G. Janeway, Surgeon-General Wyman, Dr. William Osler, Dr. Chas. G. Stockton, and Dr. Lewis A. Stimson. A bill has been passed by Congress under which the President will have power to retire Dr. Sternberg with the rank of Major General.

California Health Officials Organize.—Health officials, sanitarians, and inspectors from various cities about San Francisco met on April 14th to organize a State association and arrange for a regular annual convention. About thirty were present. The plan of organization was placed in the hands of a committee, who reported in favor of a permanent association and recommended plans, which were adopted. The election of officers resulted as follows: President, Dr. Edward van Adelung, of Oakland; vice-presidents, Dr. S. B. Davis, of Stockton, and Dr. William Simpson, of San José; secretary and treasurer, J. A. Emery, of San Francisco. The name of the organization will be the Public Health Association of the State of California, and the association will be open to all health officers of the State, and will meet annually on the Monday preceding the meeting of the State Medical Association. The objects of the organization will be the exchange of ideas and experiences, consideration of laws and rules for proposed legislative action, and other matters of pertinent interest to health officers.

The American Gynecological Society will meet at Atlantic City on May 27th, 28th, and 29th, at the Hotel Rudolf. The programme includes papers by the following authors: Dr. Edward W. Jenks, Detroit; Dr. Thomas A. Ashby, Baltimore; Dr. Walter L. Burrage, Boston; Dr.

John T. Thompson, Portland; Dr. Matthew D. Mann, Buffalo; Dr. Francis H. Davenport, Boston; Dr. Clement Cleveland, New York; Dr. Hunter Robb, Cleveland; Dr. J. Riddle Goffe, New York; Dr. J. Wesley Bovée, Washington; Dr. Hiram N. Vineberg, New York; Dr. James Clifton Edgar, New York; Dr. Robert A. Murray, New York; Dr. Edward P. Davis, Philadelphia; Dr. Charles P. Noble, Philadelphia; Dr. Edward Reynolds, Boston; Dr. Ely Van de Warker, Syracuse; Dr. Fernand Henrotin, Chicago; Dr. Isaac S. Stone, Washington; Dr. Edward E. Montgomery, Philadelphia; Dr. Ruben Peterson, Ann Arbor, and Dr. Philander A. Harris, Paterson.

A Course in Hospital Economics will be inaugurated by Columbia University this Fall, the tuition fee for the course being \$100. The required course of study includes psychology, hospital economics and practical education, and the elective courses include biology, bacteriology, four courses in domestic science, and economic and social history of the United States. With the exception of the two hospital courses, all the subjects enumerated are found among the regular courses of Teachers' College. In the new courses on hospital economics there will be three lectures on the history of hospitals by Miss M. A. Nutting, of Johns Hopkins Hospital, Baltimore. Miss Eva Allerton, of the Rochester Homœopathic Hospital, will give four lectures on hospital construction, sanitation and ventilation. Hospital administration will be treated in eight lectures by Miss Maud Banfield, of the Polyclinic Hospital, Philadelphia. Isabel Hampton Robb will give four lectures on training school administration, and Miss M. M. Riddle an equal number on the same subject. Miss Banfield is chairman of the board of examiners, and applications should be sent to her.

The New York Academy of Medicine.—On Monday evening, May 19th, the Section in Ophthalmology held a clinical meeting, cases being presented and reported on as follows: A case of Sarcoma of Iris, by Dr. G. H. Cocks; A Case of Dacryolith, and A Case of Blepharorrhœa of the Sac, caused by a Rhinolith, by Dr. C. J. Kipp, and A Case of Migraine Ophthalmoplégique (Charcot), by Dr. J. Wolff. On Tuesday evening, May 20th, the Section in General Medicine discussed summer climates and climate-therapy in a series of short papers as follows: The Climate and Health Resorts of Maine, by Dr. Guy Hinsdale, of Philadelphia; Ocean Climato-Therapy in Summer, by Dr. H. Holbrook Curtis; The Summer Climatic Treatment of Bronchial Asthma and Allied Affections, by Dr. Beverly Robinson; The Summer Climatic Treatment of Neurasthenia, by Dr. E. D. Fisher, and A Word about Mineral Spring Resorts, by Dr. James K. Crook. The Section in Obstetrics and Gynecology will meet Thursday evening, May 22, when a paper was presented on Endothelioma of the Ovary, by Dr. H. J. Garrigues, followed by a discussion of papers of previous meetings on complications of pregnancy. The remainder of the evening was devoted to a symposium on retroversion and retroflexion of the uterus embracing the following

papers: *Ætiology, Pathology and Palliative Treatment*, by Dr. J. Riddle Goffe; *Alexander's Operation*, by Dr. Leroy Broun; *Abdominal Operations for Relief of these Conditions*, by Dr. Brooks H. Wells, and *Vaginal Operations for Relief of these Conditions*, by Dr. H. N. Vineberg.

Vacancies in the Marine Hospital Service.—

A board of officers will meet at the Marine-Hospital Bureau, 3 B Street, S. E., Washington, D. C., Monday, June 16, 1902, for the purpose of examining candidates for admission to the grade of assistant surgeon in the U. S. Marine-Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons, two thousand dollars, and surgeons twenty-five hundred dollars a year. When quarters are not provided commutation at the rate of thirty, forty and fifty dollars a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per-centum in addition to the regular salary for every five years' service up to forty per-centum after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address the Supervising Surgeon-General, U. S. Marine Hospital Service, Washington, D. C.

Hospital Buildings and Endowments.—Governor Odell has stricken out of the appropriation bill passed by the New York State Legislature the sum of \$250,000 included in the following clause: "For the support and maintenance of the State hospitals, other than salaries and wages of officers and employes, pursuant to the provisions

of the Insanity law and the amendments thereof, \$250,000, or so much thereof as may be necessary, to be paid from the moneys received for board and care of private patients, sale of farm products and other miscellaneous receipts of said hospitals." The Governor's comment on this appropriation is: "I am convinced that this item is unnecessary, and the form of this appropriation is so elastic that the money can be used for such a variety of purposes as to be liable to abuse. Such appropriations should be made direct, and should not be included in such form in the Supply bill. There is a balance in the treasury of the lunacy commission for maintenance, salaries and buildings, which seems to me to be ample for the present year. Aside from this, I am convinced that the recent amendments to the lunacy laws will result in economies that will render the item unnecessary."—Under the will of the late William Whitewright, the Presbyterian Hospital of this city is to receive \$50,000.—St. Anthony's Hospital at Barrett Avenue and Wyckliffe Street, Louisville, Ky., was formally dedicated on April 14th. The total cost of the present building was \$100,000. As it stands it contains twelve public wards, forty-seven private rooms, two reception rooms, one parlor, one large and one small operating room, bath rooms on each of the four floors, a pharmacy, a provisional chapel, linen rooms, refectory, kitchen, laundry, and all the latest modern equipments of gas and electric illuminations.—The need of a hospital in the Borough of Queens for the treatment of contagious diseases is apparent, and Dr. Samuel Hendrickson, head of the health department, of the borough, has set on foot a movement to secure such an institution. He has prepared a petition which will be circulated for signatures and forwarded to Mayor Low.—The board of trustees of the Frances E. Willard National Temperance Hospital Association, Chicago, is taking steps to acquire additional property and to erect a hospital building, to cost in the neighborhood of \$250,000.—Judge Ashman, of Philadelphia, has filed an adjudication in the estate of Ann R. Reynolds, deceased, making distribution of a balance of \$221,413.27. The decedent among other bequests, left \$10,000 each to St. Joseph's Hospital, and St. Mary's Hospital.—The new building fund of the St. Alexis Hospital, Cleveland, has now reached \$19,979, the total amount desired being \$63,000.—Several gifts of money have been made to the Mount Sinai Hospital, New York, to establish and maintain an electric ambulance service. Murry Guggenheim, one of the directors, has given \$20,000. The income of this is to be the nucleus of a permanent fund, to be used when the hospital moves into its new building, One Hundredth and One Hundred and First Streets, between Fifth and Madison Avenues.—Contributions toward the liquidation of the debt of the Memorial Hospital for Women and Children, Brooklyn, continue to be made to the authorities. The total received to date in response to the appeal is \$1,913.—The District Commissioners of Washington, D. C., have sent to the Secretary of the Treasury for approval a supplemental estimate of \$6,000 for improvements to the Columbia Hospital for Women.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 17, 1902:

DISEASES.	Week end'g May 10.		Week end'g May 17.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	23	14	20	8
Scarlet fever.....	402	41	385	29
Cerebro-spinal meningitis.....	0	3	0	2
Measles.....	450	20	582	19
Diphtheria and Croup.....	281	44	307	48
Small-pox.....	58	9	46	7
Tuberculosis.....	294	168	273	157

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending May 17, 1902:

Smallpox—United States.

Alabama.....	Mobile.....	May 10.....	21 cases.	
California.....	Los Angeles.....	Apr. 19-May 3.....	11 cases.	
	San Francisco.....	Apr. 27-May 4.....	7 cases.	
Colorado.....	Denver.....	Apr. 28-May 5.....	3 cases.	
Florida.....	Jacksonville.....	Apr. 26-May 10.....	4 cases.	
Illinois.....	Belleville.....	May 3-10.....	3 cases.	
"	Chicago.....	May 3-10.....	10 cases.	1 death.
"	Galesburg.....	May 3-10.....	5 cases.	
"	Peoria.....	Apr. 1-30.....	26 cases.	
Indiana.....	Evansville.....	May 3-10.....	1 case.	
"	Indianapolis.....	May 3-10.....	6 cases.	
Kentucky.....	Covington.....	May 4-11.....	13 cases.	
"	Lexington.....	May 3-10.....	1 case.	
Maine.....	Portland.....	May 3-10.....	1 case.	
Maryland.....	Baltimore.....	May 3-10.....	5 cases.	
Massachusetts.....	Boston.....	May 3-10.....	28 cases.	6 deaths.
"	Brockton.....	May 3-10.....	1 case.	
"	Cambridge.....	May 3-10.....	1 case.	
"	Everett.....	May 3-10.....	2 cases.	
"	Lowell.....	May 3-10.....	2 cases.	
"	Malden.....	May 3-10.....	2 cases.	
"	Newton.....	May 3-10.....	1 case.	
"	Northampton.....	May 3-10.....	1 case.	
"	Somerville.....	May 3-10.....	1 case.	
Michigan.....	Detroit.....	May 3-10.....	2 cases.	
"	Grand Rapids.....	Apr. 26-May 10.....	7 cases.	
Minnesota.....	Winona.....	Apr. 26-May 3.....	1 case.	
Missouri.....	St. Louis.....	May 4-11.....	48 cases.	
Montana.....	Butte.....	Apr. 27-May 4.....	4 cases.	
Nebraska.....	Omaha.....	May 5-12.....	29 cases.	
New Jersey.....	Camden.....	May 3-10.....	1 case.	2 deaths.
"	Hudson County.....			
	including Jersey City.....	Apr. 27-May 4.....	32 cases.	6 deaths.
"	Newark.....	May 3-10.....	40 cases.	7 deaths.
"	Passaic.....	Apr. 26-May 10.....	2 cases.	
"	Plainfield.....	May 3-10.....	3 cases.	
New York.....	New York.....	May 3-10.....	58 cases.	9 deaths.
Ohio.....	Cincinnati.....	May 2-9.....	11 cases.	
"	Cleveland.....	May 3-10.....	4 cases.	
"	Toledo.....	May 3-10.....	1 case.	
"	Youngstown.....	Apr. 10-26.....	1 case.	
Pennsylvania.....	Columbia.....	May 5-12.....	5 cases.	
"	Erie.....	May 3-10.....	3 cases.	
"	Philadelphia.....	May 3-10.....	24 cases.	2 deaths.
"	Pittsburgh.....	May 3-10.....	17 cases.	1 death.
"	York.....	Apr. 1-30.....	3 cases.	1 death.
South Carolina.....	Charleston.....	May 3-10.....	2 cases.	
"	Greenville.....	Apr. 26-May 3.....	1 case.	1 death.
South Dakota.....	Sioux Falls.....	May 3-10.....	1 case.	
Tennessee.....	Memphis.....	May 3-10.....	21 cases.	1 death.
"	Nashville.....	May 3-10.....	1 case.	
Texas.....	San Antonio.....	Apr. 1-30.....	3 cases.	
Utah.....	Ogden.....	Apr. 1-30.....	3 cases.	
"	Salt Lake City.....	May 3-10.....	1 case.	
Washington.....	Tacoma.....	Apr. 27-May 4.....	3 cases.	
Wisconsin.....	Green Bay.....	May 4-11.....	2 cases.	
"	Janesville.....	May 3-10.....	3 cases.	
"	Milwaukee.....	May 3-10.....	9 cases.	

Smallpox—Foreign.

Great Britain.....	Birmingham.....	Apr. 26-May 3.....	7 cases.	
"	Gateshead.....	Apr. 26-May 3.....	1 case.	
"	Leeds.....	Apr. 26-May 3.....	1 case.	
"	Liverpool.....	Apr. 26-May 3.....	6 cases.	
"	North Shields.....	Apr. 26-May 3.....	7 cases.	
"	South Shields.....	Apr. 26-May 3.....	4 cases.	
"	Sunderland.....	Apr. 26-May 3.....	2 cases.	
India.....	Bombay.....	Apr. 8-15.....	16 deaths.	
"	Calcutta.....	Apr. 5-12.....	7 deaths.	
"	Karachi.....	Apr. 6-13.....	2 deaths.	
"	Madras.....	Apr. 5-11.....	3 deaths.	
Italy.....	Naples.....	Apr. 12-26.....	11 cases.	
Mexico.....	City of Mexico.....	Apr. 27-May 4.....	1 case.	
"	Vera Cruz.....	May 3-10.....	2 cases.	
Spain.....	Malaga.....	Mar. 1-30.....	5 deaths.	

Yellow Fever.

Costa Rica.....	Port Limon.....	Apr. 23-30.....	1 case.	
Mexico.....	Vera Cruz.....	May 3-10.....	17 cases.	9 deaths.

Cholera.

China.....	Amoy.....	Mar. 29-Apr. 5.....	2 cases.	2 deaths.
India.....	Bombay.....	Apr. 8-15.....	1 death.	
"	Calcutta.....	Apr. 5-12.....	172 deaths.	

Plague—Insular.

Hawaii.....	Honolulu.....	Apr. 29.....	1 death.	
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Plague—Foreign.

China.....	East Honam.....	May 2.....	Epidemic.	
India.....	Bombay.....	Apr. 8-15.....	664 deaths.	
"	Calcutta.....	Apr. 5-12.....	603 deaths.	
"	Karachi.....	Apr. 6-13.....	153 cases.	110 deaths.
Japan.....	Nagasaki.....	Apr. 1-20.....	1 death.	

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending May 17, 1902:

APPEL, DANIEL M., Major and Surgeon, is detailed to represent the Medical Department of the Army at the fifty-third annual meeting of the American Medical Association, to be held in Saratoga, N. Y., from June 10 to 13, 1902.

ASHBURN, JAMES K., Contract Surgeon, is relieved from further duty at Fort Grant, Arizona, and will proceed from Batavia, Ohio, to Fort Crook, Nebraska, for duty.

AUSTIN, R. EMMETT, Contract Surgeon, will report in person to the commanding officer at Fort Robinson for duty.

BELT, HARRY D., Contract Surgeon, is granted leave of absence for one month.

BROOKS, JOHN D., Contract Surgeon, will proceed to St. Paul for duty.

BROWN, H. L., Contract Surgeon, will report to the commanding officer at Fort Sheridan, Illinois, for temporary duty.

CARR, LAWRENCE C., Major and Surgeon, is granted leave of absence for one month.

GILCHRIST, HARRY L., First Lieutenant and Assistant Surgeon, will proceed to Seattle, Washington, and accompany the Thirty-third Company, Coast Artillery, to Fort Liscum, Alaska, returning to Seattle with Company G, Seventh Infantry. Upon completion of this duty he will rejoin his proper station.

GREGORY, JUNIUS C., Contract Surgeon, is detailed as a member of the examining board convened at Fort Myer, Virginia, vice J. B. CLAYTON, First Lieutenant and Assistant Surgeon, relieved.

HAVARD, VALERY, Lieutenant Colonel and Deputy Surgeon General, is detailed to represent the Medical Department of the Army at the Second International Conference for the Prevention of Syphilis and Venereal Diseases, to be held in Brussels, Belgium, from September 1 to 6, 1902.

KIEFFER, CHARLES F., Captain and Assistant Surgeon, is granted leave of absence for one month.

LUDINGTON, PAUL H., Contract Surgeon, is assigned to duty as attending surgeon at these headquarters and examiner of recruits in Omaha, Nebraska.

MCCORD, DONALD P., Captain and Assistant Surgeon. The leave of absence granted him is extended one month.

MOSES, H. C., Contract Surgeon. The leave of absence granted him is extended one month.

PERSONS, ELBERT E., First Lieutenant and Assistant Surgeon, will proceed to Fort Assiniboine, Montana, and report for duty to accompany Troops A and C, Thirteenth Cavalry, to Fort Yellowstone, Wyoming. Upon arrival at the latter post, Dr. Persons will report to the commanding officer for temporary duty with troops in the National Park during the tourist season.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

VAN POOLE, GIDEON McD., First Lieutenant and Assistant Surgeon, will report to the commanding officer of the Army and Navy General Hospital, Hot Springs, Arkansas, for temporary duty.

WOOD, MARSHALL W., Major and Surgeon, is granted leave of absence for twelve days.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 17, 1902:

ARNOLD, W. F., Surgeon. Detached from duty at Guam, L. I., and ordered to the Naval Hospital, Yokohama, Japan, for treatment.

BELL, W. H., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered to the *Chesapeake*, when that vessel goes into commission.

Appointments.

E. M. BROWN, M. D.; H. F. STRINE, M. D.; J. P. TRAYNOR, M. D.; and R. E. HOYT, M. D., were appointed assistant surgeons, May 8, 1902.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned officers of the United States Marine-Hospital Service for the Seven Days ending May 15, 1902:

DUFFY, FRANCIS, Acting Assistant Surgeon. Granted leave of absence for six days from May 6th.

GUIERAS, G. M., Passed Assistant Surgeon. The Bureau order of May 5, 1902, directing him to proceed to Philadelphia, is amended so that he shall proceed to Cienfuegos, Cuba, for temporary duty. Upon completion of this duty, to proceed to Philadelphia, May 12th.

HASTINGS, HILL, Assistant Surgeon. Detailed to represent the service at the meeting of the Southern California Medical Society at Idyllwild, May 22 and 23, 1902.

HOLT, J. M., Assistant Surgeon. Relieved from duty at St. Louis and directed to proceed to Honolulu, Hawaii, and report to the medical officer in command for duty, stopping *en route* at San Francisco Quarantine Station for special temporary duty.

McMULLEN, JOHN, Assistant Surgeon. Granted leave of absence for three days.

MURRAY, R. D., Surgeon. Granted leave of absence for twenty-five days from June 1st.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for three days.

ROWLES, J. A., Acting Assistant Surgeon. Granted leave of absence for thirty days.

WASDIN, EUGENE, Surgeon. The leave of absence granted him for seven days, under paragraph 179 of the *Regulations*, is amended so that the said leave shall be for three days.

Board Convened.

Board convened to meet at the Marine-Hospital, Chicago, May 31, 1902, for the physical examination of an officer for the Revenue Cutter Service. Detail for the board: Surgeon H. W. SAWTELLE, chairman; Assistant Surgeon L. P. H. BAHRENBURG, recorder.

Births, Marriages, and Deaths.*Born.*

LEWIS.—At Fort Howard, Maryland, on Wednesday, May 7th, to Dr. W. F. Lewis, United States Army, and Mrs. Lewis, a daughter.

SCHREINER.—At Fort Russell, Wyoming, on Saturday, May 10th, to Dr. E. R. Schreiner, United States Army, and Mrs. Schreiner, a daughter.

Married.

HOMER CLARK.—In Newark, N. J., on Tuesday, May 20th, Dr. Arthur Greysted Hooper and Miss Amelia Schuyler Clark.

MULBURY-OSBORN.—In Wadsworth, N. Y., on Thursday, April 17th, Dr. Claude De Vere Mulbury and Miss Daisy Belle Osborn.

O'MALLEY-GRUGAN.—In Philadelphia, on Thursday, May 15th, Dr. Joseph O'Malley and Miss Susan M. Grugan.

PARKER-LINNE.—In San José, California, on Friday, May 9th, Dr. Edward G. Parker, United States Navy, and Miss Charlotte M. Linne.

SMALL-IRWIN.—In Chicago, on Monday, May 12th, Dr. Atwell Small and Miss Ida Barnes Irwin.

Died.

BELLARD.—In Cherbourg, France, on Wednesday, February 26, 1902, Madame Eugène Bellard, wife of Dr. Eugène Bellard, Médecine-Major du Cinquième Régiment d'Infanterie coloniale, Chevalier de la Légion d'Honneur.

BROOKE.—In Radnor, Pennsylvania, on Monday, May 12th, Dr. John Brooke, United States Army, retired, in the seventy-second year of his age.

CALHOUN.—In Covington, Kentucky, on Wednesday, May 14th, Dr. Wesley Calhoun, in the sixty-ninth year of his age.

DARNALL.—In Kokomo, Indiana, on Sunday, May 11th, Dr. James M. Darnall, in the eighty-fifth year of his age.

FRITTS.—In Wilmington, Delaware, on Friday, May 16th, Dr. Stewart A. Fritts.

HULSHIZER.—In Philadelphia, on Monday, May 19th, Dr. Allan H. Hulshizer, in the fifty-first year of his age.

JENNER.—In East Dayton, Ohio, on Monday, May 12th, Dr. Robert Jenner, in the thirtieth year of his age.

LANIER.—In Oliver, Georgia, on Friday, May 9th, Dr. Sidney J. Lanier, formerly of Savannah.

LORD.—In Portland, Maine, on Monday, May 12th, Dr. Charles Y. Lord, in the forty-seventh year of his age.

McLANE.—In Kansas City, Missouri, on Saturday, May 10th, Dr. Moses McLane, in the eighty-first year of his age.

TALL.—In Baltimore, on Monday, May 12th, Dr. Reuben James Hooper Tall, in the fifty-ninth year of his age.

TOD.—In Lexington, Kentucky, on Tuesday, May 13th, Dr. Lyman Beecher Tod, in the seventieth year of his age.

VAN SYCKLE.—In Brooklyn, N. Y., on Tuesday, May 13th, Dr. Clarence M. Van Syckle, in the twenty-fourth year of his age.

WHITE.—In Bloomington, Illinois, on Tuesday, May 13th, Dr. John L. White, in the seventieth year of his age.

OBITUARY NOTES.

DR HENRY RENDU, physician to the Hôpital Necker, member of the Academy of Medicine, and general secretary of the Société Médicale des Hôpitaux de Paris, is dead at the age of fifty-seven. Dr. Rendu was one of the most noted clinicians of Paris, and was a voluminous writer, his work being mainly in the form of contributions to current medical literature. His principal work is his course of clinical lectures, published in two volumes.

DR. WILLAM MILLER ORD died in Salisbury, England, on May 15th. He was for years attending physician at St. Thomas' Hospital, London, and did a large consulting practice in England. His work on myxœdema is classical, very little having been added to the literature of the subject since the publication of his article. He retired from practice several years ago.

Pith of Current Literature.

The Boston Medical and Surgical Journal,
May 15, 1902.

Birth- and Death-Rate as Influenced by Obstetric and Gynæcic Progress. By Dr. George J. Engelmann.—The progress of medical science has left an unquestioned impress upon the world's vital record, and we see the results clearly marked in the statistics of all civilized communities. No less decisive has been the progress of gynæcological and obstetrical science, and we have every reason to expect similar positive results and a similar impress upon vital statistics. The author, however, believes that this is not the case, at least not to an even approximately corresponding degree, and he shows this by a comparison of the results achieved: On the one hand (1) the death-rate, past and present from certain infectious diseases; on the other (2) fecundity, number of stillbirths and death-rate in childbirth before and after the introduction of modern methods.

Amaurosis (Atrophy of the Optic Nerve) and Its Treatment by the Subcutaneous Injection of Strychnia. By Dr. Hasket Derby.—The author's conclusions are: (1) Strychnine is a stimulant to the optic nerve. Even in normal eyes it slightly increases the acuteness of vision and widens the visual field. These effects are temporary. (2) In certain cases of optic nerve atrophy its local subcutaneous injection has, to say the least, coincided with an arrest in the progress of the disease, and has been followed by a somewhat increased acuteness of vision. Whether these effects are temporary or permanent, time and fuller statistics will show. (3) In a progressive case of this disease it is clearly our duty to state the above facts to the patient, and allow him to take the treatment if he is so inclined. (4) The strychnine should always be administered in the temple, and by subcutaneous injection.

Diseases of the Ear of Interest to Insurance Examiners. By Dr. Philip Hammond.—The author notes that, at the present time, nearly all companies refuse to consider persons having a suppurative process in either ear, although some accept candidates who have had no discharge for three months. The author shows that this rule is not a sufficient protection, inasmuch as there are certain conditions which favor the recurrence of the disease.

Traumatic Asphyxia. By Dr. H. H. A. Beach, and Dr. Farrar Cobb.

Angina Cruris [Intermittent Claudication]. By Dr. G. L. Walton.

Philadelphia Medical Journal, May 17, 1902.

A Case of Hæmatoporphyria. By Dr. James Tyson, and Dr. Alfred C. Croftan.—In this case the patient for a period of seven years had been taking, as a hypnotic, from twenty to sixty grains nightly of sulphonal. About one-seventeenth of the hæmoglobin was destroyed and wasted in the urine during twenty-four hours in the form of hæmatoporphyrin. It is easily understood how such a loss of blood pigment sustained for a prolonged period of time must lead to severe degrees of an-

æmia. In the present case the administration of sulphonal was stopped in time so that the loss was inhibited, a regeneration of the blood occurred, and the patient recovered.

Polyhydramnios; Its Differential Diagnosis and Treatment, with the Report of Cases. By Dr. Edward P. Davis.—The treatment of this condition by the administration of drugs is without known value. When the fluid is but slightly in excess no action need be taken, but when there is rapidly increasing distention with large quantity of fluid, and interference with the patient's general condition, pregnancy must be terminated. This should be done under thorough asepsis, puncturing the membranes, allowing the fluid to escape gradually, using the fœtus as a valve to prevent the immediate removal of the fluid. After a part of the fluid has been removed, the patient must be kept under immediate observation. Abnormal presentations are not infrequent. No effort should be made to hasten labor in the interests of the child. After the child is expelled, the uterus must be prevented from relaxing by manual compression, massage, the complete removal of the placenta and membranes, irrigation with hot antiseptic fluid, tamponing with gauze, and the hypodermic use of strychnine, ergot, and other stimulants, if necessary. When a positive diagnosis cannot be made, abdominal section is justifiable to complete a diagnosis and to deal with any condition requiring removal.

Diabetes Insipidus, Twin Pregnancy, Polyhydramnios and Post Partum Hæmorrhage. By Dr. George De Tarnowsky.—So far as the author knows, no writer has reported on the coexistence of diabetes insipidus and polyhydramnios; should such cases be published, and this complication be found to be a common one during pregnancy, they would form a strong argument in favor of the maternal origin of amniotic dropsy.

Some problems in Municipal Sanitation From an Executive Standpoint. By Dr. William C. Woodward.

The Importance of the Lacrymal Reflex in the Diagnosis between Organic and Hysterical Anæsthesia of the Face. By Dr. William G. Spiller.

Some Reasons for Considering the Vermiform Appendix as a Gland. By Dr. Clarence L. Killbourn.

Report of a Primary Sarcoma of the Small Intestine. By Dr. Arthur W. Booth.

Asthenopia. Graduated Tenotomy. Prisms. By Dr. Norburne B. Jenkins.

Medical Record, May 17, 1902.

So-Called "Joint Derangement" from Movable Bodies in Joints. By Dr. Joseph D. Bryant.

A Few Cases of Penetrating Stab Wounds of the Abdomen. By Dr. Joseph B. Bissell.—A stab-wound involving the peritoneal cavity is frequently followed by recovery without operation. In every case the wound and the field near it should be rendered aseptic. If doubt exists about involvement of the organs it is better to bring the divided edge of the peritonæum into the wound, and, fast-

ening it there, to drain and wait. If the viscera have certainly escaped, the wound should be closed by suturing the peritoneum, the muscles, and the skin and fascia, in three different layers with catgut. If there is grave doubt and the symptoms point to damage in the peritoneal cavity, the wound must be enlarged and a complete exploration made; or, a median laparotomy may be done exactly as in an examination of tumors of the abdominal cavity. If the gut is cut across it must be united in any one of the usual ways. If the omentum is cut off, so much of the intestine as is deprived of its blood supply must be resected. If symptoms of internal hæmorrhage are present and increasing, the indication is imperative to open the abdomen, find the origin of the bleeding, and control it.

Prophylaxis in Pneumonia. By Dr. H. R. Tut-hill.—Knowing the microbic origin of the disease, the author believes the most rational mode of treatment to consist in the administration of internal antiseptic agents, which, upon being brought in contact with the bacilli through the medium of the blood, may destroy, or at least embarrass, their growth, and check the influence of their poisons. The author has had very good results with salol given in the first stages of pneumonia. Carbolic acid and salicylic acid have a direct specific action when brought in contact with the bacillus. Ten grains of salol every two hours in adults, widening the intervals as the symptoms subside, is good practice.

The General Complications and Sequelæ of Measles. By Dr. Adolph Rupp.

Eye Complications of Measles and Their Treatment. By Dr. D. H. Wiesner.

Cerebral Abscess. By Dr. C. E. Ruth.—The author points out that serious consequences could be avoided in many, if not in all, cases of middle-ear disease, if the membrana tympani was removed sufficiently to provide free drainage. The dangerous complications arise from granulation-material filling the tympanum, and plugging the drainage point through the perforation of the tympanic membrane and auditory canal, leading to meningitis, thrombosis of sinuses, and abscess in the cerebrum or cerebellum.

A Report on Experiments Made with Cargile Membrane, for the Purpose of Determining its Value in Preventing the Formation of Peritoneal Adhesions. By Dr. Robert T. Morris.

Medical Notes, May 17, 1902.

Ætiology of Paresis. By Dr. Arthur W. Hurd.—The author believes that, in the present state of our knowledge, it seems justifiable to conclude that: (1) Syphilis is the most common factor in the production of paresis; (2) it may cause it directly—an exciting cause; (3) it may cause it indirectly by bringing about such a devitalization of the system generally as to render other influences operative; (4) it is not usually the sole cause, but there is associated with it the deleterious effect of mental stress and overexcitement, dissipation and alcoholism, and heredity; (5) in a certain relatively small number of cases mental stress, worry or overwork may be the sole ascertainable cause;

(6) traumatism may also be the cause in a still smaller percentage of cases, but in many of them it acts as a developing or ripening agent of an incipient paresis in a syphilitic subject.

The Comparative Frequency of General Paresis. By Dr. Charles G. Wagner.—From the author's survey of the statistics of general paresis it would appear that it forms about eight and three-quarters per cent. of all cases of insanity. It occurs most frequently between the ages of thirty and fifty; it is gradually increasing in frequency at the present time; men are about seven times as liable to the disease as women; it is invariably fatal in its termination, and usually so in less than two years and a half. Furthermore, it is nearly twice as frequent in large cities as in the country, and heredity, syphilitic infection, and alcoholic indulgence are important factors in its production. General cerebral strain, with more or less hereditary influence, is found to have existed in the majority of cases. Overwork, sexual excesses, alcoholism, irregular habits of sleeping and eating, and such accidents as sunstroke and cerebral traumatism, appear to be the great factors in the production of this disease.

The Early Diagnosis of Paresis. By Dr. F. X. Dercum.—The author considers that it is of the utmost importance to study carefully the symptoms of every so-called case of neurasthenia that comes before us. After physical signs have made their appearance, the recognition of the disease is relatively easy; but it is during the initial period that the diagnosis should be made. It can be made by bearing in mind the clear and well-defined symptomatology of chronic fatigue—neurasthenia—on the one hand, and the special symptoms of the mental weakness and degeneration of paresis on the other.

Treatment of Paresis; Its Limitations and Expectations. By Dr. Edward Cowles.—The part played by syphilis in the pathogenesis of general paralysis and tabes dorsalis is essentially that of altering the general immunity; and, according to the author, the treatment should be directed primarily to the correction of the disorder of the alimentary tract. The limitations of pathological anatomy teach us that we must seek in the deeper plane of the chemistry of nutrition explanations of both function and structure and of the changes in them.

Sclerotomy, Anterior and Posterior; When Indicated in Glaucoma; Method of Operating. By Dr. David Webster.

A Danger from the Employment of the Weighted Vaginal Speculum. By Dr. Frederic Griffith.—The author warns against the use of the weighted speculum for any length of time in a case in which pressure opens the way for the assaults of infection.

Orthopædic Operations for Intractable Cerebrospinal Cord Lesions, with Report of Two Cases. By Dr. Homer Gibney.

The Journal of the American Medical Association, May 17, 1902.

The Evolutionary Aspect of Infectious Diseases, with Especial Reference to the Local

Venereal Diseases. By Dr. G. Frank Lydston.—The author's view of infection has, as its basis, the belief that infectious diseases may arise spontaneously. He does not uphold the theory of spontaneous generation of germs, however, but the spontaneous generation of new and virulent properties in hitherto innocuous germs, and a natural variation of type and pathogenic effect of germs supposed to be invariably specific. [*To be continued.*]

A Preliminary Report on the Transmission of Pathogenic Germs by the Common House Fly. By Dr. Jacolyn Manning.—The author records an interesting series of experiments. He calls attention to the fact that the house-fly has, in the specialized structure of each terminal tarsus, a well-adapted brush for the transmission of adhering germs. In experimenting it was found that every footprint of an infected fly on a sterile culture medium was followed by a discrete colony of the germ; thirty to forty distinct colonies sometimes appearing after one journey of the fly across the surface of the culture medium. During the experimentation, forty-four culture tubes have been subjected to fly infection; of this number forty-one tubes showed colonization at the end of forty-eight hours, three tubes remaining apparently sterile. The following germs have been transmitted by fly infection, isolated, and pure culture obtained: *Bacillus pyocyaneus*, *Staphylococcus pyogenes aureus*, *Bacillus typhi abdominalis*, *Bacillus coli communis*, *Bacillus prodigiosus*, *Sarcina aurantia*, *Sarcina alba*, moulds, and fungi.

The Fixation of a Movable Liver and Report of a Case of Hepatopexy. By Dr. J. H. Carstens.—The author's case is interesting because of its rarity, but, by being on the lookout for it, a good many more cases than we suspect would be found, especially in these chronic abdominal troubles with no marked symptoms. The case is also interesting in that it illustrates the fact that operative procedure offers a radical method of cure.

Some Acute Diseases of the Ear; Their Diagnosis and Treatment. By Dr. Philip Hammond.—The author deems it fortunate for our patients that we are to-day enabled to detect the presence of extension to the mastoid at a very early stage. Every patient who has an acute suppuration of the middle ear should be carefully examined for evidences of mastoid involvement, as symptoms may appear as early as the second day. Absence of temperature is no guide whatever; tenderness over the mastoid antrum is apt to be a better guide; the presence of an increased swelling of the drum and posterior canal wall is diagnostic of mastoid trouble, and it should not be allowed to persist long without operation. If the pain and tenderness of the mastoid persist for more than twenty-four hours after free paracentesis and the use of cold, it is advisable to consult a specialist at once as to operative procedure. Practically the only notice we have of pus penetration inward to the lateral sinus or brain, is a sharp chill, ushering in a condition of septicæmia. It may then be too late to intervene. The mastoid operation in competent hands is devoid of danger.

An Improved Method of Examining the Female Bladder. By Dr. J. Clarence Webster.

The Differential Diagnosis of Typhoid Fever. By Dr. Willson O. Bridges.—If the diazo-urinary test and the Widal blood reaction and splenic enlargement and a search about the abdomen and chest for rose spots, were more carefully inquired into in the continued fever of early life, the author believes, we should find more typhoid cases.

Grave Abdominal Injuries without External Evidences of Traumatism. By Dr. R. Harvey Reed.—The author believes that it is the surgeon's duty to make an exploratory incision in all cases where there is grave doubt as to the real nature of the injury, and particularly so when the constitutional symptoms point to a condition more serious than is indicated by either the subjective or objective symptoms, provided the physical condition of the patient is such as to warrant an operative procedure.

Unprecedented Case of Constipation. By Dr. D. Geib, and Dr. J. D. Jones.

American Medicine, May 17, 1902.

The Future of Obstetrics as a Specialty in America. By Dr. Barton Cooke Hirst.—The author points out that in the hospitals of Boston, New York, and Philadelphia, the trained nurses are receiving thorough instruction in obstetrical diagnosis, and in the management of a normal labor case. He suggests that it would be a most desirable development of the near future if the average labor case could be entrusted to a highly trained, well-informed, skilful, and experienced nurse, the physician being called in to repair the injuries of childbirth, to deal with any complication or abnormality that might arise, to make, perhaps, the daily routine visits, and above all to make the final careful examination at the end of the puerperal convalescence. By this plan the specialist, and the general physician too, could undertake the supervision of an almost unlimited number of cases.

Acquired Incomplete and Complete Prolapse of the Uterus and Vagina in Nulliparous Women. By Dr. Henry D. Beye.—The author concludes from a study of the cases of prolapse of the uterus in nulliparæ thus far reported, that its subjective ætiology is chiefly dependent, first, upon poor health, physical weakness, and general tissue relaxation; and, secondly, frequently upon want of development of the uterus and its supports. The exciting causes are the diseases, laborious occupations, and great physical effort, that actively increase the intra-abdominal pressure. The cure depends upon the general health of the patient, and upon the performance of such plastic and abdominal operations as shall positively restore the equilibrium of the uterus and fix the prolapsed structures in natural position.

A Case of Fracture of the Neck of the Femur in a Man Seventy-Six Years Old, Treated with the Thomas Hip-Splint. Perfect Recovery in Ten Weeks. By Dr. John Lincoln Porter.—The author believes that excessive manipulation of an injured leg, in an attempt to diagnosticate between intra-capsular and extra-capsular fracture, is detrimental. When impaction of the fragments exists, the two pathognomonic signs of fracture—crepitus

and false point of motion—will be lacking—and the fact that they are not found with slight and gentle motion is the very best argument against making further attempt to elicit them. In the absence of marked displacement and shortening, the sooner the joint is put at rest and perfectly immobilized the better will be the chances of recovery.

Goitre: Medical and Surgical Treatment. By Dr. Thomas P. Scully.—The author's results with thyroid extracts have not been satisfactory. He believes that electricity is without doubt a valuable adjunct to the physician in treating small parenchymatous goitres. The surgical procedures employed at the present time are ligature of the thyroid arteries, exothyreopexy, division or resection of the thyroid isthmus, partial excision, enucleation and its modifications, resection, extirpation, and complete excision. It is far safer for the patient and more convenient for the surgeon to use local anaesthesia. Surgery offers far more encouragement for the relief from this deformity than does medicine: the benefit is certainly accomplished in far shorter time and with less pain and discomfort.

The Sodium Tungstate Test for Combined Chlorides. By Dr. A. L. Benedict.—The author suggests that the tungstate be added in the form of a standard solution. He proposes to add to each ten cubic centimetres of stomach-contents one cubic centimetre of a ten-per-cent. solution of sodium tungstate. This test depends upon the fact that proteid chlorides, plus sodium tungstate, yield sodium chloride plus proteid tungstate, both of which are neutral, whereas proteid chloride is acid to phenolphthalein.

Vaccination from the Standpoint of the Surgeon. By Dr. Ernest J. Mellish.

Raynaud's Disease. By Dr. Emil King.—The author presents a typical case of this affection. The pain, however, was far more intense than is usual. This case would seem to assist in proving that Raynaud's disease is by no means confined to the extremities but may affect any organ.

British Medical Journal, May 10, 1902.

Remarks on the Surgical Treatment of Arterio-Venous Aneurysm. By Sir F. Treves, F. R. C. S.—Arterio-venous aneurysms are of comparatively rare occurrence and of recent years their rarity has become more and more marked. But the introduction of the bullet of small calibre into warfare has once more made such aneurysms as familiar as they were in the past, and the war in South Africa has furnished numerous examples. The prognosis is more favorable in the varicose aneurysm than it is in the aneurysmal varix, but in neither variety can the outlook be said to be other than unfavorable. Spontaneous cure in these forms of so-called aneurysm does not appear to occur. The mortality from arterio-venous aneurysms is not nearly so high as is that depending upon those where the artery is alone concerned. Gangrene is quite rare in the arterio-venous form, and rupture is comparatively uncommon; but they lead to great functional trouble and to considerable and increasing local disturbances. This is especially seen where the lower limb is concerned. The muscles waste, the limb re-

mains swollen and painful; it becomes rigid and fixed in a vicious position. Ulcers form, and a condition of solid oedema is not unusual. In some cases the condition is incurable, but, in the majority, operation will bring about recovery. The only operative measure that is to be commended in these cases is ligature of the vessel or vessels at the wounded spot. The ideal procedure is that in which both the affected artery and vein are ligated above and below the point of the abnormal communication, but this cannot always be done.

The four cases of arterio-venous aneurysm described in this paper were all due to bullet wounds. In all, the missile penetrated the part and escaped without injuring the bone, the resultant wound healing by first intention. In the first case, the superficial femoral vessels were involved; in the second, the lesion concerned the popliteal artery at its point of bifurcation; in the third, the bifurcation of the common femoral was the part injured; and in the fourth, a branch of the external carotid artery had been damaged. In all the cases operation brought about a cure.

Splenic Leucæmia and Phthisis Combined in the Same Patient. By Dr. G. Parker.—The author reports the case of a man, aged thirty-four years, who had suffered for seven years from phthisis. In 1899, he struck his left side against the corner of a table, after which he complained of pain in the splenic region. A mass was detected there which exploratory operation proved to be the spleen. Examination of the blood at that time showed it to be normal, but one year later the leucocytes were found to be increased to 238,000 per cubic millimetre, and the blood presented a typical picture of splenomyelogenous leucæmia. The patient did well on sodium cacodylate for about a year, when his condition began to fail, cardiac symptoms appeared, and he died in a few days.

Close as the connection is between lymphadenoma or pseudoleucæmia and pulmonary tuberculosis, the combination of true leucæmia with phthisis is exceedingly rare, and, though a few instances have been met with where the lymphatic form was present in this combination, no case of pure splenomyelogenous leucæmia had till recently been recorded in which phthisis also existed.

The Blood in Cases Affected with Filariasis and Bilharzia Hæmatobia. By Dr. A. C. Coles.—The author found a marked increase in the number of the eosinophile leucocytes in the blood of a patient suffering from filariasis; on two occasions, the eosinophiles constituted fifteen and seventeen per cent, respectively, of all the leucocytes, their normal proportion being about two per cent. In a patient affected with *Bilharzia hæmatobia*, the eosinophiles were increased to twenty per cent.

Case of "Infective Endocarditis" Treated with Antistreptococcus Serum. By H. M. Cooper, M. B., and C. Ogle, M. B.—The authors report the case of a man, aged twenty-six years, suffering from infective endocarditis. Streptococci were found in the blood and furnished a clear indication for treatment. Ten cubic centimetres of antistreptococcus serum were injected beneath the skin of the abdomen every other day, the total amount used

being 110 cubic centimetres in twenty-seven days. The patient did well for a time, but died quite suddenly after an illness of two months. The serum undoubtedly did good and, could the treatment have been begun in the earlier stages of the disease, a good result might have been obtained.

Case of Fatal Anæmia Presenting Some Unusual Blood Changes. By O. K. Williamson, M. B., and E. W. Martin, M. B.—The authors report a case of pernicious anæmia occurring in a man, aged forty-three years. The blood picture as regards the red corpuscles was practically that of pernicious anæmia, the diminution in the number of red cells being unusually great, even for this disease. On the other hand, the white corpuscles exhibited typically the condition found in lymphatic leucæmia, their number being about four or five times the normal, and consisting of over 99 per cent. of lymphocytes, instead of the normal number of about 30 per cent. The absence of any notable enlargement of the lymphatic glands was interesting.

Spontaneous Gangrene of Both Lower Limbs in a Man Aged Thirty Six. By W. Mitchell, M. B.

On the Treatment of Hæmophilia with Calcium Chloride. By C. E. Wallis, M. R. C. S.—The author reports the case of a hæmophilic in which it became necessary to extract several teeth. As removal of a tooth two months previously had caused alarming hæmorrhage, calcium chloride (gr. xv, t. i. d.) was given for a week or ten days, when all the teeth were removed with very little bleeding.

Notes of Cases Illustrating the Use of Adrenalin Chloride in Ophthalmic, Nasal, and Aural Surgery. By A. S. Green, M. B.

Lancet, May 10, 1902.

The Seed and the Soil. By Dr. W. H. Dickinson.—To originate tubercle the seed in the shape of the bacillus is essential, but in one person the bacillus falls on barren ground, in another it yields fruit a hundred fold. The determining influence in ordinary life is in the individual, not in the germ or its distribution. In common social conditions the seed is sown broadcast, and the vital question is, not where it will be deposited, but where it will grow. As predisposing causes of tubercle—influences which fit the soil for the seed—heredity may be placed first. Next, as a distinct and recognizable antecedent, at least of pulmonary tubercle, comes local inflammation. Then comes alcoholism. Next come circumstances which lower the vitality—want of food, frequent childbearing, over lactation, overwork, mental distress, and anxiety. Next may be mentioned conditions which are not less surely provocative of tuberculosis because their mode of action is indefinite or complicated. Chief among these are overcrowding and defective ventilation. A cause of phthisis which is accepted generally, but not universally, is living on damp earth. Some of these causes of disease act obviously upon the soil, so to call the human body proper; by impairing nutrition they increase the fitness of the tissues to entertain the bacillus; while

overcrowding and want of ventilation are attended also by increase of the seed owing to over-production and deficient removal.

Embalming the Dead. By Dr. J. G. Garson.—In temperate climates the best period to select for the process of embalming is about twenty-four hours after death, when, as a rule, rigor mortis has nearly passed off and the tissues have become relaxed but no marked signs of putrefaction have begun to show themselves. The presence of putrefactive changes is not, however, any bar to the operation, by which, not only will the further progress of these changes be at once stopped, but the parts which have become affected will be greatly improved, if not restored to their natural appearance. The artery usually selected for the purpose of injection is the femoral, in Scarpa's triangle, but the author prefers the abdominal aorta just below the umbilicus. At this spot it is easily reached by a median incision about seven or eight centimetres long through the anterior abdominal wall, from which, in the normally collapsed state of the parts after death, it is separated by only a short interval. In order to get the best results, it is important to inject the preservative fluid with as low and as continuous a pressure as possible. The continuous and regular pressure required is best obtained, either by compression of the air above the surface of the preservative fluid placed in a closed receptacle connected at its base by a tube with the artery through which it is to be introduced into the body, or by utilizing the force generated by the fluid itself in flowing from the receptacle placed at a higher level to the artery situated at a lower level. A good preservative solution for the blood-vessels should consist essentially of bichloride of mercury or some similarly acting salt and methylated spirit, and this may also be used for external application and for injection into the cavities and hollow viscera. The formula for the injection fluid for an adult male is as follows: Bichloride of mercury, from one and a half to two ounces (from forty two to fifty seven grammes); glycerin, from ten to eighty ounces (from 0.25 of a litre to 2.25 litres); and methylated spirit to two gallons (nine litres). Chloride of zinc has long been used for purposes of embalming and is an excellent preservative, but a much larger quantity of it is required than of corrosive sublimate. The most frequent complication that occurs in the course of an ordinary injection operation, is the rupture of an artery. It generally takes place in the thorax or abdomen, and is usually the result of disease of the vessel or organ in which it occurs. In such cases the ruptured vessel must be secured by ligature. Rupture of a vessel inside the skull is of little consequence, it being a closed box. The most troublesome cases to deal with are those in which general anasarca is present. When death has resulted from the bursting of an aneurysm in the thoracic or abdominal cavity, the injection should be performed from the ruptured vessel, which has to be exposed for the purpose.

The Quiescent or Latent Period in the Course of Grave Abdominal Inflammation. By A. H. Tubby, F. R. C. S.—The quiescent or latent period is from time to time a feature in the following group

of cases: 1. Injury to the intestines, with or without rupture. 2. Perforation of the intestines by ulceration. 3. Injury to, and bruising of, the peritoneal connections of the viscera, with interference with their blood-supply. 4. Acute diseases of the genital organs, especially of the Fallopian tubes. 5. Acute appendicular inflammation, either ulcerative, perforating, or gangrenous. This last disease affords by far the greater number of examples of apparent improvement.

The following symptoms, even in obscure cases, are of great moment: 1. The most important information is gathered from repeated records of the pulse and temperature. 2. Of all the physical signs, a transient or a persistent rigidity and the absence of other symptoms are the most valuable, and they become convincing when signs of abdominal peristalsis are absent. 3. Distention that persists for longer than from twenty-four to thirty-six hours and is unrelieved by turpentine enemata, is of grave moment. 4. As a rule, vomiting is absent during the quiescent period; if it recurs in spite of careful feeding and nursing, and more especially if it does not yield to sedatives, the symptom is a serious one. 5. The presence or absence of leucocytosis often furnishes valuable information as to the existence of a quiescent inflammatory condition of the abdomen. 6. The detection of either a pleuritic rub or the presence of fluid in either of the pleural cavities may serve as an indication that mischief is still going on in the abdominal cavity, and that exploratory operation is called for.

Some of the Surgical Aspects of Glycosuria and Diabetes. By L. C. P. Phillips, F. R. C. S. (*A continued article.*)

Case of Poisoning by Morphia Injection Treated by Infusion of Salt Solution. By Dr. E. F. Willoughby.—The author reports the case of a woman who had taken eight grains of morphia sulphate in three hypodermic injections in rapid succession. Hypodermic injections of atropine, strychnine, and ether were given, but to no purpose. Saline subcutaneous infusion was then carried out, with marked and immediate beneficial results. This was owing to the impulse given by the increased intravascular tension to the gastric and intestinal exudation, and consequently to the elimination of the morphia, which ordinarily is excreted mainly in the bowel and little, if at all, by the kidneys.

An Interesting Phenomenon Occurring In Tachycardia. By H. D. Everington, M. B.—The author reports the case of a woman, aged thirty-six years, suffering from severe tachycardia (pulse 224 to the minute), in which, when the patient took a few deep inspirations, the pulse-rate dropped to 124 per minute, a fall of 100 beats. Broadbent and others have called attention to a similar phenomenon in other persons suffering from tachycardia.

Gazette hebdomadaire de médecine et de chirurgie, March 30, 1902.

Acute Hydrocephalus Following Gastro-Enteritis.—M. P. Morklen and M. A. Devaux record the case of the child, aged two years, of a degenerate mother and a tuberculous father, who was born with many stigmata of degeneration,

physical and mental. After a severe attack of acute gastro-enteritis, an acute hydrocephalus appeared. A lumbar puncture was performed, the hydrocephalus vanished, and the mental faculties improved. The authors lay stress in this instance upon this therapeutic use of lumbar puncture. They were unable, by an examination of the fluid removed, to ascertain the cause of the hydrocephalus. A lymphocytosis only could be demonstrated.

Sudden Luxations of the Hip at the Beginning of Coxalgia.—By M. Jouon.

Centralblatt für Gynäkologie, April 19, 1902.

Urobilinuria in Pregnancy.—Dr. C. Merletti finds, from numerous examinations, that it is quite the rule, during the last three months of pregnancy, to discover spectroscopically two or three times the quantity of bilin that is found in healthy, non-pregnant women. The patients may themselves bear every evidence of good health. Merletti has found, also, that as the bilin increased, intra-uterine death of the foetus could be observed more frequently, and he suggests this as one of the causes of foetal death during the terminal months of pregnancy.

Birth in a Woman with Advanced Tabes Dorsalis.—Dr. Richard Cohn reports such a case, in which the labor was absolutely painless and the midwife was unaware that it was taking place until the head appeared at the perinæum. [Another, or possibly the same, case is reported in fuller detail in our issue for April 5th, page 615.]

Centralblatt für Chirurgie, April 19, 1902.

Manual Reposition of Dislocations without Narcosis.—Dr. F. Roloff describes his method as follows: The patient is laid upon the floor, and the surgeon steps to the injured side. The luxated arm is gently seized and extension is slowly practiced. This is gradually increased in its area, but is always gently done, and abduction is gradually added to the procedure. When abduction is complete, the head of the humerus will be found in the glenoid cavity, as a rule. The arm is then slowly placed at the side, and the dislocation is replaced. Pain is absent during the manipulation. The author advises as little interference with the muscles as possible. The procedure takes from seven to thirteen minutes.

Centralblatt für Innere Medizin, April 10, 1902.

Preservation of Specimens for Clinical Microscopy.—Professor Gumprecht says that hardened sediments precipitate better in the centrifuge than fresh ones; alcohol hastens the deposit. In centrifugating, excess of fat should be removed. This can be done in a few moments by turning the centrifuge a few times, when the fat will appear on the surface and can be decanted. For a fixation fluid, Gumprecht employs a one-per-cent. or two-per-cent. solution of formaldehyde. Stomach contents can be preserved indefinitely by pouring over them a similar solution of formol. Stools are well preserved by alcohol without any preliminary preparation. Leucæmic blood may be kept by first washing with a saline solution, then with concentrated sublimate solution, and then kept in formalin. Casts

in urine, as well as epithelium, are to be centrifugated, the excess of urine decanted, and preserved in formalin. Urea and oxalate of lime crystals can not be well kept. The sediment of alkaline urine may be well preserved, after centrifugating, by the addition of chloroform.

Wiener klinische Rundschau, April 6, 1902.

Traumatic Scarlatina.—Dr. Theodor Lippmann reports the case of a boy aged eight years and a half, who at two years and a half and at five years and a half had had attacks of scarlatina. While playing with other boys, he received a sharp blow upon the ear. Twenty-four hours later, he developed an angina with high fever, which was followed by a typical eruption, and later by a desquamation, lasting the usual length of time. There were no other cases in the school which he attended. The author believes that a focus of the disease existed in the left tonsil which, after the previous attacks, had always remained very large. (*To be continued.*)

Bilirubin Calculus in an Echinococcus Cyst.—By Dr. Arthur Krausz.

Black Water Fever and Quinine.—Dr. P. Reinhard says that when black water fever seems to be induced by the use of quinine, quinine must be interdicted in the treatment, even when a recurrence of malaria appears, or even in the presence of the plasmodium in the blood.

Münchener medicinische Wochenschrift,

March 25, 1902.

Differences between Maternal and Fœtal Blood Serum.—Dr. Josef Halban and Dr. Karl Landsteiner, conclude, as a result of their investigations, that the maternal and fœtal sera have quite different reactions, the former having a greater power of dissolving red blood cells than the latter, as well as being more active in its agglutinating influence on red blood cells. The maternal serum is also stronger in its bactericidal influence, as on cholera vibrios, it is a stronger antitoxic and anti-fermentative agent. In general, it may be said, that chemically, as well as physically, the new-born infant is not perfectly developed, and that, while the antitoxic elements are present in fœtal blood, they are not in the same strength and abundance as in that of the adult. The result is that newborn children have less resistance to infection, and the authors suggest a further study along these lines to determine at what age and in what manner the change in the properties of the serum takes place.

Section of the Kidney for Acute Pyelonephritis with Miliary Abscesses.—Dr. Wilms reports such a case followed by recovery. The infecting agent was the *Bacillus coli communis*.

On Diabetes of Suprarenal Origin.—Dr. L. Metzger reports, as the result of experiments, that the injection of suprarenal extract into dogs produces a hyperglycæmia. This shows that the toxic element acts upon the liver or pancreas and not upon the kidneys. The experiments point to further lines of study as to metabolism.

Intra-ocular Galvanocaustics.—By Dr. Alfred Roscher.

Relation of Homœopathy to Modern Medicine.—By Dr. Kunkel.

Riforma medica, April 1, 1902.

Splenectomy and Talma's Operation in a Case of Banti's Disease. By Dr. I. Tansini.—Banti's disease, splenomegaly with cirrhosis of the liver, has been heretofore considered incurable. The author reports a case in which he used two surgical procedures for the relief of the symptoms of the disease, and suggests that the morbid process may be arrested by these means. Splenectomy and Talma's operation of anastomosis between the ommental veins and the veins of the anterior abdominal wall were the two operations performed in this case. The patient was a woman, aged twenty-four years, who presented enlargement of the spleen with cirrhosis of the liver accompanied by ascites and cachexia. The ascites became so marked as to render life unbearable and an operation was decided on, inasmuch as paracentesis proved of no avail. According to the author, in these cases the spleen elaborates a poison which causes the development of the hepatic lesions. The removed spleen weighed in the neighborhood of 1,300 grammes, and on microscopic examination showed a thickened capsule, an increased amount of connective tissue, and a sclerosis of the Malpighian corpuscles. The patient recovered, and the ascites did not return, even in small amounts.

April 2, 1902.

A Contribution to the Study of Surgical Procedures for the Deviation of the Portal Blood. By Dr. Gabriele Doglioni.—The author reports the case of a man, aged forty-seven years, in whom a Talma's operation was performed for the relief of the ascites of an alcoholic hepatic cirrhosis. After the operation all went well for a few days, but then the patient became jaundiced and delirious, and his urine gradually diminished in quantity, until he became comatose and died. According to the author, therefore, the operation only hastened the advance of the disease. A remarkable feature of this case lay in the fact that, while in life the urine never showed any evidences of renal disease, the autopsy showed that the kidneys were the seat of interstitial changes. As regards the technics of the operation, the author states that he prefers the modification of Poggi. In most cases in which, a few days after this operation, there is a flow of fluid from the wound, an infection probably takes place in spite of the elaborate precautions employed by the surgeon.

April 3, 1902.

The Histology of the Fallopian Tubes in Uterine Gestation. By Dr. P. Fiori.—The author studies the question whether the Fallopian tubes participate in the changes that take place in the uterus during the process of gestation, and concludes that the rôle of the tubes in pregnancy is not a very important one. There is, indeed an increase in the vascularity of the tubes, just as in every other part of the genital apparatus during pregnancy, but

there is no elongation and no hypertrophy of the walls of the tubes, such as might be expected. The portion adjacent to the uterus, namely the isthmus and the uterine portion of the tube, are exceptions to this rule, however, for a thickening of the wall is present in these portions. The author, therefore, does not agree with Grusdiew, who states that the entire length of the Fallopian tube is in a state of hypertrophy during pregnancy. Nor does he confirm the observation of Janot, to the effect that the cilia disappear from the tubular epithelium in gestation. The different findings may, however, depend upon differences in technics.

April 4 and 5, 1902.

On the Value of Intravenous Injections of Mercuric Bichloride. By Dr. A. Serafini.—Experimental researches on the antiseptic value of intravenous injections of corrosive sublimate have led the author to conclude that the antiseptic action of corrosive sublimate, when injected intravenously at the same time as cultures of anthrax or cholera, begins when the drug is introduced in a proportion of 1 part to 360,000 of the body weight, or of one part to 30,000 of the blood weight. Therefore, it does not seem possible that these intravenous injections will save life whenever pathogenic bacteria of any kind circulate in the blood, as has been asserted. The author does not believe, therefore, that the introduction of solutions of corrosive sublimate intravenously can be considered as a therapeutic agent indicated in infectious diseases, except in syphilis, where mercury exercises, so far as we know, a specific, not a bactericidal action.

Roussky Vrach, April 6, 1902.

On the Treatment of Locomotor Ataxia. By L. O. Darschkevitch. (*To be continued.*)

Resection of the Knee without Shortening the Extremity. By Dr. V. M. Zykoff.—Having tested, in 1900, the results of osteoplasty for the repair of a gap in the middle portion of the lower jaw, the author conceived the idea of applying a similar principle to the knee in resections for tuberculous arthritis. Accordingly, he performed the following operation in a girl aged eighteen years. Textor's incision was made, the patella removed, the periosteum reflected, the crucial ligaments and adhesions severed, and the ends of the bones resected. With a circular saw trephine he then excised a piece of bone shaped like half a ring, about 4 centimetres wide and $2\frac{1}{2}$ centimetres in height, from the anterior portion of the end of the femur. This ring was then placed between the resected ends of the bones, a little behind their anterior surfaces. The periosteum of the end of the femur and of the opposite end of the tibia was then brought into contact over this ring, and the skin was sutured into place. A plaster-of-Paris bandage was applied over the joint. The operation lasted about an hour. The after treatment included extension, massage, and baths. The patient began to walk after three months. When seen a year later she showed a shortening of only $1\frac{1}{2}$ centimetre, namely so much as could exist without interfering with free walking.

On Penetrating Punctured and Incised wounds of the Abdomen. By Dr. B. K. Finkelstein. (*A continued article.*)

On the Pathological Changes Observed in Lupus Vulgaris under the Influence of Phototherapy after Finsen's Method. By Dr. M. S. Pilnoff.—Observations on the changes found in the lupus granuloma under the Finsen treatment show that the skin becomes hyperæmic to such an extent that hæmorrhages are found in the tissues exposed to the rays, that the lymphatics and blood-vessels of the region become markedly dilated, and that the skin proper and the lupus nodules become infiltrated with serum, and that the cells composing the nodules become separated by the exudate. The skin and the lupus nodules are infiltrated with leucocytes, which penetrate into the giant-cells and the epithelioid cells of the growth, rarefying the protoplasm around them, creating chromatolysis and vacuolization in the nuclei of the lupus cells. Gradually the cells of the growth become vacuolated, degenerate, undergo coagulation necrosis, become replaced by cavities containing leucocytes, cavities in the mucous layers, etc. These changes appear with different degrees of intensity, depending upon the duration of time since the application of the treatment, the maximum of the changes described taking place in thirty-six hours after the *séance*. The author concludes that the invasion of leucocytes into the lupus nodules is a powerful factor in the mechanism of the Finsen light treatment.

On the question of Involvement of the Ovaries in Epidemic Parotiditis in Girls. By Dr. I. V. Troitzky.—Localization of the disease in the ovaries is much more frequent than is usually assumed. The ovaries are less frequently affected, according to most authors, than the testes, but this is due to the fact that the disturbances in girls are comparatively slight, and that, owing to the anatomical conditions, it is very difficult to make a diagnosis of ovarian inflammation in children. There is no doubt, however, that local ovarian pain, tenderness, and swelling do occur in parotiditis in girls, in a considerable proportion of cases. The cases cited here show unmistakably the intimate connection between the ovaries and the parotids in this infectious disease. The pathology of the ovaritis that occurs in this disease has not been studied with definite results, but it is probably a parenchymatous inflammation, such as occurs in other organs in infectious conditions, and possibly there is also some peri-ovaritis. It is possible that atrophy of the ovary may occur as a consequence, as a similar process occurs in the testes under the same circumstances. As a rule, the ovaritis of mumps is observed in girls who have passed the age of ten years, but it may be present in younger girls. It is important in every case of mumps in growing girls to inquire into the state of the genital organs. If local counterirritants, such as applications of iodine, cold compresses, or even vesicatories, are not necessary, the girls should be at least kept in bed with bandaged abdomens for several days, and the state of the bowels should be carefully looked after. If such care is given to these cases, we can, in the majority of instances, be assured that more serious pathological changes will not take place in the ovaries.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

XIV.—How do you treat chronic ulcers of the leg? (Answers due not later than July 10, 1902.)

XV.—How do you treat rhus poisoning? (Answers due not later than August 11, 1902.)

XVI.—What is the best non-operative treatment of dysmenorrhœa? (Answers due not later than September 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. David E. Wheeler, of Buffalo, whose paper appears below.

PRIZE QUESTION NO. XII.

THE TREATMENT OF A PERSON WHO HAS SWALLOWED A POISONOUS DOSE OF CARBOLIC ACID.

By DAVID E. WHEELER, M. D.,
BUFFALO.

The points to be considered in treating a case of carbolic-acid poisoning are: 1. Removal of the poison. 2. The administration of chemical antidotes. 3. Stimulation. 4. Treatment of complications and sequelæ.

1. *Removal of the Poison.*—On being called to a case of carbolic-acid poisoning, the physician's first duty, after making the diagnosis, is to introduce a stomach-tube and wash out the stomach. Owing to spasm of the œsophagus, reversed peristalsis, and half-conscious resistance on the part of the patient, this is likely to prove difficult and should be done methodically and without undue haste. The clothing of the patient should first be loosened and the neck and chest exposed. The stomach-tube should then be passed, preferably through the nose. This gives room in the mouth for the left hand, which, passed deep into the pharynx, guides with the fore and middle fingers the tip of the tube back from the glottis into the œsophagus. Moreover, if the tube is passed by the mouth, the patient is liable at any

time during lavage to free the mouth from the mouth-gag and stop siphonage by biting the tube. Several inches more of the tube must be passed in lavage *via* the nose than in lavage *via* the mouth. Before pouring any liquid into the stomach-tube, the physician should always listen, with his ear to the funnel, for respiratory sounds. If these are heard, the tube is in the trachea and must be withdrawn and passed again. This is a point which needs particular emphasis. Washing out the lungs instead of the stomach is an accident by no means so infrequent in carbolic-acid poisoning as is commonly supposed. Such cases are not likely to be published, and their frequency is easily underestimated.

When the tube is in the stomach, siphonage should be tested with plain warm water. As soon as it is assured that the stomach-tube is working properly, the stomach should be washed with 35% alcohol. As much dilute alcohol is poured into the stomach as will run in easily, and it is then immediately emptied. This must be repeated until the washings return clear and have no smell of carbolic acid, and then once more to make certain that none of the poison remains in the stomach. About three quarts of dilute alcohol will usually be required. The alcohol should then be washed from the stomach with water. There are two great advantages gained by using alcohol instead of water in washing out the stomach. First, carbolic acid is rapidly and completely soluble in alcohol, slowly and incompletely in water. When water is used, it is almost impossible entirely to remove concentrated solutions of carbolic acid from the stomach. Second, alcoholic solutions of carbolic acid are less toxic than watery solutions, and alcohol immediately stops the local escharotic action of carbolic acid, as is seen in the prevention of carbolic burns of the skin by alcohol. The danger of increased absorption from increased solubility is obviated by introducing alcohol into the stomach only after the physician has ascertained that he can immediately empty the stomach, and by rinsing out the stomach with water as soon as the carbolic acid is wholly removed.

As soon as the more urgent indications have been met, the patient should be catheterized, not only to remove the urine laden with phenol derivatives, but also to keep watch for commencing suppression of urine. An empty bladder does not, however, necessarily mean suppression, as the urine may be involuntarily passed.

2. *The administration of chemical antidotes.*—Just before removing the stomach-tube, two ounces of any one of the soluble sulphates, dissolved in about four ounces of water, should be poured into the stomach and allowed to remain there. It is possible that these salts pass into the blood and unite

with the carbolic acid there to form sulphocarbolates. At all events they supply sulphates to the system depleted of these salts by the poison and also act as a hydrogogue cathartic.

3. *Stimulation*.—The indications for stimulation are twofold—first, the shock of an irritant acting on the mucous membrane of the alimentary canal; second, the direct depressant action of carbolic acid on the centres of respiration and circulation.

If possible, stimulation should be carried out by an assistant while the stomach is being washed by the physician in charge. The patient should be undressed, wrapped in a hot blanket, and placed in a bed with its foot elevated. Heat should be kept up with hot water bottles. Camphor and strychnine, being the most rapidly diffusible stimulants, should be given first, and these be followed by atropine till its full physiological effect is produced, and also by digitalin and a hot coffee enema. The atropine is especially indicated, as its action on the cardiac, respiratory, heat, and secretory centres is directly opposed to that of carbolic acid. If the patient does not respond to full doses, hypodermically given, of these stimulants, intravenous infusion must be performed. From eight to twenty ounces of normal saline solution, at 110°F., may be run very slowly into a vein, watching the effect on the pulse and stopping the infusion as soon as the pulse becomes full. This may be repeated in a few hours in case the secretion of urine is deficient. If phlebotomy is practised, it should only be done in connection with infusion, and considerably less liquid should be drawn from the veins than is run into them. The infusion apparatus should be working well before the vein is allowed to bleed. The blood in severe cases smells of carbolic acid.

Morphine is a very useful drug in the treatment of carbolic poisoning, lessening shock and giving rest and quiet. It must, however, be very cautiously given, on account of the already existing respiratory depression and the diminished activity of the kidneys. If the acid has been swallowed dilute, as will be shown by the absence of eschars from the mouth, face, and breast, morphine is decidedly not indicated.

4. *Treatment of Complications and Sequelæ*.—The most important of these are:

- a. Suppression of urine.
- b. Œdema of the lungs and pneumonia.
- c. Gastritis.
- d. Carbolic burns of the skin.
- e. Ulceration of the upper portions of the respiratory tract and alimentary canal.
- f. Stenoses of the œsophagus and larynx.

The treatment of these conditions, when fully established, hardly falls within the scope of this paper. They can, however, often be prevented or

mitigated by a good routine after-treatment modified to suit special indications.

For the first twelve hours of the treatment, the patient must be kept warm with hot water bottles, and all through the convalescence should be guarded from exposure to cold. The lungs should be examined at first twice a day, later daily. The temperature, pulse, and respiration should be taken every six hours and a record of them kept, also a record of the amount of urine passed. If the secretion of urine is insufficient, the patient should receive a hot pack, should be dry-cupped over the loins, and should receive an intravenous infusion.

Demulcents should be administered by the mouth as soon as the patient is able to swallow. The diet during convalescence should be liquid, chiefly milk. Twelve hours after the stomach has been washed out, give the patient a second hydragogue cathartic, preferably a sulphate.

For the first day, compound tincture of cinchona is the best dressing to apply to carbolic burns of the skin. After the first day use boric-acid ointment, or some similar preparation.

DO NOT WASTE TIME IN SEEKING FOR AN IDEAL
ANTIDOTE, BUT USE THE BEST THAT IS
AT HAND.

Dr. Rowland Cox, Jr., of New York, says:

In the treatment of a person who has swallowed a poisonous amount of carbolic acid, there are two main indications: 1. To neutralize and remove the acid. 2. To combat collapse. To meet the first indication, a stomach-tube should be passed. Great care must be observed in doing this, for the tissues are softened by the acid, and false passages are easily made. It is of great importance that this be accomplished as early as possible after the ingestion of the acid, both that the acid may be removed before it has time to produce extensive destruction of tissue and for the facility with which the tube may be passed. For it takes but a few minutes for so much swelling and œdema to form that at times the tube cannot be passed at all.

When the tube is in the stomach, this organ should be thoroughly washed out. For this purpose, solutions of the soluble sulphates offer the advantage of neutralizing the acid. However, they are rarely at hand and valuable time must not be wasted in sending for them. Alcohol is an antidote with power, not alone to neutralize the acid, but also in a measure to counteract its effect on tissue. It also is usually to be had at very short notice, especially in the form of whiskey or brandy. It has been my custom to introduce about a pint of whiskey immediately after passing the tube, and after allowing it to remain in the stomach for about a minute, to siphon it out; then to wash the stomach with warm

water, using several gallons or continuing until I felt sure that as much as possible of the acid had been removed, using as a rough test the odor of the washings; then to introduce about two ounces of whiskey and withdraw the tube, leaving the whiskey in the stomach. It is important to have the water for this washing warm. For warm water will dissolve and bring away the acid much more rapidly than cold. It undoubtedly does, by dissolving the acid, render it more easily absorbed, but the power of absorption of a stomach corroded by carbolic acid is almost nil, so that this is not an objection to the use of warm water.

In those cases where it is impossible to introduce a tube into the stomach, the problem of emptying the stomach is much more difficult. The local emetics may be discarded as worthless. They cannot be got into the stomach, on account of the swelling of the œsophagus. This is also true of egg albumen, the soluble sulphates, or other antidotes which might be introduced with the hope of leaving the neutralized acid in the stomach. Moreover, if local emetics did reach the stomach, its mucous membrane would be so destroyed by the acid that the stomach would not respond to them and emesis would not occur. Apomorphine should be tried hypodermically. It will frequently fail, yet sometimes it is productive of very happy results. Fortunately, carbolic acid itself usually produces emesis before it corrodes the stomach. And frequently the major part of what has been injected will be disposed of in this way.

In cases where the acid cannot be removed from the stomach, it has seemed to me that in hospital practice, where it could be accomplished rapidly, a gastrostomy and washing of the stomach by this means might save life, for almost all these patients die under other modes of treatment.

When as much of the poison as possible has been removed by the above-mentioned means, the remainder should be disposed of by flushing the alimentary canal by means of a brisk cathartic. Magnesium sulphate is not only a fairly rapid cathartic, but is also antidotal to the poison. It should be given half an ounce every half hour, until watery motions are produced.

To meet the second indication, the treatment of the collapse, efforts must be directed toward arousing the depressed centres of the medulla and spinal cord and preventing the loss of bodily heat. The vasomotor centre is principally affected, and this secondarily affects the heart, next the respiratory centre, and so on, through all the centres of the cord. This depression must be combated by stimulants. Strychnine and atropine are the best. A twentieth of a grain of strychnine sulphate and a hundredth of a grain of atropine sulphate should be given hypodermically while the stomach is being emptied,

and the dose may be repeated in a few minutes. The guide to the amount of stimulation is the pulse, and stimulation must be pushed until the pulse becomes slow and full. If the strychnine and atropine do not accomplish this, either may be used hypodermically in half-drachm doses repeated several times. The other diffusible stimulants are better avoided, since they widen the blood paths. Loss of heat is to be prevented by placing the patient in blankets and using hot-water bottles.

If the patient survives, the unconsciousness of the collapse gradually gives way to great restlessness, and this is followed in turn by gradually returning consciousness. With the consciousness comes the pain, from the areas corroded by the acid, which is very severe. The restlessness must be controlled by a quarter of a grain of morphine given hypodermically. This, also, in a measure controls the pain from the corroded areas when consciousness has returned. The drug should be repeated as often as necessary for this purpose.

Food by the mouth must be entirely dispensed with for several days, and rectal feeding resorted to. The usual nutrient enema of milk, egg, and brandy answers every purpose. It should be given every six hours if the rectum will tolerate it. Thirst is excessive and must be allayed by high rectal injections of normal salt solution. This procedure also has a most beneficial effect in flushing the kidneys. These organs should be watched carefully and if the urine becomes scanty, hot packs and other measures indicated in acute nephritis should be instituted.

The local conditions require attention. Burns about the face are usually of small moment. The pain in them may be allayed by using a paste of bicarbonate of sodium and water. The mouth must be kept clean by some mild antiseptic. A saturated solution of boric acid answers the purpose. It may be used as necessity requires. The stomach and œsophagus are perhaps benefited by demulcent drinks, and mucilage of acacia should be allowed almost *ad libitum*. This is certainly very conducive to the patient's comfort, if of no other utility. Lime water answers the same purpose.

When the burns caused by the acid have begun to heal, the rectal alimentation is to be gradually replaced by alimentation by the mouth. The latter should be begun by the use of milk and lime water, and one article added after another until regular diet is again reached.

The treatment of the remote results secondary to the corrosive action of the acid is essentially the treatment of chronic gastritis and stenosis of the œsophagus. These are rather beyond the scope of the question and need not interest us at present.

THE VALUE OF THE SOLUBLE SULPHATES AND, POSSIBLY, OF RHYTHMICAL TRACTION ON THE TONGUE.

Dr. Leo Jacobi, of New York, says:

Taken internally in poisonous quantities, carbolic acid has a local and a general action. Locally, it is an escharotic to the mucous membrane. The systemic toxic effect is characterized by a profound depression of all vital processes. The heart's action is inhibited, the respiratory centres are depressed, the vasomotors are paralyzed, and the bodily temperature is lowered.

The aim of treatment is to remove or neutralize the poison and to counteract its effects. We possess several chemical antidotes to carbolic acid—alcohol, the soluble sulphates, saccharated lime, and the raw white of egg. Alcohol being the most efficient and, perhaps the most ubiquitous, our first step on being called to the patient is to introduce alcohol or any alcoholic liquor into the stomach and thoroughly wash out the organ with the aid of a stomach tube. In the absence of the latter, emesis should be secured by a large dose (a fifth of a grain) of apomorphine, given under the skin. The alcohol not only neutralizes the free acid in the stomach, but also remedies to a certain extent the damage to the mucosa. It cannot, however, reach the poison in the blood and tissues. The soluble sulphates, on the other hand, are able to do this. Therefore, having siphoned out the stomach with alcohol, we administer a solution of Epsom or Glauber's salt, in the hope of overtaking the circulatory poison and converting it into innocuous sulphocarbolates. To protect the cauterized mucosa we give olive oil or some mucilaginous drink such as flaxseed tea, gruel, etc.

This done, our specific treatment is practically at an end. We must now proceed along general lines of therapeutic endeavor, directing our measures toward the maintenance of the circulation and respiration and toward the preservation of bodily heat.

The patient is vigorously rubbed with a brush or rough towel. Artificial warmth is provided in the form of heat reservoirs, such as hot water bags, hot sand-sacks, hot bricks, etc., which are applied to the trunk and the extremities. A very hot saline enema of from a pint to a quart of normal salt solution is thrown high up the bowel, the fluid supplying heat and acting as a powerful stimulant. Warm blankets are wrapped about the patient, in order to imprison the natural and the artificial warmth.

While these procedures are being carried out, stimulants are administered beneath the skin. Of these, atropine, alleged to be a physiological antidote, is the most valuable, owing to its excitant action on the respiratory centres and its tonic influ-

ence on the vasomotor system. One milligramme of the drug is injected, and the dose repeated at intervals of from fifteen to thirty minutes three or four times. Strychnine, digitalin, caffeine, and camphor-ether (oleum camphoratum and ether, equal parts) are also valuable, and by giving them alternately every fifteen minutes or half an hour, continuous stimulation of the vital processes can be maintained. Morphine may be required for the pain.

Equal in importance to these measures, though less popular, is a resource of comparatively recent acquisition. It has been plausibly asserted, that in fatal cases of poisoning with carbolic acid death is often the immediate result of asphyxia, the latter being due in part to cedematous conditions about the larynx, and partly to the falling back of the tongue and the consequent closure of the laryngeal orifice by the epiglottis. Acting on this suggestion we should constantly watch the breathing, and the first evidence of its obstruction should be the signal for the employment of Laborde's method of artificial respiration. The tongue is grasped with the fingers or with a forceps and drawn forward with every inspiration, or the latter failing, about eighteen times a minute. This rhythmical tongue-traction, persisted in for a reasonable length of time, has a life-saving record to recommend it, and should be given a thorough trial.

So much for the immediate treatment. With the mere survival of the patient, however, the day is not yet ours, for, though the crisis be passed, there is a train of formidable sequelæ ahead. These are, briefly, gastro-enteritis, uræmia, pneumonia, fatty degeneration of the viscera, and œsophageal stenosis.

(To be concluded.)

Letters to the Editor.

ROUND LIGAMENT VENTROSUSPENSION OF THE UTERUS.

COLUMBUS, O.,

May 10, 1902.

To the Editor of the New York Medical Journal:

Sir:—My attention has just been called to a letter by Dr. Carl Beck in your issue of January 18th in which he claims priority for my operation of suspension of the uterus by the round ligaments. Dr. Beck and I discussed this matter once before in the *Philadelphia Medical Journal*, in which I showed that the two operations were entirely dissimilar and that his description of his operation appeared in the *American Journal of Obstetrics* months (I think six months) after I had published mine in the same journal. I never saw nor heard of Beck's operation until then. I got my idea of using the round ligaments in this way from Ferguson. Beck's operation and mine are as dissimilar as they well can be. In his first attack on me, which I became cognizant of by

mere accident, he maintained that the two operations were alike in every step and detail, and when I compared them he retracted and said his original operation was like mine. I now challenge him to produce any printed record of an operation similar to mine which antedates the publication of the operation I claim. Beck has his operation; I have mine. If Beck is satisfied with his operation, why should he desire to take the credit of mine?

D. TOD GILLIAM, M. D.

CONCERNING A PRESCRIPTION.

DILLON, MONTANA,

May 8, 1902.

To the Editor of the New York Medical Journal:

Sir.—I note in the article of Dr. Keschner, on page 789, *Journal* for May 3rd, a prescription said to be used by him for pneumonia in children. This would be better if he had directed sodium acetate instead of the bicarbonate, as the former will be what remains after effervescence has ceased or the bottle burst. It is to be remembered that syrupus scillæ U. S. P. is made from vinegar of squill.

M. A. WALKER, M. D.

Miscellany.

Honey in the Treatment of Burns.—The editor of the *Georgia Journal of Medicine and Surgery*, for March, says that in the treatment of burns of any degree honey has proved very successful. It should be pure strained honey—not glucose or cane syrup mixed with a little honey to give it what the Germans call the "Smeck." The burn is covered with it and kept covered. Pain will be alleviated and suppuration prevented. It is not necessary to sterilize the honey, but if there should be any darkness or dirt in the injured area it should be mopped off thoroughly with absorbent cotton. Says the editor: "Honey acts by excluding the air, by its chemical composition, and by its specific gravity preventing germ life."

Pathological Changes in the Fœtus in Cases of Puerperal Eclampsia.—Alfieri (*Ann. di ostet.*, 1901; *Edinburgh Medical Journal*, April, 1902), as a result of his investigations, comes to the following conclusions:—(1) That certain changes are found in the organs of the fœtus, corresponding to those affected in the mother; (2) that those changes are not constant, or characteristic of eclampsia; (3) that the lesions found in the kidneys, suprarenal bodies, and liver may have caused the death of the fœtus, but, on the other hand, they may merely be the expression of a toxic condition, and that other factors may have caused death; (4) that anatomical and pathological researches on the fœtus have so far failed to substantiate the belief in the fœtal origin of eclampsia.

Acquired Deaf Mutism; Rapid Recovery of Hearing and Speech on Removal of Cerumen.—Mayo Collier, (*Medical Press and Circular*, January 15th; *Medical Review*, March), reports the case of a girl, aged nine years, who was sent to hospital because she was apparently deaf and

dumb. The mother stated that early in life she was bright and intelligent, and not unlike her other children, whose hearing and speech were good. At about the age of three years, she appeared to be deaf, and the condition had slowly increased. Simultaneously the power of uttering intelligible sounds diminished until the vocabulary was limited to a few words such as "mammy," "more," and "pese." On being spoken to in a loud voice she answered no questions and uttered no sound, but stared from the questioner to her mother, expressive of inability to understand. No response was elicited when the bells of a repeater watch were suddenly struck close to the ear. The pharynx was normal. The nose was considerably obstructed by two very large lower turbinals. In each ear, in contact with the membrane, was a hard, inspissated mass of cerumen, which was removed. The membranes were retracted and somewhat opaque. Politzer's bag was used, and a wash ordered for the nose.

Afterwards she apparently heard and attempted to converse and make sounds. The bells of the repeater watch, when struck behind her, caused her to move. On showing her a small bronze lion, she uttered the word "dod," and on leaving said, when requested by the mother, "Goo bi." Subsequent improvement in hearing and speech has been remarkable.

Is Abortion Justifiable in the Vomiting of Pregnancy?—Dr. J. A. Wright (*American Medical Compend*, February) in a very interesting and commendable paper read before the Lucas County Medical Society of Ohio, combats the belief that the intractable vomiting of pregnancy is ever a justifiable ground for the procurement of abortion. Dr. Wright says that for the sake of convenience the nausea and vomiting of pregnancy are divided into two classes. In the first, or simple, form it occasions more or less annoyance, distress, and weakness, but is in no way dangerous to life, and it is so very ordinary as to be rightly regarded as one of the normal signs of pregnancy. It varies in severity from the slightest morning sickness to most persistent nausea and repeated vomiting and retching at the taste, odor, and even at the sight, of food. Though essentially intractable, it ordinarily yields eventually to some one of the many expedients, medicinal or remedial, in common use, or gradually dies away with the progress of gestation.

The second class is what may be termed the grave and irrepressible vomiting of pregnancy. It differs from the first simply in degree. All the symptoms of the milder form are greatly intensified and there is an utter inability apparently to retain the slightest nourishment. Great exhaustion supervenes with progressive failure of vital force, until the subject is brought to the lowest ebb of life, and existence seems to be flickering so fitfully as to be at the point of extermination. The danger is, however, more apparent than real. Some little portion of nourishment must, of course, be retained, digested and assimilated in the very midst of active emesis.

The severer form of vomiting which draws

the patient to the very verge of collapse is very rare, and though the simpler form is frequently intractable, severe, exhausting, and even painful, it differs from the other in that it always keeps at a respectable distance from the edge of the grave. The patient is clearly not dying in one case, and is apparently in imminent danger of death in the other; yet the so-called lethal form of vomiting of pregnancy nearly always terminates in recovery. The author then quotes at considerable length from Burns, Desormeaux, Caseaux and Turner, and cites many other excellent authorities to show how little real danger there is in the vomiting of pregnancy—the mistaken idea having arisen from confusion with vomiting during pregnancy, but due to other pathological conditions, e. g., gastric ulcer, carcinoma, etc.—and says that while the rarity of death from vomiting of pregnancy is a well established fact, recognized by all obstetricians, the difference between authorities lies in the fact that some assert that fatal results have never occurred in their extensive experience, while others say they do occur very exceptionally, but all agree that death from vomiting during pregnancy is probably due to intercurrent disease.

This fact gives the medical man the key to the situation in the gravest cases. If he can make a diagnosis by exclusion, and remove all question of complicating conditions, accepting the dictum of writers that the very worst form of vomiting of pregnancy, *per se*, nearly always ends in recovery, he will be encouraged in his remedial efforts, and be in a position to expect with full confidence the happy termination of that which may, for a considerable time, look like the gravest and most dangerous of conditions.

As to treatment, when the nausea is slight and occurs only in the morning, a meal taken in bed, the administration of a mild saline laxative, the use of bismuth, cerium oxalate, sodium bicarbonate, or some other antacid, will often afford relief. When obstinate constipation coexists, minute doses of calomel, in conjunction with the salts of Carlsbad or Vichy, will often prove advantageous by restoring normal peristalsis. When emesis comes on after a full meal, the subject should be advised to eat often and sparingly; when occurring after a particular meal, such as breakfast, we may recommend the entire omission of the meal, the abstinence to be made up by more generous nourishment at other meals, with or after which vomiting does not take place. Cold foods are often retained when warmer ones are rejected. Carbonated waters, ice, champagne, beer, sherry, brandy and various *liqueurs* have, with similar remedies, been praised for their good effects. Opium, belladonna, chloral, cocaine, codeine and hyoscyamus represent the great class of analgetics in appropriate cases. Gentian, quassa, iodine, hydrocyanic acid, salicylic acid, salol, potassium permanganate, with many other drugs, comprise an almost endless catalogue of medicinal agents.

Regulation of diet, rest in bed, hot baths, counter irritation to the epigastrium, the employment of sedative enemata and suppositories, applications to, and dilatations of, the cervix uteri, as

well as the correction of uterine displacements, are each and all well known to possess a special sphere of usefulness.

Is instrumental abortion ever justifiable for the relief of vomiting during gestation? According to most authorities, no. According to some few, yes; but, even with these extremists, only if it is necessary to save the life of the mother. Burns of London, out of many thousands of pregnancies, never saw a fatal termination from nausea and vomiting. Ramsbotham, Caseaux, Tarnier and many others record a similar experience. Case after case is cited by authorities ancient and modern showing that the patient in many instances approaches to a point from which a return to health is seemingly impossible, and yet complete recovery ensues.

If we concede, says Dr. Wright, for the sake of argument, that one out of twenty such cases must terminate fatally, and the estimate is more than liberal, how can we select the subject for instruments of impending death. Moreover, instrumental abortion in these cases is no more of a specific than, nor so much as, many of the medicines and remedies enumerated. Caseaux and Tarnier report four or five successful cases in the practice of English accoucheurs, but suggestively say: "We are not told how often it has been followed by death." And Dr. Wright adds: To say nothing of probable injury to normal health.

The author lays down the following propositions:

1. That the so-called lethal form of vomiting in pregnancy rarely occurs.
2. That death from this exceptional disorder is at least so very unusual that its possibility has been doubted by many high and thoroughly competent authorities.
3. That when death, incidental to vomiting during gestation, does take place, it is much more likely to be due to gastric ulcer, malignant growths, tuberculous peritonitis or other disease, in which severe, intractable and dangerous vomiting is common, and from which death is inevitable, than to follow a condition that nearly always ends in a restoration to health.
4. That the natural termination of all vomiting of pregnancy is in recovery, and that the resources of treatment are practically inexhaustible.
5. That instrumental abortion is more dangerous to the life and health of the mother than the disorder it is designed to relieve, and its performance, excepting as a desperate chance to save her from certain death, is unscientific, unjustifiable and unwarranted.

The author points out that he has wholly refrained from considering the interests of the unborn child and has, by an impartial presentation of facts, endeavored to show, wholly in behalf of the mother, that instrumental abortion for the relief of the nausea and vomiting of pregnancy, is utterly indefensible. But the child certainly has some right to protection. He holds the opinion, in all conscientiousness, that the interests of the child are entirely secondary to those of the mother; but he does not believe, as some profess, that the product of conception is of no more consequence than any unimportant piece of protoplasm.

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Original Communications.

THE SURGICAL TREATMENT OF PROSTATIC HYPERTROPHY.*

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NEW YORK.

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In a paper read before the New York Academy of Medicine, October 31, 1891, entitled *The Enlarged Prostate and Its Operative Relief*, my honored colleague, Dr. E. L. Keyes, propounded three pertinent questions upon that subject, as follows:

1. When is perineal prostatectomy to be preferred to the suprapubic operation?
2. What condition of prostatic or vesical disease, or both, requires radical operation; and should it be done early or late?
3. How much of the prostate should be taken away?

Although more than a decade has elapsed since the publication of this paper, these three questions are before the profession with increasing significance. It is my purpose to discuss them briefly by calling to your attention the writings of the past year pertaining to this subject, and to recount my own experience, in the hope of aiding the decision in at least a percentage of the cases.

During the past ten years much valuable work has been done and numerous important articles have been written in this department of genito-urinary surgery, notably by members of this association.

In discussing this subject I shall refer principally to communications that have appeared during the past year, as they jointly embody the gist of earlier literature in the same line.

If we reduce the above-quoted queries to abstract form, we have the following subdivisions of the subject for consideration in their natural sequence:

- A. When to operate.
- B. Choice of operation.

C. Extent of operation.

A. When to Operate.—Until recent years, surgical interference in prostatic hypertrophy has been regarded as an operation of such high mortality that most surgeons have been cautious to advise and patients more reluctant to accept so hazardous a remedy.

McGill, who, with Belfield, has made an epoch in prostatic surgery, stated in his day that it was the minority of all classes of cases that required operative relief; and even in the past year, Bangs, in a contribution upon the Bottini operation, proclaims that any surgical attack upon the hypertrophied prostate gland is a serious matter, and that he reserves operative measures for such as imperatively require them.

Hayden (1), of New York, and Spencer (2), of Liverpool, have contributed articles upon the conservative treatment of prostatic hypertrophy, giving prominence to the palliative course; but when palliative measures fail—as fail they must in a large proportion of cases—more serious measures become inevitable. Under these circumstances, surgical interference is an act of necessity rather than one of expediency. But when the risk of radical measures is proved to be of slight degree, surgeons must necessarily be inclined to discount the future of catheter life, during which both bladder and kidneys are in danger of infection, and advise early operation.

Old age is not so much an objection to an operation to-day as it was formerly. Improved diagnostic skill, more rapid technique, and new therapeutic agents have aided this advancement. But when to operate is a question that must be decided in connection with the peculiarities of each individual case and the patient's state of mind.

The sole aim of prostatectomy is to remove obstruction of the urinary outlet, and, by such removal, to relieve complete or incomplete retention of urine, inflammation of the bladder, and its attendant symptoms; to avoid the habitual use of the catheter, and to prevent ascending infection; or, if this has already occurred, to drain the kidneys. Generally speaking, it may be stated that when palliative measures fail to relieve active bladder symptoms, when the catheter is not well tolerated, or the patient cannot be relied upon in

* Read before the American Association of Genito urinary Surgeons at the sixteenth annual meeting, held in Atlantic City, N. J., April 29 and 30, 1902.

its proper use, an operation is warranted; that delay should not be permitted when there is evidence of ascending urinary infection, and that kidney inflammation is not a contra-indication to an operation, but an additional reason why one should be resorted to.

B. Choice of Operation.—One cannot present to a patient the advisability of an operation at an early date to forestall trouble—or at a later stage to relieve persistent symptoms—without weighing at the same time the choice of the operation to be performed. In this case, the nature of the prostatic growth, the mortality, and the extent of relief to be expected from the operation of choice are important considerations.

At the time of the writing of Dr. Keyes's paper, the suprapubic operation had more adherents than the perineal. But, at the present day, it seems as though, in the lapse of time, the pendulum of surgical preference had swung over in favor of the latter operation. Judging from the literature of the past year, however, this opinion is not entirely concurred in. It is surprising—but none the less true—that, should a patient suffering from symptoms of prostatic enlargement visit New York with a view to an operation, he might call upon three or four representative urinary surgeons and be advised a different operation by each one. The operations referred to—suprapubic prostatectomy, perineal prostatectomy, the Bottini operation, and perineal galvanoprostatectomy—are radically different in technique.

The good work of some operators and the excellent results attained in certain cases after the suprapubic operation cannot be overlooked. That there are cases of prostatic enlargement which are best handled by this route needs no additional testimony. Fuller (3) is a strong advocate of the suprapubic operation, and performs the perineal operation exceptionally.

Lilienthal (4) is an almost uncompromising advocate of suprapubic prostatectomy. He states that, "as a general rule, with few exceptions, the first step in the operative cure of any form of prostatic obstruction should be a suprapubic cystotomy, even if it should later become evident that the disease itself must be attacked from another quarter."

Wishard (5) says of the suprapubic operation that we have by this method a more satisfactory surgical procedure than any other yet devised, and states that "if the suprapubic operation has been thoroughly done and the obstruction all removed, the patients afterward are assured of more perfect bladder function than by any other method."

Buckstone Browne (6) favors the suprapubic

operation, where an operation is necessary, and believes that no attempt should be made by the perinæum.

P. J. Freyer (7) regards the suprapubic operation as the most valuable of the radical methods for the removal of prostatic growths, "most commonly applicable, most easily accomplished, and most thorough in its results."

Orville Horwitz (8) considers the suprapubic the safest method by which to perform prostatectomy, especially if combined with perineal drainage.

That very large growths are better reached and more quickly removed through a suprapubic opening is quite evident; but compared with the perineal operation, as applied to all classes of cases, the rate of mortality is certainly higher.

The contention that the hypertrophied gland is more easily reached by this route is answered by the statement of Watson, based upon an examination of a large number of anatomical specimens and concurred in by other writers, that in more than two-thirds of the cases the enlarged gland is readily reached through a perineal opening.

From an observation of the past year's work, it is evident that a greater attempt has been made to perfect the technique and extend the possibilities of the perineal operation than of the suprapubic. Guitéras, Ferguson, Parker Syms, Deaver, and Bryson have all written on perineal prostatectomy during the past year. It is not necessary to dwell before this association upon the important and painstaking work in this direction by Dr. Samuel Alexander.

Dr. John Bryson (10) regards the perineal route as the method of choice, and states that in his experience ninety-five per cent. of hypertrophied prostates may be successfully handled through the perineal incision. His report of six strikingly successful cases lends strong support to the belief in the lesser mortality of this operation as compared with the suprapubic. He gives the chief features and advantages of the technique which he employs, which are the avoidance of suprapubic fistula and infection of the space of Retzius, the ability to perform a most radical operation, at the same time avoiding incision of the vesicourethral isthmus; which incision he considers a serious danger on account of the possibility of operative and post-operative hæmorrhage—a danger which all experienced operators must recognize, provided the incision is made with the bare knife-blade, scissors, or cutting forceps. That this is not so when the galvanocautery knife is employed is one of the views which this paper hopes to establish.

At a recent meeting of the Société de chirurgie, November, 1901, M. Albarran (11), of Paris, declared himself in favor of perineal prostatectomy, and expressed the opinion that suprapubic prostatectomy was a grave operation, with an average mortality of from ten to fifteen per cent., and that in many of the cases operated upon suprapubically after a temporary improvement the symptoms returned.

Tuffier (12) favors the suprapubic route for that kind of prostatic enlargement which is exclusively median and forms a valvule at the neck of the bladder, but in all other varieties he recognizes the advantage of the perineal operation.

John B. Murphy (13), of Chicago, in an excellent paper upon the prostate, concludes that "suprapubic prostatectomy should be limited to exceptional cases of enormous intravesical enlargement of the prostate. The perineal is the most direct and the least bloody route."

Alexander H. Ferguson (14) favors perineal prostatectomy, and describes a modified technique, by which method he states all forms of prostatic enlargement are successfully treated.

John B. Deaver (15) registers his preference in favor of perineal prostatectomy, and states that "in perineal prostatectomy we have the operation which seems to be founded upon better surgical and anatomical principles than all the other operations."

C. Extent of Operation.—Alexander, in one of his earlier contributions upon prostatectomy, wrote: "Prostatic enlargement is purely a local affection. Its consequences are due primarily to the obstruction which it offers to the urinary flow." If this statement is accepted as true, there need be no discussion upon the question of how much of the prostate should be removed. It was more common in previous years than at the present time to speak of complete removal of the prostate gland, both by the suprapubic and the perineal route. Complete removal is not aimed at by the majority of operators. It is true that, while some operators may remove more tissue than others, with few exceptions the attempt is made to extirpate such portions only as encroach upon the vesical outlet and prostatic urethra.

The exceptions to this rule are P. J. Freyer (16), of London, who writes of complete extirpation of the prostate gland through a suprapubic opening, and A. H. Ferguson (14), whose method consists in total removal by median perineal prostatectomy. No matter how satisfactory the results may be after operations of so radical a nature, the question of the relative mortality involved would influence judgment in favor of the mildest operative means which will accomplish the end

in view, and, as stated by Keyes, the main object of the operation is to cut away the bar and to depress the bladder opening into the prostate, so that the *bas fond* may be drained; and the acceptance of this conclusion must, in many cases, satisfactorily settle the choice of surgical procedure and influence a tendency toward early operation.

The two remaining operative procedures for the relief of prostatic enlargement which have been referred to in this paper—namely, the Bottini operation and perineal galvanoprostatectomy, both aim at the removal of that portion only of the prostate which obstructs the urinary outlet and interferes with proper bladder drainage.

The Bottini operation has its adherents. The more conservative of them think that its field of usefulness is restricted to the treatment of the early stage of the disease and where the prostatic growth is of moderate size. The results that have been obtained, when good, are undoubtedly very good. The disasters, the complications, the difficulties, however, are such that, in the light of latter-day surgery, one is inclined to feel that an operation incurring even moderate chances of some of the dangers entailed must be looked upon as unsurgical. Mechanical measures under intelligent direction aid precision. Precise work, however, cannot be done unless under ocular or tactile direction. This the Bottini operation does not permit. But its greatest objection is that it does not afford adequate vesical drainage; and most of its complications and dangers arise from this fact.

If it is decided that the perineal route is the proper method of approaching the prostate for operation in a given case, and that in operating it is intended to remove only the portion of the gland that interferes with bladder drainage, the method which will accomplish this end with the quickest dispatch, with the smallest degree of mortality, and with the least distress during the period of confinement should be the operation of choice. No one operation can be suitable to all cases. Suprapubic prostatectomy has its advantages in certain forms of extensive prostatic hypertrophy. Perineal enucleation of the prostate is better thought of to-day by genito-urinary surgeons generally than at any time during the last ten years, and its results speak for themselves. Some forms of prostatic enlargement are especially amenable to this particular operation. Some cases, on account of the nature of the growth, present decided difficulties, and are unfavorable for enucleation. The method of morcellation, or taking away the prostate piecemeal with the cutting forceps, can be effected through the perinæum in those cases in which enucleation

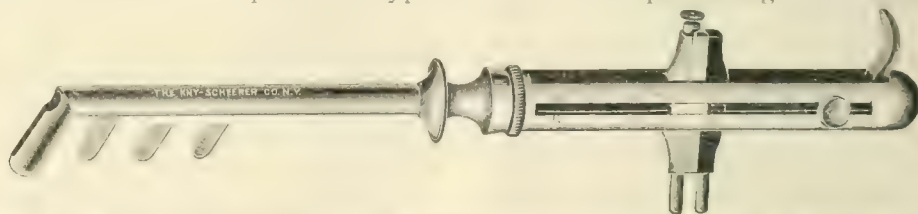
is difficult; but it would seem probable that the danger of venous thrombosis and fatal septic embolism is much enhanced by this method.

At the last meeting of this association the writer (17) presented a communication upon the subject of contracture of the neck of the bladder and its relief by perineal galvanoprostatectomy. The advisability of employing the same operation in some forms of prostatic hypertrophy had already suggested itself; and, in fact, some of the cases operated upon and reported were prostatitis. It was thought better, however, at that time to approach the subject with a moderate amount of enthusiasm and confidence; and prominence was therefore given to the minor condition of contracture of the neck of the bladder—a condition which is akin in its nature to prostatic hypertrophy in the obstruction it produces to the urinary outlet. The satisfactory results and permanent benefits which have followed this operation in the cases already reported led to its more extended adoption in a number of patients with advanced prostatic hyper-

perinæum, speaks of using small galvanocautery points to puncture nodes of hypertrophied tissue. None of these methods was known to me until after the construction and use of the instrument previously exhibited.

The results obtained in the cases of prostatic hypertrophy have been even more uniformly good than the previous ones reported of contracture of the neck of the bladder, in that they have not been followed in any instance by the complication which marred the success of the few of the contracture cases, namely, partial incontinence of urine. The explanation of this occurrence is probably too great length of the galvanocaustic incision, which impaired the integrity of the internal sphincter of the bladder, and in the later cases great care has been taken to avoid complete section of the vesico-urethral isthmus.

The steps of the operation consist in opening the urethra upon a grooved staff. Digital exploration of the bladder is then made through this opening, and a correct knowledge of the nature and extent of the prostatic growth obtained. In some



The author's galvanocautery incisor used in operating upon the prostate through a perineal opening. The upper part shows the complete instrument, the lower the cautery knives which can be changed at will.

trophy; and the results of this experience are submitted for your observation and criticism in the cases to be hereafter reported.

The technique of the operation is the same as that originally described. The cautery incisor has been improved in some respects. The different-sized blades are changeable at will, like the modified Freudenberg incisor of H. H. Young (18). The beak of the instrument is bent at an obtuse instead of at a right angle. A small non-conducting metal piece, 1-16 of an inch in height, has been applied to the upper portion of the proximal side of the platinum blade to protect the sphincter muscle. The experience derived from upward of forty cases has aided in determining the proper extent and limit of the galvanocaustic incisions.

The earliest record that I have been able to find of the use of the galvanocautery upon the hypertrophied prostate through a perineal opening is that of W. T. Belfield (19), who employed the method in 1886. In 1888 F. S. Watson (9) devised a galvanocautery instrument for the purpose of attacking the enlarged prostate through a perineal wound, but reports no cases. W. N. Wishard in May, 1895, in describing different methods of removing the prostate through the

cases, in which the perineal distance is extreme and it is impossible to reach beyond the vesical neck, a specially devised retractor is employed to shorten the distance and to facilitate examination. The number of the galvanocaustic incisions varies according to the nature of the growth and the manner in which it obstructs the bladder outlet.

Generally speaking, such obstruction is produced by an obtruding middle lobe which blocks the orifice, by intravesical and urethral hypertrophy of the two lateral lobes which elevate a median fold of mucous membrane and flatten the vesical orifice, or by intra-urethral prostatic nodules.

A median lobe is treated with one incision through the centre or one on each side, when the intermediate portion may be excised. The bilateral enlargement is treated with two ample incisions directed at an angle toward the median line, which serve to widen the flattened urethral outlet and to drop the elevated fold of mucous membrane. Intra-urethral nodules are best enucleated in the usual way, and the operation completed by an intravesical galvanocaustic incision, if such is required.

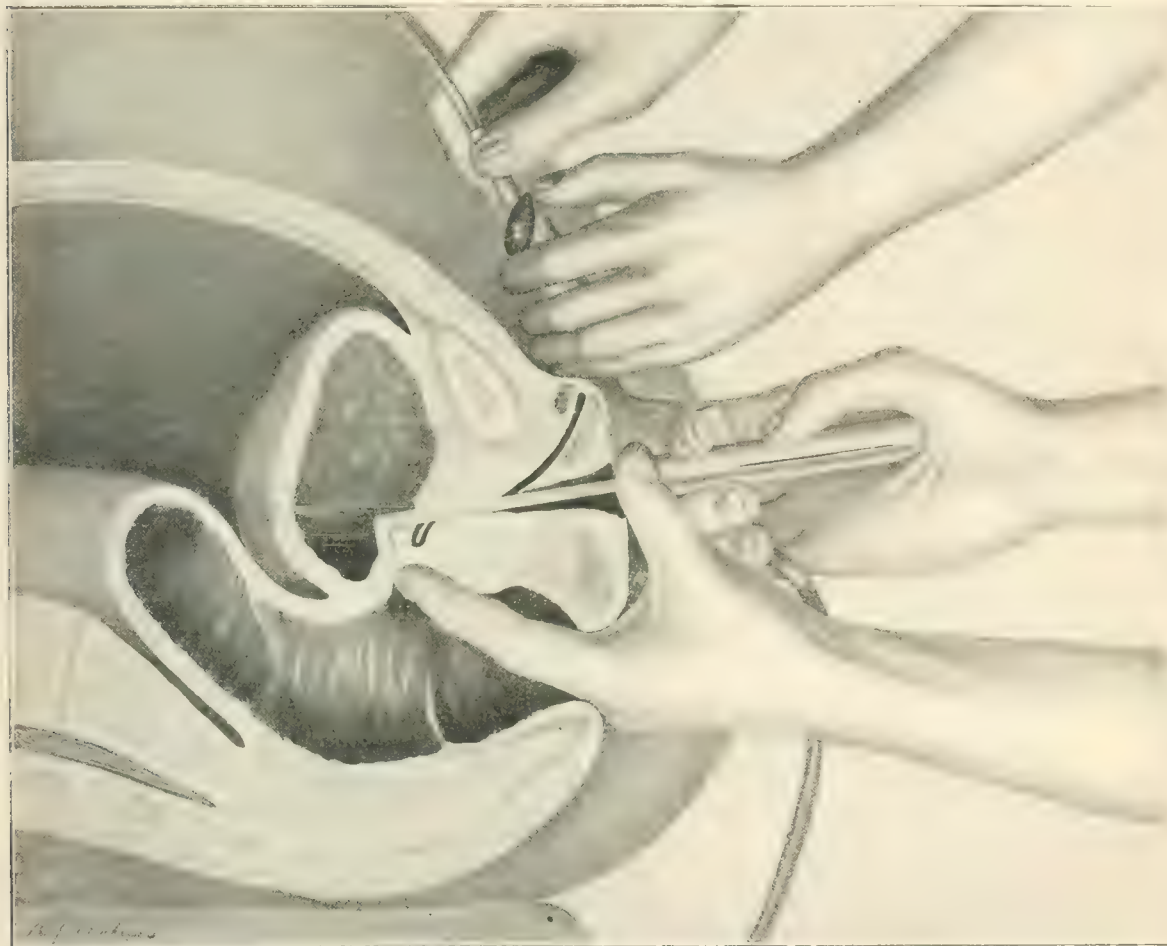
Seven cases of prostatic hypertrophy have been operated upon in the last year by this method, in

one of which a second operation was required. The average age of the patients is sixty-seven years, the youngest being sixty-two and the oldest seventy-three; there has been no death. Five of the cases were complicated with pyelonephritis. Three of the patients were in a serious general condition, with signs of urinary septicæmia. In one there existed previously to the operation a renal abscess. Three patients had almost complete retention of urine, and required the constant use of the catheter. One had continuous overflow, com-

last five months, following an attack of retention which was relieved by the use of the catheter.

On examination per rectum, the prostate is found moderately enlarged, sensitive to pressure, and of firm consistence. Search for stone is negative; long prostatic urethra; marked median prostatic enlargement; residual urine, four ounces. Examination of urine finds $\frac{1}{4}$ of 1 per cent. of albumin by weight and a moderate amount of pus.

June 25th.—Patient returns to his home, in Detroit, with directions for the systematic use of the catheter and bladder irrigation; urotropin internally.



Cut showing method employed by author in performing operations upon the prostate with the galvanocautery through a perineal opening.

plicated with a calculus, and was compelled to wear a rubber urinal.

Report of Cases.¹

CASE I.—W. J. C., aged sixty-six, June 20, 1901, comes complaining of great urinary urgency and frequency, to such an extent that he is compelled to wear a urinal, and passes the water every few minutes. He rises from three to four times at night. This urinary frequency and urgency have been abnormally marked and progressively increasing during the past two years, and have been especially annoying in the

July 12th.—Pus and albumin both markedly increased. Use of the catheter twice a day does not materially diminish the number of urinary calls.

July 18th.—Increased frequency of urination; polyuria. Between the beginning of September and the end of December, 1901, under the use of wintergreen oil and a mild anodyne, his symptoms have moderated.

January 11th, 1902.—His condition has become much worse; the former urinary urgency and frequency return. He has had several attacks of complete retention of urine, requiring relief by the catheter. To-day he passes three ounces vol-

¹ A synopsis will be found at the end of each case.

untarily, and I draw thirteen ounces residuum. The patient's general condition has failed considerably. He has lost between twenty and thirty pounds in weight; the tongue is dry and coated; he has become nervous and apprehensive and broken in spirit. The quantity of pus, which settles in a solid, compact zone when the urine is allowed to stand, is very great; the albumin has also increased.

January 12th.—Cystoscope reveals large median prostatic hypertrophy; and freely purulent urine is readily distinguished jetting from the ureters.

January 16th.—Operation: perineal section. Bladder exploration finds an unusually deep perineal distance. It is almost impossible to reach beyond the prostatic urethra into the bladder. There is bilateral and median prostatic enlargement. Two incisions are made, one on each side of the median line, two centimetres in length, both being directed toward the median line. No hæmorrhage, no reaction. Perineal tube left *in situ* about one week. Shortly after its removal patient passes the urine in part through the natural canal. At the end of three weeks he is out of bed, passing the water both through the natural channel and through the perineal wound. There is some nocturnal incontinence of urine. At the end of five weeks from the operation the patient goes South to a mineral spring resort, where he remains four weeks.

Last report, April 14th, 1902.—Patient returns from his trip. He passes his water on an average every four or five hours; urine slightly clouded; percentage of albumin, $\frac{1}{2}$ of 1 per cent.; there is no pain whatever; residual urine, about half an ounce. Patient is delighted with his condition, and has markedly improved in general health.

Synopsis of Case of W. J. C., aged sixty-six.—*Marked intravesical bilateral prostatic growth and median lobe:*

Before Operation.—Urination from every fifteen minutes to every half-hour, night and day; continuous overflow, requiring the use of urinal; residual urine, thirteen ounces; great depression in general health; pyelonephritis

After Operation.—Urination every four to five hours; residual urine, half an ounce; pyelonephritis less pronounced.

A noteworthy fact in this case is that when the patient was first seen there was only slight evidence of pyelonephritis, and the general health was good. Six months later the pyelonephritis had increased very markedly, in spite of treatment, and the general condition had suffered greatly. This would suggest the advantage of early operation in his case.

CASE II.—*L. J., aged sixty-two, September 24, 1901,* complains of pain, difficulty, and frequency of urination. His trouble commenced three months before this date, when, without any apparent reason, he was compelled to pass water more frequently, and noticed that urination was preceded by the passage of some blood. At that time, after urination, his doctor passed a catheter and found four ounces of retained urine. Prostate.

per rectum, of about three times the natural size, symmetrically enlarged; sulcus obliterated. Search for stone negative; marked intravesical bilateral prostatic growth. Urethral length, ten and one-half inches; residuum, eight ounces; urine purulent, foetid, but not ammoniacal in odor. Contains only 1-16 of 1 per cent. of albumin; pus and bacteria.

From September 24th to November 11th.—Patient is placed upon a systematic course of bladder irrigation and internal urinary antiseptics. In spite of this treatment his condition does not improve; on the contrary, he is getting progressively worse. He now has complete retention of urine and is compelled to rely entirely upon the catheter. The urine contains fully 2 per cent. of albumin, is exceedingly purulent, and contains a large, thick deposit of renal pus, and there is nocturnal and diurnal polyuria.

November 13th.—*Operation: Median Perineal Incision by Digital Exploration.* A very deep perineal distance is found. It is impossible to reach entirely beyond the lateral lobes of the prostate, which extend into the bladder about three-quarters of an inch on each side. Two incisions are made with the galvano-incisor, each about three centimetres in length. Perineal tube inserted, and, when removed at the end of ten days on account of the pain accompanying involuntary urination, the catheter is used at regular intervals for three or four days. At the end of that time patient passes urine with much diminished sensation. He leaves the hospital December 14th, the perineal wound being entirely healed. Urination every two hours, residuum two ounces.

Last report, April 23d, 1902.—Patient urinates every four hours by day and rises once during the night. He uses the catheter once a day to irrigate the bladder. The residuum found at this examination is about three ounces, but the patient states that when he passes his own catheter he frequently finds but half an ounce, and sometimes none. The urine still shows evidence of pyelonephritis, but the amount of pus and albumin has diminished.

Synopsis of Case of L. J., aged sixty-two.—*Intravesical, bilateral prostatic enlargement:*

Two Months Before Operation.—Patient uses catheter three or four times a day and urinates between times. Residuum, eight ounces; urine purulent and malodorous.

Immediately Before Operation.—Complete retention of urine and marked failure in general health; polyuria; 2 per cent. of albumin by weight and a large deposit of pus; pyelonephritis.

After Operation.—Urination every four hours by day, once at night; no pain. General health improved; but still evidence of pyelonephritis.

The continuous and progressive change for the worse in this patient's condition between the time of his first examination and the date of the operation would seem to indicate that this is another case in which an early operation might have checked the progressive ascending infection to the kidney.

CASE III.—J. H., aged sixty-six.

October 10, 1901.—Great frequency of urination, with pain, which trouble began seven years ago, when he first noticed that he urinated too often. In the last year this trouble has increased considerably. During the night he gets up frequently and has great pain before and during urination, almost constant tenesmus, and is compelled to wear a urinal on account of persistent dribbling. Exercise makes him worse. One week ago he had swelled testicle.

Prostate, per rectum, only moderately enlarged; very sensitive to pressure. The Thompson searcher is introduced and finds a small stone behind a prostatic bar, with some median lateral enlargement. Urethral length, nine inches; residual urine, three ounces, purulent and ammoniacal.

October 15th.—Operation: *Median Perineal Incision*. The perineal distance is very long and it is difficult to reach beyond the neck of the bladder. *The prostatic bar*: One lateral lobe is as large as a bird's egg and the other of about the size of a hickory-nut. Two small, soft phosphatic stones removed. One slightly lateral cut made on the right side with the galvano-incisor, one and one half centimetres in length, extending through the median bar, which is thought to be sufficient to permit free drainage. Perineal tube introduced; no reaction. At the end of ten days, tube is removed. Patient has considerable pain and spasm. Catheter used, but relief is not satisfactory. Perineal tube returned and left in place ten days longer, when it is again removed and the catheter employed. At the end of three days pain has practically subsided and the patient is able to hold the urine three hours; but the residuum is still four ounces, and he is compelled to pass the catheter every twelve hours to prevent complete retention.

A second operation is proposed and accepted. The perineal distance is so long that it is practically impossible to reach into the *bas-fond*. A groove of the original cut can be felt through the right lobe, but there is still considerable bar. Two additional cuts are made, one with the largest knife through the right lobe, two centimetres in length, and another with the medium-sized knife a little to the left of the median line, at an angle. One week after operation, tube is removed. The catheter is employed at regular intervals, and two days later the patient begins to void the urine voluntarily through the perineal wound, with no pain, at about three-hour intervals. Three weeks after the second operation patient leaves for his home in Connecticut. At that time he passes the water every two or three hours, with slight irritability. Residuum, half an ounce.

April 23, 1902.—Patient writes that his general health is very good and that he feels well. He urinates every two or three hours by day. He does not state how often at night, but writes that he sleeps well. The urine is slightly cloudy, purulent, and bacterial, but not malodorous.

Synopsis of Case of J. H., aged sixty-six.—Moderate bilateral hypertrophy and prostatic bar, two small calculi.

Before Operation.—Almost constant urination; sharp tenesmus; dribbling, requiring the use of urinal; residuum, three ounces; urine very purulent, foul and ammoniacal. Two operations were performed in this case.

After Second Operation.—Urination every two to three hours, without pain; urine much less purulent; residuum, half an ounce. Marked improvement in general health.

CASE IV.—J. F., aged sixty-five.

November 5, 1901.—For the past ten or fifteen years has been compelled to rise several times at night to void urine. Two years ago had an attack of complete retention. Entered one of the New York hospitals, where he was treated by systematic catheterism and bladder irrigation, after which double vasectomy was performed.

Patient left the hospital in about the same condition as before his attack of retention, and continued about the same until three months ago, since when he passes the urine every hour or two by day and once or twice at night, accompanied by sharp pain. In the morning he is compelled to use the catheter—a No. 6 silk woven—to empty the bladder, as at this time, after the night's accumulation, he is able to void but a small amount. Residual urine, four ounces, which is decomposed and ammoniacal. Prostate, per rectum, symmetrically enlarged and of about three times its normal size; consistence, firm and resistant; urethral length, eight inches. Search for stone negative. It is possible to detect with the searcher a moderate bilateral prostatic enlargement and an elevation of the posterior fold of the bladder.

Operation, November 8, 1901: *Perineal Section*.—Digital bladder exploration reveals bilateral prostatic enlargement of the two lateral lobes of about the size of pigeons' eggs, and there is a small median lobe. Two incisions are made with the galvanocautery, one and a half centimetres each, through the lateral lobes, the one on the left being made to encroach upon the median line so as to include the middle lobe. No hæmorrhage; perineal tube inserted and tied in place.

During the week following the operation the patient is perfectly comfortable; there is no reaction and no spasm. At the end of that time the tube is removed, and there are at first some pain and spasm attendant upon the effort to urinate voluntarily. To relieve this, the catheter is employed and the bladder irrigated, which is continued for four days, at the end of which time the patient is able to urinate voluntarily without any difficulty. Two weeks after operation, the residuum is half an ounce. Urination, every three or four hours day and night, with slight sensation of burning.

Last report, March 14, 1902.—Patient's urine almost entirely clear; shows a slight haze only. He urinates from every two to every five hours by day; sometimes rises at night, and sometimes passes the night without urinating. There is entire absence of pain; the residuum is half an ounce.

Synopsis of Case of J. F., aged sixty-five.—Bilateral intravesical growth; small median lobe.

Before Operation.—Urination every hour or two by day, every three or four hours by night, with much pain; urine ammoniacal; residuum, four ounces.

After Operation.—Urines every four to six hours day and night; sometimes not at all during the night; no pain. Residuum, half an ounce; urine almost clear; no odor.

CASE V.—M. M., aged seventy-three.

November 12, 1901.—Trouble began two years ago, when he noticed a difficulty in urination, soon after which he began to urinate with increased frequency, and, in the course of the ensuing six months, this condition became progressively more marked. At the end of this period he urinated every two hours by day and was compelled to rise once or twice at night. This condition continued with increased severity until about six months ago, when he began to urinate every hour during the day and five or six times during the night. Three months ago urination became painful and the calls increased to every half-hour by day and every hour by night. Just before his entering the hospital the pain had increased in severity and the urine passed in drops.

Examination per rectum, reveals the prostate gland enlarged to about two and a half inches in its transverse diameter and to about three inches in its anteroposterior diameter. Urethral length, nine inches. Search for stone negative. Deep *bas-fond*; bilateral intravesical prostatic growth. Residuum, six ounces; urine mildly purulent.

November 15th.—Operation: Perineal Incision. Digital bladder exploration finds abnormally long perineal distance, almost impossible to reach beyond, large lateral lobes jutting into the bladder, and elevation of median fold. Incisions are made with the galvanocautery, about three centimetres in length, one on each side, directed toward the median line. No hæmorrhage; perineal tube tied in place; no reaction. Tube is removed at the end of one week. In forty-eight hours urine passes through the urethra, causing a little pain at first, but not sufficient to require the use of the catheter, and gradually disappearing in the course of a few days. Urination, first week after operation, four to six times by day and once or twice at night. Residual urine, less than half an ounce. During the first week following the operation patient was attacked with a swollen testicle, but this was of short duration and yielded rapidly to the usual measures.

Last report, March 5, 1902.—The patient's condition most satisfactory; general health excellent; urination every four hours by day; does not rise at night; urine clear and sparkling; no residuum.

Synopsis of Case of M. M., aged seventy-three.—Very large bilateral intravesical prostatic hypertrophy.

Before Operation.—Urination every half-hour day and night, accompanied with intense pain. Residuum, five ounces; urine purulent.

After Operation.—Urination every four hours by day and not at all at night. No residuum and urine perfectly clear.

CASE VI.—N. V., aged seventy-three.

November 24, 1901.—Has had an acute retention of urine for two weeks. Previous acute retentions, three years and two years ago, were relieved in a few days by the passage of a soft-rubber catheter. On the present occasion the soft catheter could not be introduced, and therefore a silver instrument with a very sharp curve has been used, bringing blood almost every time. For eight days the bladder was regularly relieved by this instrument. Then the temperature began to run up, the urine became purulent, and the calls more frequent. He now urinates every half-hour or so, with great pain. The temperature has touched 102° every afternoon

for three days; the catheter is being used every four to six hours. Finding that an elbowed woven instrument goes, this is introduced every hour and the bladder irrigated with nitrate of silver. In spite of this change, the spasm remains unrelieved; it becomes more and more difficult to introduce the instrument, and the patient's condition has grown visibly worse. The catheter is therefore tied in.

November 25th.—The retained instrument causes constant spasm and gives no relief. The patient is passing seventy ounces of urine a day, of a specific gravity of 1.010, containing $\frac{1}{4}$ of 1% of albumin by weight and $1\frac{1}{2}\%$ of pus by centrifuge. The prostate is slightly enlarged, the right lobe being larger than the left; not inflamed. The urethra is eight inches in length; the residual urine amounts to twenty or thirty ounces before overflow occurs. The patient's condition being considered desperate and his medical advisers having told the family that he would certainly die, no matter what was done for him, he was operated upon in the afternoon of November 25th.

Median Perineal Section.—A large right lateral lobe was found projecting into the bladder and elevating a fold of mucous membrane. *Galvanocautery incision at the angle where the fold meets the lobe.* This cut, although two and a half centimetres long, did not seem sufficiently deep, and a second cut, one and a half centimetres long, was made through the scar. This entirely relieved the obstruction and freed a small encapsulated adenoma of the size of the last joint of the little finger. This was removed and perineal drainage established, the entire operation requiring but twenty minutes. After the operation, no spasms whatever. But the uræmic condition immediately became worse. For three days the patient was flighty and totally prostrated, his temperature running to 102° and his pulse to 110 daily.

November 28th.—Almost a quart of pus was discharged from the kidneys within twenty-four hours. The uræmic condition immediately cleared up and the pus continued to flow at the rate of about a pint a day. The abscess filled again between December 6th and 11th, but the symptoms were less grave. The perineal tube was removed on the twelfth day, and thereafter the patient was considerably annoyed by vesical spasms. A third renal retention occurred on December 25th. The patient persistently refused nephrotomy, which had been urged upon him several times, and his condition gradually improved, although he continued to suffer from frequent and irregular spasms of the bladder due to renal irritation. During the night the bladder would hold from twelve to sixteen ounces, and empty itself completely; during the day intervals and quantities varied greatly, and, at worst, he would pass one ounce, leaving from twelve to fourteen ounces in the bladder. Cystoscopy at this time revealed a congested left urethral orifice, with pus issuing from it. The irregular vesical spasms continuing and nephrotomy being refused, the case was turned over to the care of Dr. William H. Thomson. Within a month the patient's spasms were much less, and during March he was able to take a daily drive, the bladder being perfectly comfortable and emptying itself entirely. But renal pus continued to flow, and a daily prophylactic vesical irrigation was employed.

In the middle of April a prostatic abscess occurred and was drained by reopening the perineal wound. Dr. Thomson reports that this second operation was followed by recurrence of uræmic symptoms which again threaten the patient's life, even now—two weeks after the operation.

Synopsis of Case of N. V., aged seventy-three. (Operation by Dr. Keyes.) Right lateral lobe; prostatic bar.

Before Operation.—Acute prostatic retention for two weeks. Infection and constant irritation by silver catheter result in acute cystitis with continual spasms, unrelieved by the retained catheter; while, at the same time, an abscess begins to form in the left kidney. Urine ammoniacal, albuminous; specific gravity 1.010; urinary calls constant and straining frightful.

After Operation.—Spasms are immediately relieved; uræmia continues acute until an abscess bursts in the left kidney; after which the patient continues to have symptoms, due to the renal condition, for which he refuses surgical relief. Has no further bladder trouble.

CASE VII.—T. B., aged sixty-seven.

January 8, 1902.—Complains of frequent and painful urination, which occurs every hour day and night. His symptoms began eighteen months ago with a complete retention for six weeks, before which time he had been rising once at night for three or four years. Since then he has used the catheter once a day, his urinary symptoms varying with the weather, but his general health gradually failing. He has lost fifteen pounds in weight, and his daily temperature runs from 97.4° to 99.2°. The prostate is moderately and symmetrically enlarged; the urethra, eight and a quarter inches long. Residuum, two and a half ounces; vesical capacity, five ounces. Urine is cloudy, with pus, alkaline, ammoniacal, and contains 1.03% of urea and a trace of albumin.

January 10th.—Median perineal section; galvano-incision, two and a half centimetres long, at the junction of the right lobe and the bar. Second incision, one and a half centimetres long, at the base of the left lobe. Between these two incisions a piece of prostatic tissue of the size of a lead pencil and about two centimetres long is removed by rongeur forceps; perineal drainage.

After Operation.—No spasms. The patient sleeps every night on trional and codeine. The temperature runs to 102° during the first and second days, and there is a moderate discharge of renal pus. Tube is removed on the sixth day. The patient is out of bed on the ninth day, and on the eighteenth day goes home with the perineal wound almost closed, urination being painful and occurring every two hours, with half an ounce of murky residual urine.

March 12th.—Patient reports urination six or seven times by day, four times by night; gaining flesh.

April 23d.—Has gained fifteen pounds since operation; urine acid; specific gravity 1.025; trace of albumin; hazy with bacteria; only a trace of pus. He urinates five times by day, three times by night, and reports himself "much better than I had hoped."

Synopsis of Case of T. B. (Operation by Dr. Keyes.) Prostatic bar.

Before Operation.—Chronic incomplete prostatic

retention for eighteen months, with ammoniacal cystitis and mild pyelonephritis. Urethra eight and a quarter inches in length; residuum, two and a half ounces. Bladder holds five ounces. Urinates every hour day and night.

After Operation.—Renal congestion for two days; no spasm. Tube out on sixth day; patient up on ninth day; home to Georgia on eighteenth day.

Three months after Operation.—Urinates eight times in the twenty-four hours; has gained fifteen pounds and is all but well. Constantly improving.

Conclusions.

Palliative measures should not be persisted in when they fail after reasonable trial to produce and maintain an abatement of symptoms.

A first infection of the bladder is not alone sufficient excuse for operation unless palliative measures fail to promptly subdue inflammatory conditions.

Recurring infection of the bladder or ascending infection of the kidney is sufficient warrant for operative interference.

There is a growing tendency toward earlier operation than was formerly practised.

The greater number of cases of prostatic hypertrophy can be satisfactorily reached through a perineal incision.

In the large majority of cases, the requirements of any operation upon the prostate consist in the removal of the obstructing area and depressing the bladder opening into the prostate, so that the *bas fond* may be properly drained.

In many cases the obstructing area of the hypertrophied gland can be satisfactorily reached and effectually removed through a perineal opening by means of galvanocautic incisions.

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HOW TO CONDUCT A NORMAL LABOR.*

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We, as physicians, ought to give more care to the pregnant and puerperal woman than we usually do.

As soon as I am engaged to attend a woman and have made a diagnosis of pregnancy I examine the urine, and have her bring once a month a sample of the night's and morning's water. After the eighth month I examine it every week, particularly if it contains albumin, sugar, or tube casts. I examine the heart and lungs, also, and give my patient instructions in regard to diet, exercise, hygiene, and clothing.

The diet should be of a nature easily digested, and nourishing in character. A moderate share of exercise daily in the open air is very necessary to the health of the pregnant woman. Violent exercise and long journeys over bad roads should be avoided if possible. Frequent or daily baths of moderately warm water help to keep the skin active and the patient in good condition. The bowels should be kept regular, if necessary, by a mild cathartic.

The clothing should be worn loosely and hung from the shoulders, so that there may be no constriction around the waist. The circular garters should be replaced by the long side supporters. Corsets, if worn at all, should be worn loosely, and after the fifth or sixth month discarded and a corset-waist used instead. Wearing of tight corsets predisposes to mal-development and mal-position of the fœtus, and also impedes the functions of the kidneys. The breasts if pendulous should be supported by a suitable bandage or underwaist. The nipples should be kept free from pressure. Any mild ointment may be used to keep them soft and in a healthy condition. If depressed they should be massaged and manipulated to bring them into proper shape.

On the first or second visit of the patient to my office I get her history as far as possible. If she has had children, and difficulty in previous labors, I try to ascertain the cause and nature of the difficulty, whether it was due to kidney disease, tumors, deformed pelvis, or very large children. With a primipara I examine to ascertain if there is any deformity or malformation or any diseased condition. If the trouble in the multipara is due to a small pelvis or a very large child, I can do much to lessen the difficulty in the next confinement, by limiting the amount of food and drink of the mother during the last two months.

I allow her very little liquid during the last month, provided there is no trouble with the kidneys. By this method the child will not accumulate a lot of unnecessary fat.

The Room and Bed.—I give each patient, when she comes to engage me, a printed card with instructions as to the proper kind of room and how to prepare the bed, and a list of the things that are necessary for herself and the child.

The patient should be confined in a large and well ventilated room and a sunny one if possible. If the weather is cold the room should be kept warm by steam, gas, or a stove. The room should be well aired and cleaned before admitting the patient, and if there has been any infectious disease in the room a thorough fumigation is necessary.

The bed should have a firm mattress covered with rubber or oilcloth, a clean sheet or blanket should next be put on over the rubber, and both fastened to each side of the mattress and at the corners with safety-pins. Then, on top of these where the patient lies, should be placed a second piece of oilcloth, four feet square, and over this a pad or clean sheet, folded three or four times. The bed is now ready for the patient. A rug or oilcloth is placed at the bedside to protect the carpet.

Preparation of the patient for labor.—She should have much the same care and treatment as if she were undergoing an operation. When the pains of labor are felt, some medicine should be taken to move the bowels. Either of the following will suit:

(1) Epsom salts, one tablespoonful in a cup of hot water; or

(2) A seidlitz powder in a cup of water; or a bottle of magnesia.

Then, two or three hours later, an enema should be administered, of a quart of hot water and soap-suds, with one drachm of spirit of turpentine; the injection should be repeated every half hour until the bowels move freely. The patient should then take a warm bath, using plenty of soap and washing the genitals with great care, after wiping dry. She then puts on a clean chemise or night-dress, and a clean sheet is now folded once across and put

*Read at the meeting of the New York Celtic Medical Society at the Academy of Medicine, in February, 1902.

around her waist and fastened in front with a large safety pin. The night-dress can then be folded up above the sheet and fastened so as to remain there until after delivery. The patient should not use the water closet after this, but the chamber or bed pan.

Vaginal douches I do not give unless there is some infection of the genital tract. I make sure that the bladder is emptied during the first, and the early part of the second stage, of labor.

Little or no solid food should be given after labor begins. Solid food in the stomach might be very injurious should surgical anæsthesia be required. Chicken broth, mutton broth, or other nourishing soups, and plenty of water may be given during the first stage of labor.

Outfit for Patient and Child.—One rubber sheet or oilcloth large enough to cover the entire width of the bed and the greater part of its length. A second piece of oilcloth about four feet square.

Six abdominal binders one yard and a quarter long and half a yard wide, made of the cheapest grade of unbleached muslin.

Four bed pads, each four feet square and two or three inches thick, made of cheese-cloth and stuffed with non-absorbent cotton. They should be stitched or tufted enough to prevent the cotton slipping.

One pound of absorbent cotton.

Twenty-four vulvar pads or napkins, sterilized.

Twenty-four baby napkins.

One small blanket to wrap the baby in.

Three-quart or four-quart fountain syringe and a douche-pan.

Two or three wash basins and from half a dozen to a dozen clean towels.

From six to twelve clean sheets.

Rug or oilcloth to protect the carpet at the bedside.

Eight-ounces of olive oil and a cake of ivory or castile soap.

One new nail brush.

Two dozen large, and two dozen small, safety pins.

Three clean aprons.

One pot or kettle of boiling water and a pot of cold water boiled and covered with a towel.

Examination of the patient.—Before making the examination I scrub my hands and arms for several minutes with soap and water, changing the water two or three times, then soak them for a few minutes in a solution of bichloride of mercury, and then rinse them off in a two-per-cent. solution of lysol. A similar solution of lysol is used to wash off the patient's genitals just before the examination is made.

I never make an examination under cover of the bed clothes or the patient's clothing, as contact with any of these may infect the examining fingers.

I use sterilized rubber gloves if I have attended any infectious cases a short time previously.

In my first examination of the patient I try to ascertain the condition of the vagina and cervix, the position and presentation, and the probable duration of labor, and whether or not it will be necessary for me to remain. I do not make frequent examinations.

All this care and preparation of the patient and washing and scrubbing with the use of antiseptics may seem unnecessary and impossible to carry out, particularly with a poor patient in a tenement house. But I find that almost all of it can be done with very little difficulty if the physician takes the trouble to impress on his patient the necessity of thorough cleanliness and the great danger of sepsis or child-bed fever, and most women feel their importance more when there is some fuss made over them, and will make extra efforts to have something that their neighbor never had for a confinement.

I must confess that I did not take these precautions until the last few years. During my first years of practice I had several cases of puerperal fever—some running a mild course, others with a high fever for two or three weeks, and three patients died of sepsis, contracted no doubt in labor. My experience in this misfortune is no exception to the general rule, as I have seen many such cases in consultation in the practice of other physicians.

When I take all these precautions I find I have no trouble with my confinements. They run through with a normal temperature, and I am saved a lot of worry and all the trouble I formerly had in washing and curetting of the uterus. Now, I have no trouble with the so called milk-fever and "a touch of malaria," that formerly served as a cloak to cover my mistakes.

In addition to the usual things in my obstetrical bag. I also have a double tenaculum, a uterine dressing forceps, and a square yard of iodoform gauze in a sealed glass bottle, so that, in case of post-partum hæmorrhage, I can pull down the cervix and pack the uterus. I also carry a needle holder and perinæum and cervix needles with sterilized sutures, so that I can repair all lacerations at once.

When the pains are severe and the os is rigid, I usually give 20 grains of chloral every half hour, till three or four doses are taken. This may be given by either the mouth or rectum. Quinine and sulphate of strychnine I find act better than ergot in producing uterine contractions and keeping up the tone of that organ, and there is not the danger in using these that there is in the use of ergot. Morphine, in $\frac{1}{8}$ grain doses, I use now in almost all my cases; where the woman is suffering severely and labor progresses slowly, I give it every

hour and sometimes every half hour. It does not prolong labor but allows the woman to bear down with more force and very much less suffering, and it calms her fears. It gives me often a chance to go and make two or three calls before she requires my assistance, and it acts much as does chloral in relaxing the cervix and perineal muscles.

I find most patients do better by being on their feet until labor is well advanced. When the patient goes to bed, I place under her hips the Kelly pad, covered with a clean napkin. This saves the bed from the discharges.

When the child's head is well down and pressing on the perinæum I give a little chloroform during the pain. I find that this enables her to bear down with more force and less suffering. It also causes relaxation of the cervix and perinæum. When the occiput is well down under the pubic arch and the vulva wide open, the patient's limbs should then be kept extended, in order to relax the perinæum as much as possible. When the knees are flexed upon the abdomen, the skin of the perinæum is put on the stretch, and there is more danger of it tearing than when the legs are extended. Sufficient chloroform may now be given to stop pain and muscular action. I can now usually, by upward pressure on the child's forehead, deliver it in from fifteen to twenty minutes. This method will save the perinæum from tearing, in the great majority of cases, and spare the mother much keen suffering. As soon as the head is born I stop the chloroform and wipe off the child's eyes with a saturated solution of boric acid.

In cases where labor is progressing very slowly and the pains are nagging in character and of very little force, if the cervix is well dilated, I find by experience that it is better to use the forceps and, by slow and easy traction, deliver the child. In such cases, waiting too long wears out the strength of the mother; the uterus loses its tone and power of contraction, and there is great danger of post-partum hæmorrhage.

Following the delivery of the child I make firm pressure on the fundus, and this pressure is kept up by myself or the nurse for at least half an hour after expulsion of the placenta, or until all danger of hæmorrhage is passed. After the placenta is delivered it should be examined carefully to see that no part of it remains in the uterus.

All blood clots should be removed, and a careful examination of the vagina and cervix made, and any lacerations found should be repaired at once if the patient's condition will permit it. A sterilized gauze pad is then placed over the vulva and the abdominal binder is put on so soon as the uterus is firmly contracted. The binder should be fastened from above downward and the uterus

should be pressed firmly against the pelvic brim. Putting on the binder from below upward, may push the uterus into the abdominal cavity, causing it to relax and produce hæmorrhage. The patient should now be put in bed and have absolute rest, and friends and relatives be kept out of her room.

After an hour or two, if the mother is in good condition, the child can be put to nurse; this is done to stimulate uterine contraction and to increase or hasten the flow of milk. Before the child is put to nurse, its mouth should be washed with a solution of boric acid; the mother's nipples should be washed at the same time with a similar solution and this should be repeated after each nursing. The patient should remain quietly on her back until all danger of hæmorrhage has passed. After the second day I advise my patient to lie on the abdomen for a short period of from five to twenty minutes, several times each day and night, while she remains in bed. This is done for two reasons: First, to prevent or correct a retroversion or retroflexion, which may have previously existed; secondly, to afford better drainage from the vagina.

The diet of the mother, after labor, should be liquid: Milk, cocoa, soups, and plenty of water, may be given to stimulate the kidneys and bowels. After the second or third day a little solid food may be given. So long as there is a free reddish discharge the patient should be kept in bed, except when she has to get up to attend the calls of nature.

When I make my last call, which is usually about the tenth or twelfth day, I make a careful examination of the vagina and uterus, to ascertain the condition, and I give instructions as to douches or any other treatment that I may see indicated.

Before leaving my patient I impress on her the necessity of nursing the child, no matter how difficult it may be, and warn her of the great mortality of infants artificially fed, and I instruct the mother as to the proper kind of diet to use, in order that she may have sufficient good milk to nourish her child. Water should be drunk freely between the meals, and, by so doing, constipation of both mother and child is prevented.

152 WEST FIFTY-SEVENTH STREET.

CONSERVATISM IN ABDOMINAL AND PELVIC SURGERY.

By EDWIN RICKETTS, M. D.,

CINCINNATI, O.

Never since the day that Lawson Tait gave to the world that list of his wonderful results of one hundred and forty-three consecutive ovariectomies without a death, has the necessity been so great for crying out loud and long against the increasing high mortality, and for the needed conservatism, than now. Commercialism, along with the desire

to perform the greatest number of operations in the shortest length of time, has had much to do with this. Lack of judgment is another cause.

The substantial business man will tell you, and with reason, that of all modern commercial adventures, ninety per cent. are destined to fail. Just so it is with those entering our profession and its specialties for "revenue only." Inefficiency in diagnosis, prognosis, mechanical technique, clean rapid operating, and mid-operative ability in diagnosis, can not be laid at the door of the men who have served long apprenticeships under rigid leaders and teachers in the work. In other words, a specialist is not a mature product at the end of an eight weeks' polyclinic gestation. Many a genius in the teaching and practice of general surgery often proves to be a dangerous quantity to a class of post-graduates, for the reason that he too often thinks that every pupil before him should learn gynecology and abdominal surgery just as readily as he teaches it for six weeks.

After Ephraim McDowell had reported, giving to the world the list of ovariectomies done by him, there was a rush into the field of surgery for the removal of ovarian cystomas. Their mortality soon went so high, that the sober-thinking general practitioner, who will always be our surgical reflector of failures, called a halt in operative procedures. It was right then, it is right now.

It was for half a century that ovariectomy, for the lack of skilled and clean hands, was to be justly condemned. Thousands of women suffering from ovarian tumors, the only growth of the abdominal cavity, removed during that time, went to their graves for the lack of this cleanliness and for the lack of skilled hands. Sir Spencer Wells, of England, the Atlees, Dunlap and others of this country, finally had the courage to take up the work in the most conscientious manner of the day, and with commendable lowering of the previous mortality. But it was not until the record of Lawson Tait, before referred to, was made and published, that an effort at true specialism was attempted with success; and then, later, came too many who did not fulfil the recognized, and so necessary, requirements.

A talk with men from different sections of this country, who have won their spurs in this work, and so are far from being jealous of any man attempting or successfully doing this work, has prompted this article. There is a number of reasons for the existing circumstances and I shall speak of the most important ones. Members of business firms take stock at least once a year, to know best how they stand in the business world. If professional men would do as much great would be the benefit to be derived.

Polyclinics giving a six weeks' course in abdom-

inal and pelvic surgery, so called "touch courses," are not without responsibility. The opportunities for pre-operative and postoperative responsibility, as to history, duration, and those symptoms that lead up to and show when best to operate, are not equal to the importance of the occasion. Technique, with much stress laid on how to be chemical high executioner of the innumerable little beasts, is too seriously considered. The importance of the shortest possible and intelligent anæsthesias, the meeting of any or all emergencies promptly, are often of the greatest consideration. In one of our leading institutions I saw three patients under the anæsthetic, respectively thirty-two, thirty-one, and twenty-eight minutes by the watch, before the operation was begun. After a six or eight weeks' course too many men return home thoroughly imbued with the idea that the doing of this work is of the easiest, and so they launch into the abdomen and pelvis. Often they succeed in hysterectomies and in removing a simple ovarian cyst, but in conservatism in the surgery of the uterus and ovaries, they fail in the majority of cases. They are too slow, tedious, and uncertain operators, and inoperative ability in diagnosing between a healthy ovary and one that demands resection after the abdomen has once been opened, they are very often rank failures. They do a great deal in obstetrics, quite a little in general surgery, and not quite enough in abdominal and pelvic surgery, to satisfy their ambition as to the lowest possible mortality that has been attained. Their appendectomies too often consist in simply opening an abdomen to let out the pus. In one instance the operator, in going through the abdominal wall, exposed the spermatic cord, mistaking it for the vermiform appendix, keeping the patient under the anæsthetic for nearly two hours.

With the true specialist hysterectomies are growing less frequent, while, with the occasional operator, the number is increasing to an alarming degree. After the abdomen has been opened the capsule of a fibroid can be incised and the same shelled out, the procedure being followed by the closure of the uterine tissue and peritoneal wound. The capsule of many of the fibroids located within the folds of one or both broad ligaments, can be successfully extirpated in a similar manner, saving one or both ovaries or parts of one or both. In hydrosalpinx, frequently the tube can be drained through the uterine-wall end or through a cul de sac, at the same time freeing the fimbriated extremity, which in time may result in restoration of connection.

A number of these operators have given as a reason for doing some gynecological abdominal surgery, that their respective territories have been invaded by the over zealous drumming of some of

the brethren and sisters to induce patients to enter their respective denominational hospitals. This is done from house to house and from the pulpits, and, in many instances, the attending physician has been ignored by these solicitors, who have more zeal than wisdom. While self-defence is justifiable under ordinary circumstances, it is not so in these instances, aggravating though they be.

The greatest feats in our surgical work in the abdomen and pelvis should come from studied conservatism, rather than from the quickest and rank-est extirpation. Our aim should be, not to present the greatest number of specimens for the consideration of our medical brethren, but the greatest possible number of written reports of successful cases without specimens.

Sterility existing in the females of the United States, as so graphically portrayed in the paper read at the St. Paul meeting of the American Medical Association, June, 1901, should startle and cause us to put forth our best efforts for the conserving of all possible healthy ovarian stroma. We have many men doing first class work in general surgery, and incomplete work in abdominal and gynæcic surgery. Those that can and do cover successfully the entire domain of surgery are few indeed, and they are chiefly to be found in the large centres. Their teaching before the undergraduates and post-graduates, that successful abdominal and gynæcological surgery can be done at their hands, tends to disaster at too high a mortality. General surgeons are not, they can not be, made on the plan of "one day," any more than the polyclinic plan of "six weeks" can make an abdominal and gynæcological surgeon. The latter must be the best matured product of medicine and surgery.

The best possible rectal surgeon has no business to open a rectal abscess one day and an abdomen the next. *He can not do it without the greatest risk of infecting the abdominal subject, no matter how well he tries to antisepticize and rubber-glove himself.*

I recently witnessed the presentation, at a certain medical society, of a perfectly healthy uterus that the reporter said had not been retroflexed. On examining the specimen, I found the ovaries with one-third of their stroma invaded by small flattened cysts, the tubes normal in size and in appearance. The ovaries were just in that condition for resection—from a macroscopical examination. When the operator was asked "For what reason was the hysterectomy done in this young and unmarried woman?" he replied, "For pain and for the reason that *in time* these ovaries would have been entirely destroyed." He had done a sweeping radical hysterectomy by the vaginal route in ten minutes, instead of an abdominal section to have been fol-

lowed by resection of those ovaries, which would have taken him forty minutes to do.

There is no true specialist of to-day that would be guilty of such a rank procedure. No wonder that our friends in medicine point the finger of scorn at us in our entifety. No wonder that the honored general practitioner says, "We will try our remedies almost till doomsday before we will consent for our patients to be operated on." This general practitioner is to be commended under the circumstances, for he can, and will, show better results for his delay, than the non-conservative extirpationists, with their half-rational eagerness and their incomplete work, which can not compare with his work in workmanship or in low mortality. On this point the laity is not supposed to be posted and the high mortality men will not enlighten it.

It will take time for this question to adjust itself, so that it shall be recognized as a field in surgery as distinct as that of the eye, ear, nose, and throat.

Success has come to those who have fulfilled the rigid preliminary requirements along with the most matured efforts on the necessary stringent lines. There are no short cuts in the preparation for the successful doing of this special work in surgery.

COLON BACILLUS INFECTION.

By J. HOLCOMB BURCH, M. D.,

BALDWINVILLE, N. Y.

At various intervals during the past ten years, I have met with a peculiar class of cases that have caused me much anxiety and no little uncertainty in regard to diagnosis.

The cases referred to are a type of fevers, the duration of which varies from seven to ten days. The attack is usually ushered in by a period of malaise that continues several days, the patient becoming progressively worse until at last he is confined to his bed. The seizure is accompanied by a gradually rising temperature that reaches its limit at the end of the third or fourth day, from which time it remains at about 102° F. in the morning, and from 103° to 104° F. in the afternoon. There is almost always a certain amount of gastro-intestinal disturbance; sometimes diarrrhoea, and less frequently constipation. The abdomen is at times distended, and nearly every case is accompanied by ilioæcal gurgling. The tongue is dry and often charged with a foul coating. There is sometimes a mild delirium, and almost always more or less headache. In fact, the whole clinical picture is that of typhoid fever. In every case that I have seen there has been diminished leucocytosis. The urine in many cases contained traces of albumin and sometimes a few granular casts. Its reaction was always acid, it was many times turbid, and swarmed

with peculiar motile organisms resembling the Eberth bacillus. Indican was present in every case, and the Ehrlich diazo-reaction has been, as a rule, well marked. The Widal-Johnson reaction has been absent in every case throughout its entire duration; but, by employing a broth culture of the bacillus found in the urine, following the technique of the Widal-Johnson reaction, agglutination was manifested in every case.

The following is a typical example:

On January 10, 1898, I was called to see C. H., aged twenty years, a strong, healthy young man, weighing 170 lbs. He had been ill for several days, suffering from a general malaise that progressively became worse, he being at the time I first saw him confined to his bed. Previously to his illness he had been working hard in the open air. There had been an usually cold period followed by a warm humid change of temperature. His work had been hard and his appetite had kept pace with his exercise. The change of temperature necessitated a cessation of his labor, but his appetite remained as active as before. He became constipated, suffered from indigestion, and finally was seized with a chill, which was followed by a continued fever. When I first saw him, his eyes were suffused, his face flushed, and his tongue was laden with a thick white coating. His pulse was 110, full, strong, and cordy, and his temperature was 103° F. There were present increased splenic and hepatic dullness, abdominal tenderness with some distention, marked ilioæcal gurgling, and diarrhoea. The case certainly appeared to be one of typhoid fever. The next morning the temperature was 102° F., pulse 100, and somewhat less cordy than during the night before. His general condition was much the same. An examination of the blood revealed diminished leucocytosis, small lymphocytes predominating; Widal-Johnson reaction negative. The urine contained a trace of albumin, epithelial cells, and innumerable motile bacilli. Its reaction was strongly acid and it was very turbid. The Ehrlich diazo-reaction was well marked. The evening temperature was 103° F. The next day his condition was much the same. In fact, he continued in much the same condition until the eighth day from my first visit, when the temperature began gradually to diminish, and by the tenth day it was normal. He made a rapid recovery. On the fifth day, with a sterile catheter, I removed, using every possible aseptic precaution, 100 centimetres of turbid urine, which was collected in sterile test tubes. It was of acid reaction, turbid, contained a trace of albumin, a few epithelial casts, indican, and the same motile bacilli. A bouillon culture tube inoculated with a few loopfuls of this urine, after twelve hours became cloudy, precipitating a thick white deposit. Indol was produced in a peptone-bouillon solution inoculated with it. Neutral milk containing blue litmus was turned red after remaining in the incubator for twenty hours. In thirty-six hours a firm coagulation of fibrin occurred. Fermentation was also produced in a glucose-bouillon medium. In

fact, the culture tests proved beyond doubt the presence of the *Bacillus coli communis*. During these five days a test for the presence of the Widal-Johnson reaction was made daily, with negative results. On the seventh day I prepared a broth culture of the colon bacilli found in the urine and proceeded to make an agglutination test following the technique of the Widal-Johnson reaction. Complete agglutination took place in five minutes. This test was daily repeated until the tenth day with like results.

This case is typical of the others that I have studied with the same detail.

Now the question arises, were these cases of abortive typhoid fever, such as Osler has recently described and we are most of us familiar with, or were they a peculiar type of infection caused by the colon bacilli? As arguments favoring the latter hypothesis, we should consider the mode of life of these patients at the time of their illness. All of them had worked in the open air and had eaten in proportion to their labor. They ceased working and ate as before. This produced a condition of self-infection developing fertile fields for the growth and development of these organisms, whose toxines had perhaps produced the phenomenon above described. But would not a like environment also favor the growth and development of the Eberth bacillus as well? We are also to take into consideration the possibility of a mixed infection. Herein, without doubt, lies the solution of the problem before us. Sacquépée made a series of observations in regard to various races of the colon bacilli obtained from typhoid fever cases. He tested them with serum from the same and different cases, contrasting the agglutination results with those obtained with the Eberth bacillus. The Eberth bacillus, and some races of the colon bacilli, were isolated from the same typhoid fever patient, and in several cases the agglutinating power of the blood was tested in each. The result was as follows: Agglutinations of typhoid serums are of frequent occurrence with the colon bacillus providing that the serum and microbes are taken from the same patient. Several different races of colon bacilli may also be isolated from the same subject, showing very different reactions to the same serum. The results of these observations led Sacquépée to consider these colon infections as complications of typhoid fever.

The only difference between his observations and the cases that have come under my notice is that, in all of the cases seen by him, the typhoid infection was severe, while, in my cases it was of a mild type and neither was the Eberth bacillus isolated, nor were agglutination reactions from broth cultures of the typhoid bacilli present.

FRACTURES OF THE UPPER THIRD OF THE FEMUR.

By W. BURT, M. D.,

PARIS, ONTARIO.

As it does not yet seem to be generally established that all, or nearly all, fractures of the femur may be treated by the straight position with Buck's extension apparatus, I will add to the record one of my latest experiences, with the permission of Dr. Sinclair, who asked me on the day following the accident to see the case with him and others. The doctor has handed me a short history of the accident, which is as follows:

Y. L., æt. sixteen years, always enjoyed good health. He met with the present accident in the Y. M. C. A. gymnasium on November 16, 1901, while trying to jump over a horizontal bar three feet from the floor. He caught the left foot, which tripped him, and he fell with great violence to the floor.

He was seen shortly afterward by Dr. Dunton and myself. Under an anæsthetic, we found the femur dislocated upward on the ilium, which was reduced, the head of the bone going in with a thud. After the reduction of the dislocation we discovered that we had a fracture of the upper third of the femur to deal with and shortening to the extent of two inches and a half, the proximal fragment projecting markedly forward and outward. On an assistant making extreme flexion and extension upward, I could push the upper fragment into place, but the moment I let go it would tilt forward. The greatest flexion on the part of the assistant would not reduce the fracture. We put him up with a flexion apparatus, but the displacement remained.

I have been induced to publish this case on account of the articles by Dr. Hibbs and Dr. Shaffer in your issues of February 1st and 8th, and for the reason that there are to-day teachers of surgery who would think it a criminal procedure to treat a fracture of the upper or lower third of the femur in the straight position. I feel that if ever I had a bad case and was proceeded against for malpractice, there are many surgeons who would testify that a better result might have been obtained by the flexed position.

In my early days, when I was an interne in the Brooklyn City Hospital and fractures of the thigh were somewhat numerous for a time, I gleaned from Hamilton's classical work and discarded double-inclined planes and flexed positions altogether, and I have never had reason to repent, fractured thighs coming under my care now and again ever since.

In the present case Dr. Sinclair, with the assistance of Dr. Dunton and Dr. Scott, put up the fracture in the flexed position, and with all that they could do the upper fragment was plainly visible projecting forward and outward. Their faith was in the flexed position. I felt that the straight posi-

tion could not make matters worse and possibly a good deal better. The flexed apparatus was removed and Buck's extension applied. The projection forward of the upper fragment disappeared in a great measure almost immediately, and I felt that the condition of affairs would still improve and that in a few days at least the fragments would be in the best possible condition, which took place.

I examined our patient about three weeks ago at the request of Dr. Sinclair. I found him in the garden using a wheelbarrow and scarcely favoring the injured limb at all. The contour of the limb was normal. A better result could not be desired. Any unevenness on the outer side could not be detected, nor was there shortening to the extent of five millimetres.

I may state here, what is self-evident to every one, that the tendency of the upper fragment to tilt outward is completely overcome by Buck's extension apparatus, which brings both fragments into a straight line, and the pelvis does the tilting, which often makes the fractured limb to appear the longer. This is why I take exception to the necessity of abducting the limb when applying the apparatus. There are other points which the advocates of the extension splint allege for their method, which those in favor of Buck's apparatus will not concede to them, *e. g.*, immobility of the pelvis, continuous extension, and mobility of the lumbar spine.

Not long after the above-mentioned case occurred, Dr. Sinclair had a compound fracture of the lower third of the femur in a boy, æt. twelve. Although the lower part of the thigh was much swollen, the same procedure was adopted, and the result is most promising. The doctor tells me that there is not a quarter of an inch shortening, and the patient is walking without a cane, favoring the limb very little. Coaptation and the long side splints were used in both cases.

While I should not say that there are not many surgeons who can obtain good results with inclined planes and extension splints, neither should I like to say that a better result might have been obtained in some cases by the straight position with Buck's appliance. In the present status of affairs I do not think that those who pin their faith to the flexed position should malign those who have greater confidence in the straight position or give testimony against them in case of suit for malpractice. It is next to impossible for the surgeon to visit a case several miles in the country and make daily changes of the dressings, as is required with the extension splint, whereas almost any onlooker can attend to the treatment by Buck's plan, and then, again, it is so simple, no special apparatus being required. The use of an anæsthetic is seldom required unless it is thought desirable to use plaster of Paris, both as a

coaptation splint and to prevent shortening after reducing the fracture, a plan to which, if I remember right, the late Dr. Henry B. Sands was very partial.

Lectures and Addresses.

ABSTRACT OF AN ADDRESS MADE BEFORE THE SOCIETY OF THE ALUMNI OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK.

MAY 17, 1902.

By CHARLES K. BRIDDON, M. D.,

NEW YORK.

I do not know who is responsible for the adage or observation that has been handed down from antiquity that the span of man's life is only three score years and ten; but I strongly suspect that it emanated from some who had reached that limit without accomplishing anything satisfactory, and, not wishing to depart without leaving some issue, scientific, literary, or in the other various activities, sought an extension to work out his personal ambition.

The ego is more or less a prominent feature in most of us; in some it is to serve others by lifelong study into the causes of things that are inimical to the well-being of humanity, and in many this sacrifice is made with no other ulterior view; in others it may be only ambition, personal and pure; fame that he only grasps who outwits or outruns his fellow-man in pursuit of the object of his life. For the accomplishment of these ends, the span of life referred to is short indeed, but inasmuch as we are all aided by what has been done before and what is being done by co-workers, the results are not barren by any means.

Referring again to the time limit, I can speak from personal experience because I have been there, but before reaching it quite, I had sufficient personal interest and introspection to recognize the fact that all was not well. I could distinguish the mutterings of revolt in the mechanism that I had a personal interest in, and, like the "Good Physician," I determined to investigate, but I could not determine as to whether the encephalic or abdominal brain was at fault. Some of you may remember that the function of the latter was given to the semilunar plexus. I did not consult anyone, because I did not confess my weakness; that was my infirmity.

At the period of which I am speaking, our illustrious colleague at Chicago had not given to the world his studies bearing on the subject of parthenogenesis, in which he likens man to a mass of

protoplasm, controlled by an electric plant in which his stomach represents the dynamo, his nerves the connecting media, the telegraph wires for connection between the different parts of the body and the storage battery in his brain. Then, most wonderful of all, the fertilization of the sea-urchin without the consent or approval of the urchin's love. All this will undoubtedly bear upon the future, but my interests were in the past and present.

Going back to where I switched off to the things that I knew not of, I came to the conclusion that there was a strike or protest on the part of some of the employees in my internal economy, and that I would circumvent those that were up in arms by closing the plant for repairs, and it might happen that, while I was waiting to resume, some good student peering into the hidden mysteries of life might discover the electrical energy, enzyme, or other agent that could liquefy the coagulating protoplasm, and send it again on its way of life and youth and endurance unto the end.

Excuse me if I have transgressed in treating a subject of such transcendent importance with unbecoming levity. Do not believe that I underestimate the unflagging zeal, the untiring and ceaseless energy that have revealed facts of such momentous importance. I would remind you that, though there are many workers in the field, it is often by their united labors that the greatest results are obtained; each giving his quota either to sustain or correct the observations of his fellow-workers. There is ample room for all, and in the future, which is pregnant with so much, the probabilities are that in this great country the opportunities will be greater and that you will not be required to visit the mother country in search of the necessary training for the technique of laboratory work. Ponder over the advantages that may accrue to those of you who have the mental endowments necessary to pursue such investigations, and may you succeed in your earnest efforts to add to the store of facts in the elucidation of the unknown. Nature will not give up her secrets without a struggle, and in the contest you will often be disheartened by meeting with failure in some by-path into which you have been lured by false lights. You will often have to retrace your steps, and, maybe, have to do all over again; but with the proper unflinching spirit of the investigator you will, I trust, come out of the contest crowned with the laurels of enduring fame.

And, now, gentlemen, I will endeavor to redeem the promise made your president to give a few "Reminiscences of nearly half a century in Medicine and Surgery," of the hard lines of a practitioner in either of those two departments in the earlier period of that time, and of the comparative ease with which he succeeds in achieving the same results

to-day. This statement is intended to apply to the practitioner. The student of those days, of course, was not so well prepared; the "curriculum" was short, the didactic or scholastic lectures were not highly impressive, and there was little or no laboratory instruction. So, when the young man had obtained his legal qualifications, he was still ill-fitted to begin his career as a healer of the sick. In the eager competition for a position in one of the few city hospitals, many, of course, failed of success, not on account of any inherent lack of the necessary qualification, but because the vacancies were few and the applicants were many. In many instances he had to select a place where he might hope to gain a foothold in the battle for life, and his lot was certainly not an enviable one without the necessary training under competent clinical instructors. His early career was saddened by catastrophes and disappointments sufficient to dampen the ardor of even the most resolute and sanguine. If the proper material was within him, his careful observation of the cases entrusted to his charge would in the end bring an experience equally enduring with that acquired by those of his more fortunate classmates who had succeeded in getting positions where they could watch the processes of disease without assuming the responsibilities associated with its treatment.

I regard the man who leaves the great centres of learning in our large cities, and who goes out into the backwoods to practise medicine and succeeds, as a hero. He learns rapidly to deal with emergencies; he becomes self-reliant and trustworthy. Of course, he has to contend with many things; he recognizes that his failures and his successes are the gossip of the community in which he lives. The tongue of malice, which exists everywhere, may assail him, and he may have to drink of many a cup bitterer than those he prescribes for others, but if he has tact and judgment, he will grow up with them socially as well as professionally. Their sorrows and their hours of gladness will be mingled with his own; his counsel will be sought in matters outside of his proper vocation, and, when the period of his labor closes, he will be solaced by the conviction that he has done his work well, and that he will live in the memories of those who survive him.

I know of no more fitting illustration of the good accomplished by such men than that given by Ian Maclaren in his *Bonnie Briar Bush* stories, in his description, "A Doctor of the Old School." The village doctor, William MacLure, "who was chest doctor and doctor of every other organ as well; he was accoucheur and surgeon; he was oculist and aurist; he was dentist, chloroformist; besides being chemist and druggist;" and whose risks of life in a practice covering more than thirty miles in the

bogs and snowdrifts of Scotland earned for him more love in the hearts of his countrymen than that attached to the Victoria Cross won by other men in other fields. However, do not think that I am disposed to award all praise to the "village doctor," notwithstanding the high esteem I have for him, for in most of the walks of life there are good, bad, and indifferent. I have come in contact with types of all these grades.

Now, I must speak of the city general practitioner of fifty years ago, and I can assure you that, if he was one of those fortunate ones who had gained any degree of popularity with the masses, his occupation was no sinecure. The rank and file of the profession were at no time secure of obtaining an unbroken night of sleep; I may safely say that for the first twelve years after I was fairly engaged in practice I rarely passed a night without being summoned to some bedside. I was surgeon to the male attending department of the New York Dispensary from 1857 to 1865, an institution that averaged about forty thousand medical and surgical cases a year. I had made arrangement with the district physicians to attend personally to all the surgical cases in which the patients would not or could not be sent to a hospital. I had my hands full; operations of all kinds had to be done in tenement houses of the poorest kind; many tracheotomies and herniotomies were done at night in rooms illumined with tallow candles, or in some more favored place with a kerosene lamp, with untrained assistants, and with few or no antiseptic precautions. There were other dangers; often the mutterings outside the locked door were significant of the possibilities of personal violence in the event of the issue of the case not being successful.

I have always regarded that period of my life in which I was on the staff of the New York Dispensary as the most active and trying in my professional career. Besides the duties appertaining to that office, I was engaged in active practice among the poor, and consulted in most of the emergencies in the lower wards of the city. It certainly was not lucrative, but the reward came, nevertheless, in the consciousness that I had done the work to the best of my ability.

Before I became associated with the Presbyterian Hospital, anæsthesia had divested surgery of its most disagreeable feature. Aseptic precautions were not then in existence, but antiseptic resources had rendered many things possible that would have been reprobated at an earlier period. With the advent of asepsis all things were made subservient to the will of the operator; the three great cavities that nature had enclosed with walls, before regarded as impregnable, were now opened with impunity to the scrutinizing eye of the investigator, and now it would

be difficult to find anything in the whole domain of surgery which the practitioners in that department cannot accomplish. Their triumphs have been nothing less than wonderful, and it is difficult to conceive that there remains much more to be done.

I scarcely like to speak of the past in connection with the Presbyterian Hospital; things are so changed from what they were a quarter of a century ago. Then we had no trained nurses, the examinations of applicants for the house staff were not of such a character as to ensure us the best of men; the staff of attending physicians and surgeons was too numerous to work to the advantage of the patients; but time changed all these conditions, and now I think we may safely say that the institution ranks with any of its kind, either in this or any other land. The high standard of teaching and the immense opportunities for observation have, naturally, attracted the very best-equipped men for positions on the house staff, and this emulation to get there has gone on increasing, and is becoming a more pronounced feature every year. In fact, I do not think a man who was not fit would have the courage to enter the list of those who offer themselves for such positions.

I must not forget to mention one other very potent factor in the success to which the institution has attained. I refer to the training school for nurses. A few weeks ago, in a conversation with Miss Anna Caroline Maxwell, one of our most distinguished women engaged in the training of her sex for nurses, allusion was made to remarks made to her in 1873 by one of Boston's most celebrated surgeons, in which he expressed the apprehension that the training of women would conflict with the career of men, and their education would make them dangerous competitors. I must confess that when the present organization, the New York Training School for Nurses, came into existence, I myself looked upon it with some disfavor. It was my opinion at that time that women selected from the lower classes, feeling themselves elevated by being placed in such positions of trust, would not do the best work. I had no idea that vacancies would be so eagerly sought after by the best intellect in the land, and that their scientific training would place them on a level only subordinate to that of the physician himself. How much our own anxieties in private practice have been diminished by their faithfully performed duties in the sick chamber only those can appreciate who were engaged in practice before the advent of the trained nurse. Then the physician was called to the sick at all unseasonable hours; now his co-laborer quiets the anxieties of the patient and the still more annoying and vexatious ones of the patient's friend, and the attending physician has only to make his visits at seasonable hours, with the

conviction that he will not be disturbed without good and sufficient reason.

To such arguments as those adduced by the Bostonian and myself, before either of us was convinced by the proofs that came after, I would reply that the field is sufficiently large to afford abundant opportunities for both; and in the process of evolution that is going on over the whole crust of the earth the trained nurse might be properly regarded as a variety or subvariety of the genus *medicus*, and that it might be possible in æons of time, with proper surroundings and adaptation, that she might equal or surpass the physician. Even with such remote possibilities it would be our own fault, and would be only another proof of the "survival of the fittest."

In concluding this fragmentary address, I cannot refrain from paying my tribute to one who has been removed from his sphere of usefulness in the Presbyterian Hospital by the hand of death; I need scarcely say that I allude to our beloved and lamented friend, the Rev. Thomas G. Wall, D. D. Coming into frequent contact with him during all the years in which he filled his offices in this institution, first, that of superintendent and, subsequently, when it was considered that the duties of that office were too onerous, when the office of chaplain was created for him, I found him ever the same kind and courteous gentleman, commanding the respect and admiration of all those who came in contact with him. Suffering for a long time before the end came from a malady associated with such agonizing paroxysms as would have confined most men to the sick chamber, he continued performing the various duties of his office on to the end, dying in the act of administering one of the rites of the church at the bedside of one of the inmates of the hospital. A nobler termination to a career devoted to the afflictions of others and culminating in a moral grandeur that could not be eclipsed by anything conceivable to the finite mind, it would be difficult to think of. He has passed from among us, but he will live in the memories of all those who knew and loved him, an example for us all.

Correspondence.

LETTER FROM MANILA.

Cholera in the Philippines.

MANILA, P. I., April 18, 1902.

In a previous letter were discussed measures adopted by the sanitary authorities against plague, which for the third consecutive season threatened the city. While entire districts were being turned over to the disinfecting brigade and the campaign against rats was waged with unflagging energy, while the wily native was being protected, willing

or unwilling, through serum inoculations, and returning coolies scrutinized with ever-increasing vigilance, a visitor far more unwelcome than the pest gained admission under cover of Chinese food-stuffs.

On March 20th a Filipino cochero, or coachman, was seized with violent cramps while driving his cart through the streets, and removed to the Spanish Hospital, where he died in a few hours. About the same time another native, showing similar symptoms, was found dying in another portion of the city, and the subsequent autopsy confirmed in both cases the suspicion of Asiatic cholera. The pathological findings were typical and the bacteriological data unassailable.

These cases were traced to the barrio known as the Farola, a squalid native section bordering on both bay and river, built of nipa and bamboo—its crowded huts set up on posts which were half-submerged at high tide. The insanitary condition of this quarter has been a thorn in the side of the sanitary board for three years, so no time was lost in placing a cordon about it and inaugurating a system of house-to-house inspection. More cases of cholera were discovered, and found to follow the use of certain fruits and vegetables on sale in the foul shops scattered through the barrio.

The gravity of the situation was so evident that full power was at once given the board of health to deal with the matter as they deemed best. All fruits and vegetables on sale in the city were condemned, appraised, and destroyed; wells were closed; circulars, printed in Tagalog, Spanish, and English, and giving in full information regarding the modes of contracting the disease, were scattered broadcast.

It was also decided to burn the Farola, and build a large detention camp, but in the meantime hundreds had escaped, either by way of the river or through the cordon at night, carrying their infected food and their sick and dying, and launching an epidemic which at this writing, four weeks later, has already claimed one thousand victims.

Instead of having one focus to deal with, the authorities soon faced a score, cases being reported from every district in Manila and from all the outlying barrios, in addition to those found on river craft or among the crews of coasting vessels.

To meet this emergency, detention barracks capable of housing many thousand people have been constructed, and the city has been divided into inspection districts, with an army medical officer in charge of each station. With him are inspectors, native and white, whose duty is to make house-to-house examinations, reporting all cases of sickness or death. When cholera is found, the patient is sent to the plague hospital and all "contacts" are re-

moved to the detention camp. The house is disinfected, clothing destroyed, and a guard placed over the premises.

The source of the city's chief water supply is guarded day and night, and, in addition, distilled water from the government ice plant is distributed free. Those who are familiar with the Filipino character will appreciate the difficulties we are encountering, notwithstanding the very hearty co-operation of the military and the better class of business men.

No native would dream of reporting a case of sickness in his family, through dread of the thorough cleansing his house would receive and the detention he would undergo. He combats the regulations with a persistency that would win him laurels if directed to better purposes, and inhumanly drives or carries from home, at night, those of his family stricken with cholera. Persons affected have been found a mile away from the nearest dwelling, lying dead in field or roadway; children have been discovered dying, alone and uncared for, in houses where a few hours previous scores of natives had lived. Ambulant cases, spreading contagion through their discharges, are gathered in blocks away from the hut they are driven from.

Especially is this concealment noticeable along the river banks and among the water population, where the disease is spreading most rapidly. Thousands of the lowest class live on lighters known as *cascos*, having at each end a small coop, where from ten to twenty men, women and children, with a generous allowance of dogs, cats, and fighting cocks, huddle together and drag out their wretched lives.

When a case of cholera is found on one of these boats, it is concealed, and, should death ensue, the body weighted and thrown into the river or bay, which first receives all the discharges. Distilled water and cooked food being very unpalatable to a Filipino, he drinks this infected river water and eats fish, practically raw.

The result is obvious. Since the first case was reported, about thirty bodies dead of cholera have been found floating in the Pasig or on Manila Bay. Some were partially weighted, others anchored in shallow water. Probably these figures represent only a small proportion of the actual mortality, and must be added to the large number of cases found before death on *cascos*, by sanitary officers assigned to river and harbor work. With such a handicap to successful epidemic work, it is not surprising that the disease shows no abatement, and that new centres of infection are heard from every day, both in the city and in adjacent provinces.

Thus far, Manila has had 420 cases, with 368 deaths, and the provinces 640 cases, with a mortality of 506. Of these, there were seven cases among

Americans, with four deaths, and six in the Spanish colony, with six deaths.

The clinical picture of the disease follows closely that described by writers, but the mortality rate is unusually high. This is explained by the fact that cases are usually seen too late to be benefited. The onset is sudden, after from one to two days' incubation, and marked by stabbing pains in the abdomen, rapidly followed by violent purging and vomiting. So severe are these symptoms—draining as they do the blood and tissues, while the toxins attack the vital forces—that in a few moments, often, prostration ensues, as complete as though by lightning stroke. The rice-water discharges continue if the attack is a fatal one; the pulse is thready, rapid, and irregular and soon becomes imperceptible; the features are sunken; the eyes are glazed; the respiration is shallow; and the temperature is several degrees below normal. The fingers have the peculiar puckered appearance noticed after prolonged submersion in water. The mind remains clear to the moment of death. Violent contractions of the thigh and leg muscles are a distressing feature of the algid stage, and these may go on for some time after death. If the attack is less severe, reaction occurs in the course of from two to six hours. The temperature rapidly rises to 98.6° or 100.4° F.; the features become more natural-looking; urine and bile are secreted; and often in a day or two the patient will have recovered his normal health. Many instances of choleraic diarrhoea are found—ambulatory cases that constitute one of the greatest manaces known. All cases coming to hospital are examined bacteriologically, and the cholera vibrio is readily isolated.

So long as the main water supply remains uncontaminated, the epidemic can be kept within the limits above mentioned, but we realize that the city is over a veritable powder mine whose fuse may be ignited by black hands at any moment.

Manila was visited in 1882 by the same destroyer, and 30,000 deaths were recorded in three months. Every possible precaution is being taken by the Marine-Hospital Service to protect other ports in the archipelago and the United States. Vessels are required to anchor five days in the bay, with full personnel aboard, before proceeding to their destination; clothing is disinfected and the food and water supply are supervised.

What the end will be or when, no one may now forecast, but certain it is that if intelligent, faithful, honest effort counts for anything, cholera in Manila will be eradicated with but a shadow of the loss sustained in the days when prayers and processions were depended upon more than pure water and the sanitary police.

Therapeutical Notes.

A Spray for Acute Rhinitis.—The *Maryland Medical Journal* for April gives the following:

℞ Carbolic acid.....I grain
Menthol.....I "
Oil of gualtheria.....I minim
Liquid petrolatum.....I ounce
M. To be sprayed into the nares four or five times daily.

A Local Application for Neuralgia and Myalgia.—The *Practitioner* for April gives the following:

℞ Tincture of aconite.... } .of each..2 drachms
Tincture of belladonna. }
Tincture of opium.....4 "
Spirit of chloroform.....I ounce
Spirit of camphor.....to make 4 ounces
M.

For Acute Articular Rheumatism.—*Médecine orientale* for April 25th gives the following:

℞ Sodium salicylate.....7½ drachms
Iodoform.....2½ "
Petrolatum.....3 ounces
Extract of hyoscyamus.....75 grains

M. For external use.

A Gargle for Offensive Breath.—The *Practitioner* for April gives the following:

℞ Solution of chlorinated soda....I drachm
Peppermint water.....6 ounces.
M. ft. garg.

For Hemicrania.—According to the *Arte medica* for March 30th, Kowalesky favors the following formula:

℞ Sodium bromide.....2 drachms
Tincture of strophanthus.....30 minims
Cocaine hydrochloride.....1½ grain
Orange flower water.....6 ounces

M. From two to three tablespoonfuls daily in a little milk.

Suppositories for Spermatorrhœa.—The *Gazetta Medica Italiana*, for March 20th, ascribes the following suppositories for reducing local congestion in spermatorrhœa to C. Colin:

1.

℞ Ichthyol (or sulpho-ichthyolate of ammonium).....from 3 to 6 grains
Extract of belladonna...from 1/6 to 1/3 grain
Extract of hyoscyamus...from 1½ to 3 grains
Cacao butter.....45 grains
ft. suppos.

2.

℞ Mercurial ointment.....from 3 to 6 grains
Extract of belladonna...from 1/6 to 1/3 grain
Cacao butter.....45 grains
ft. suppos.

3.

℞ Potassium iodide.....3 grains
Iodine.....1/7 grain
Extract of belladonna.....1/3 grain
Cacao butter.....45 grains
ft. suppos.

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THE DOCTOR AS AN ADMINISTRATOR.

We have always contended that there was no sufficient foundation for the notion largely entertained by business men to the effect that physicians as a class were almost destitute of administrative ability. Over and over again, in support of our contention, we have pointed to the admirable administration of the great military general hospitals during the civil war. We may instance also the numerous examples of the successful conduct of the business affairs of lunatic asylums by the medical superintendents, affairs which, while they ought not to be allowed to interfere with those officers' strictly professional work, do perhaps afford a restful diversion, and so really contribute to their efficiency as alienists. In addition, we doubt if any business enterprise is better managed than the purveying done for the army, the navy, and the Marine-Hospital Service by their medical officers. Finally, we may point to the financial management of such bodies as the New York Academy of Medicine, the New York Society for the Relief of Widows and Orphans of Medical Men, and the New York Physicians' Mutual Aid Association, as well as to other like institutions in various parts of the country, to vindicate the reputation of our profession for administrative capacity.

But the general public knows little if anything of all this; surely, however, it cannot shut its eyes to such occasional conspicuous instances of the success of medical men in lines other than the strictly professional as are furnished by Dr. Elisha Kent Kane's achievements in arctic exploration and by the more recent career of General Leonard Wood. Starting as an officer of the medical corps of the army, Surgeon Wood quickly showed himself a brave and skilful soldier, as well as an efficient med-

ical officer, and, more than that, by his subsequent course, after he had become a general officer, as the military governor of Cuba during a great part of the American occupation, an exceptionally successful manager of very diverse affairs under circumstances that most men would have found exceedingly embarrassing. There has been nothing in General Wood's career that has had to be explained away; it has been altogether creditable, and he has now delivered Cuba into the hands of its own people, who, we believe, esteem him as highly as his fellow-countrymen do. Rarely has it been given to any man to govern a foreign community with so little friction or discontent as has marked General Wood's management in Cuba. The credit that everybody must accord to him is in no small measure to be received by the medical profession as a tribute to itself. Dr. Elisha Kent Kane and Dr. Leonard Wood have won laurels not only for themselves, but also for the American medical profession, in paths widely divergent from the practice of medicine. One of the greatest sources of satisfaction to any man whom the world recognizes as having deserved well of it is the reflection that he is able to add lustre to the guild to which he belongs. Such in a preeminent degree must be a leading element in General Wood's well earned gratification.

STATE COMPETITION WITH COMMERCIAL ENTERPRISE.

In the *Boston Medical and Surgical Journal* for May 15th is an editorial on the State Production of Vaccine Material. A Bill recently presented to the General Court of Massachusetts, on the petition of the chairman of the Boston health board, for a provision, with appropriation, for the manufacture and free distribution of vaccine by the Massachusetts State Board of Health, was unfavorably reported. Shortly afterward a sensational statement appeared in a Boston newspaper concerning the condemnation of a cow that, on inspection at the abattoir where it had been slaughtered for food, was found extensively tuberculous. It was further alleged that this cow had recently been used for vaccine production. These facts were brought to the notice of the chairman and the secretary of the State board of health, whereupon the question was reopened before the same committee on May 5th.

Our contemporary evidently favors the object

aimed at in the bill under consideration. On reading the editorial, one would suppose that evidence very damaging to the manufacturers of vaccine had been discovered, and that the hearing clearly demonstrated the necessity for the measure. It is difficult to understand on what ground this conclusion was arrived at. We have carefully read the official report, and we are constrained to say that, in our judgment, the whole weight of evidence and argument therein emphatically confirms the standpoint we have always adopted on this subject, namely, that the function of the State is not to enter into commercial competition with manufacturers, but rather to safeguard the public health by the exercise of an impartial examination of the purity of all commercial products on the market. This it can never do, or at least can never command confidence as to its doing, if it enters the lists as a competitor.

The evidence in regard to the cow, adduced for the purpose of enforcing the necessity for the measure, is of the most unsatisfactory nature. Without doubt a cow that was slaughtered was the subject of extensive and long standing tuberculosis, and without doubt, also, it had many vaccination scars; but while it was alleged that the cow had been *recently* used for the production of lymph by a Massachusetts vaccine firm, and that its sale to the slaughterers was traceable to a certain person known to lease cows for vaccine inoculation to the said firm, no effort was made to establish these points further than by the hearsay of two employees of the abattoir where the animal was slaughtered, and none at all to trace the history of the cow prior to its purchase for slaughtering. The opponents of the measure, on the other hand, produced a certificate from the alleged seller, stating that he had never been refused payment for any of his cows, as would undoubtedly have happened had the cow in question been purchased from him. For all substantiable evidence adduced to the contrary, the cow might have been recently imported into the State. The recent vaccination, if recent it was—and it is doubtful whether after the lapse of some weeks it could be positively known if a scar was very recent or not, seeing that the hair does not grow again over the scar—might have taken place anywhere in the country. The alleged negligent Massachusetts vaccine establishment was reported only within the past few weeks, *on the first inspection of any such estab-*

lishment made since 1894 by the board of health in performance of its prescribed duties, as being in all respects “in the pink of condition.” And, further, the agent, whose attention had been directed to this tuberculous cow as being a recent vaccinifer, admitted that, although cows were condemned as tuberculous nearly every day at the slaughter house, he had never before seen a tuberculous cow that presented signs of having been used for vaccine production.

Briefly, the contentions of the opposing parties may be summarized as follows. For the bill: The State compels the individual to submit to vaccination, therefore the State must give the best possible guaranty of the purity of the material used. There is no means of testing the purity and trustworthiness of lymph after its production. The only way to afford such guaranty is to have every step and detail of the production under the guarantor’s control. It would not be feasible for the legislature to say that some one establishment in Massachusetts should produce the vaccine and sell it, and that the State board of health should supervise its manufacture, for it would be practically impossible to exclude from sale within the State the products of laboratories in other States, over which the board would be necessarily unable to exercise supervision. Consequently, the only available plan is for the State to manufacture its own vaccine and, by free distribution, cut the ground from under the feet of the commercial houses, thus assuring a monopoly for the only product that it could guarantee.

Against the bill it was urged that the purity of lymph could be, and habitually was, tested by all reputable producers after its manufacture; that, even if produced by the State board itself, it ought to be tested before being issued; that the State board could buy, at a reasonable price, all the pure lymph needed; that the board, by supervising the production in the State of Massachusetts, or, in the case of vaccine produced outside the State, by requiring medical certificates that all such conditions as might be deemed essential had been complied with, and by testing all vaccine on the market, could safely give an adequate guaranty; especially since, on its own showing, no guaranty could be absolute, and that of the State would not involve liability, while commercial concerns, dependent entirely upon their reputations, had the penalty of loss always before

their eyes; and, finally, that it could more efficiently and less expensively serve the public interest if, instead of embarking upon the manufacture of vaccine, it performed those already prescribed duties—the inspection of commercial concerns in the State, and the examining and certifying of all lymph sold, wherever produced—which it had hitherto admittedly neglected, because it “had got too many other things to do”—a curious reason, by the way, for seeking to have imposed upon it further arduous labors.

It is to be noted that at a recent meeting of the committee to consider a bill for the abolition of compulsory vaccination, it was stoutly maintained, in supporting the propriety of compulsory vaccination, by the very parties now urging this measure as rendered necessary by the untrustworthiness of the commercially produced vaccine, that perfectly pure lymph could be bought at any time in open market. Dr. Francis C. Martin, moreover, whose name commands respect, and who has been in the business for thirty years, though producing now only in very small quantities, averred that he did not know of a single vaccine producer of any prominence who had not tried his very best to produce the best possible quality of lymph, and whose chance of succeeding was not fully as good as that of any board of health.

The *Boston Medical and Surgical Journal*, in conclusion, says: “Under present conditions it may reasonably be inquired What guarantee have the people that any protection can exist in the future as to the purity of the vaccine which is produced in Massachusetts?” The answer to this is best inferred from the following passage toward the end of the hearing: “Q. Doctor, suppose the State manufactures lymph, what guaranty has the public got that it is absolutely pure? A. Just the same that all private establishments have—that the board would employ the best persons to carry on the work; those who were entirely reliable.”

So it seems that, after all, this subversion of all the principles of economics, the subsidizing of the State to enter into competition with private commercial interests, bases its justification on the ground that it could make just as good lymph as other concerns, by taking the same precautions that they do!

THE “TRUE INWARDNESS” OF MEDICAL PHILANTHROPY.

It must be a matter of gratification to the members of the medical profession everywhere to learn that one of the most insidious schemes ever conceived for the exploitation of the profession—an end persistently sought by certain commercially-minded persons to whom no form of labor is a sacred service, but all are merely methods of accumulating wealth—has signally failed. The “Birmingham Consultative Institution” was inaugurated in England just about a year ago, the ostensible object being to supply expert “consulting” medical and surgical opinions at the reduced fee of half a guinea (about two dollars and a half), to such persons as could not pay the full consulting fee of five dollars, and yet were not fit subjects to receive gratuitously the attention of consulting physicians and surgeons at a hospital. To understand the position clearly, it is requisite in this country to point out that in Great Britain there exists a more or less defined division of the profession into general practitioners and consultants, medical and surgical, independently of the various specialists, who are *ipso facto* consultants. The line is so marked that a young physician, on graduation, elects usually which branch of the profession he will follow, and it is very rare and very difficult for a physician to pass from the ranks of the practitioners into those of the consultants if he once casts in his lot with the former.

The two branches of the profession in Great Britain, in fact, present a cleavage analogous to that existing there between the solicitor, or attorney, and the barrister, or counsellor-at-law—neither of which distinctions obtains in this country save incidentally in individual instances and apart from any recognized difference of legal status. No better instance of the struggles of the candidate for a consultant’s position can be obtained than is afforded by the *Memoirs and Letters of Sir James Paget*, reviewed at some length in one of our recent issues.

This being clearly understood, the insidious nature of the scheme becomes evident when it is stated that centrally situated offices were taken, and from the younger ranks of highly qualified medical men aspiring to a consultant’s career, a physician and a surgeon were appointed, at a salary of £500 a year each, to act as consultants for the institution, which charged for their services the half-fee of \$2.50.

The institution figured its expenses, including the two salaries, at £1,500 a year, and, estimating on a basis of twenty consultations daily at half a guinea each, its receipts at £3,000 a year, thus allowing for a snug little profit of £1,500, or cent per cent, for the backers of the institution. The scheme would have deserved no other consideration than that accorded to the "battle of the clubs" and other objectionable forms of contract medical service, but for the extraordinary fact that it secured the support of the Hospital Saturday Fund. The *Lancet* lent its powerful aid to the exposure of the plot, and this, combined with sensible organized action of the recognized "consultants" of Birmingham, who pledged themselves individually and collectively to see patients for the reduced fee in all fit cases properly referred to them by a general practitioner, or even, under exceptional circumstances, without such reference, has resulted finally in the collapse of the consulting institution.

"The attempt to exploit the medical profession," as the *Lancet* says in its issue for April 26th, "was an unworthy one," for such consulting advice "the Consultative Institution never could have given them by a system of consultant medical officers possessing no opportunities of gaining clinical experience." "The belief that a young man, attracted by a salary adorned with the label of 'consultant,' became capable of giving superior medical advice was ridiculous."

It is time for the public to learn that its interest will never be served by pitting medical men against one another, however true it may be that "competition is the soul of 'business'." So far as our experience goes, no medical man of acknowledged rank in his profession, in any country, will refuse the aid of his special knowledge to any brother practitioner who may need it—gratuitously if for himself or immediate members of his family, or in the case of strangers for any fee which the medical attendant may know to be all that the latter can justly pay, or none at all if really necessary. But the consultant in such case renders his service to the *thesaurus medicinæ*, to the guild, through his brother, and through them to the human race—not to the individual patient as such. The latter has no greater claim on the physician than on any other worker, for gratuitous or inadequately remunerated service; but to the community the physician freely

renders his service, acting in his corporate capacity as a member of the body politic of medicine. It is this principle that underlies the very existence of sanitary science; it is this principle that leads him in all lands to give freely of his best services to his professional brethren when they become patients, that they may be restored to their work, not only for their own sakes, but for the common good; it is this principle that forbids him to keep secret his remedies or methods of treatment, that prompts him to publish openly to his fellows, in the societies or through the medical press, whatever of value his experience or researches may have disclosed to him; it is this principle that underlies and justifies the thousand and one precepts of "medical ethics," which the world at large, looking at the matter from a purely commercial standpoint, seems to find it so difficult to understand. It is not just to exact from the individual physician that he should ignore his own needs and interests and become a professional philanthropist; it is the science and art of medicine, of which the physician is only a part, that is the philanthropist, and the physician, while safeguarding his private rights, becomes, by a loyal adherence to his art and his profession, a factor in its effective action. There is no more reason that the individual physician, isolated from his corporate position, should be a professional philanthropist than that a stenographer in a charity organization society should refuse to receive a salary. Yet the profession of medicine and the charity organization society are both philanthropic institutions, and the individual member, whether obscure or preeminent, if he discharges his duties faithfully, not only in the letter but to the full extent of the spirit, from devotion to the cause, is *pro tanto* a benefactor to the human race.

THE DINNER TO SURGEON-GENERAL STERNBERG.

In our last issue we noted the fact that a dinner was to be given to Dr. Sternberg in New York on June 13th. The committee justly say in the circular of invitation: "We feel that the retirement of Dr. Sternberg from the army should not be allowed to pass without an expression on the part of his many friends of their appreciation of his long and faithful services to the country and to our profession. Entering the army in 1861, Dr. Sternberg served through the civil war, and rose by successive grades until in 1893 he became surgeon-general, an appoint-

ment which recognized the merits of his special services to the corps. In this office he has borne great responsibilities and has improved in many ways the organization of the medical corps, notably by the establishment of the Army Medical School. In the work of the profession at large he has been deeply interested. Not only have his contributions to the science of bacteriology been important and numerous, but in this country he has, by strong personal efforts and by active work in our societies, stimulated the scientific study of medicine and fostered and encouraged those researches which in the case of malaria, yellow fever, and other infectious diseases have proved to be of such enormous value. During a long series of years Dr. Sternberg has been a warm advocate of all measures to promote the public health, and has unselfishly devoted much time to the work of national and local health societies and to the establishment of efficient legislation. His contributions to our knowledge of disinfectants are of special importance." The country is indeed indebted to Surgeon-General Sternberg for long and meritorious service in the army, and in particular has the profession of medicine been powerfully upheld by his judicious course in the high office he has held for an unusually long period. We congratulate him on this spontaneous recognition of his merit and on the probability of his being retired with the rank of major-general.

A COMMON SENSE ATTACK ON THE ABUSES OF HOSPITAL PRACTICE.

Dr. George R. Fowler, of Brooklyn, deserves the thanks of both the profession and the public for his resourceful public spirit displayed in a novel, but at the same time obvious method of meeting the imposition practised upon the hospital system by unscrupulous persons. On May 21st Dr. Fowler brought suit against eight patients on whom he had operated in various hospitals to which he was attached, for recovery of fees on account of his professional services, the patients being all of fair financial position and able to pay. Dr. Fowler's action was a matter of principle, and will undoubtedly cost him in time and money as much as he gains, so that it lays the profession under an obligation to him. If this example is followed by other physicians, it will undoubtedly do more to check the growing imposition on hospitals than any plan yet suggested, for which fact the charitably disposed who support these hospitals with their means will owe their gratitude, while even in the abstract the community must thank him for something effected toward stemming the tide of voluntary pauperization. Two of the cases were settled before they came up, and one half an hour later. In all the others either an adjournment was taken or judgment given for the plaintiff.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 2d.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, June 3d.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, June 4th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, June 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, June 6th.—Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, June 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

A Coroner's Physician Resigns.—Dr. Hamilton Williams has resigned the office of coroner's physician in the borough of Manhattan.

The Atlantic City Hospital has recently established a department of gynecology, of which Dr. William Edgar Darnall and Dr. E. Marvell have been placed in charge.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting on Tuesday, the 27th inst., Dr. A. B. Greiner opened the discussion with a paper on Malaria and Pregnancy.

Dinner to Dr. Bissell.—A dinner was given at the Saturn Club, Buffalo, on April 24th, to Dr. Bissell, by the members of his post-graduate class in bacteriology. The chair was taken by Dr. M. D. Mann.

Ten Francs the Legal Fee in Paris.—In a decision recently rendered in a law suit in Paris the rule was laid down that ten francs is the customary fee in Paris for people in a medium station of life.

Dr. Gustav C. E. Weber, while in attendance at a dinner given in his honor by the Cleveland Medical Library Association at the University Club, Cleveland, was stricken by paralysis, from which he has since partially recovered.

The American Laryngological, Rhinological and Otological Society will hold its eighth annual meeting in Washington, on June 2d, 3d and 4th, sessions being held in the Assembly Hall of the Cosmos Club.

Prof. Rudolph Virchow has recovered from his recent accident and was able a few days ago to leave Berlin for the country. During his absence, his duties of lecturing and examining will be undertaken by his three principal assistants.

Dr. Wyatt Johnson to Succeed Dr. Craik.—The Board of Governors of McGill University have appointed Dr. Wyatt Johnson, assistant professor of Hygiene, as successor to Dr. Craik, as Dean of the Medical School.

Denver Medical Colleges Unite.—By a formal vote of the controlling bodies, it has been decided to consolidate the Denver College of Medicine, and the Gross College of Medicine, of Denver. The details of the plans for the consolidation have not been published.

"Pingpongitis."—One of our contemporaries has an editorial, in its issue for May 24th, with the foregoing title. We do not like to be captious, but we note the absence of any acknowledgment of indebtedness to the author of "*New-yorkitis*."

The American Congress of Tuberculosis which was to have met in this city in May, has been postponed to June 2nd, 3rd and 4th, so that physicians desiring to attend the annual meeting of the American Medical Association at Saratoga can go to that meeting directly after the congress.

A Hundred Thousand Dollars for Cancer Research has been donated by Mrs. Collis P. Huntington to the General Memorial Hospital for the Treatment of Cancer and Kindred Diseases. The fund is in the nature of an endowment, the interest alone to be used.

The Dinner to Dr. Sternberg, which is to be given in New York on June 13th, will be in the nature of a subscription affair. Physicians desiring to subscribe should send their subscriptions to Dr. Hermann M. Biggs, 5 West Fifty-eighth street, who is acting as treasurer of the committee.

A Dinner to Dr. Thomas Addis Emmet was given at the Catholic Club on May 22d, Dr. Francis J. Quinlan presiding. Among the speakers were Dr. B. J. MacDonald, Dr. John Astell, Dr. John J. McCoy, Dr. Thomas J. Reiley, Dr. Constantine McGuire, Dr. Clement Cleveland, Dr. Thomas H. Manley, and Dr. George B. McAuliffe.

A New Building for the Long Island College Hospital will be erected by J. Rogers Maxwell at a cost of \$400,000. Henry W. Maxwell, brother of the donor, was president of the Board of Regents of the Hospital and presented \$100,000 to the institution towards the erection and mainten-

ance of the Training School for Nurses. On his death, which occurred recently, the bulk of his estate valued at several million dollars was left to his brother, J. Rogers Maxwell, who has agreed to erect a building for the hospital as a memorial to his brother.

Dr. Ohage Resigns.—Dr. J. Ohage who has made an enviable reputation as an energetic and efficient health commissioner of the city of St. Paul, Minn., has resigned because his protests regarding the abandonment by the city of its rights to a railroad in a street giving access to public baths and play grounds have been overruled.

An Emergency Chest for the House of Representatives has recently been provided for by an appropriation by Congress of the sum of \$500. The chest is to be in the keeping of the sergeant-at-arms. The medicines purchased must be approved by Representatives Wilson, of New York, Showalter, of Pennsylvania, and Ball, of Delaware, who are the three physicians who are members of the house.

The Bacteriologist of St. Louis.—C. A. Snodgrass, scientific instructor of the Washington University, has been elected by the City Council to the office of bacteriologist and pathologist for the city of St. Louis. Mr. Snodgrass is not a physician, and a formal protest against his election was presented by sixty-five physicians of St. Louis.

The Massachusetts Sanitarium for Consumptives at Rutland will get \$150,000 under an appropriation made recently by the State Legislature; \$308,400 has already been spent on the Rutland Sanitarium, and the additional sum appropriated will enable the authorities to complete the sanitarium and furnish accommodations for a great many additional patients.

Long Island College Hospital Alumni Banquet.—About three hundred members of the Alumni Association of the Long Island College Hospital participated in the twenty-second annual banquet of the Association at Pierrepont Assembly Rooms, Brooklyn, May 22d. Among the speakers were H. K. Fairbairn, Dr. William M. Polk, and Trueman J. Backus. Dr. William F. Campbell acted as toastmaster.

The New York Academy of Medicine.—At the meeting, which will be held on Thursday evening, June 5th, under the auspices of the Section in Ophthalmology, Dr. Richard H. Derby will present a paper on Contagious Ophthalmia in Industrial Schools, Asylums and Lying-in Hospitals. Papers will also be presented by Dr. Karl Koller, on Modern Methods Employed in the Prevention and Treatment of Trachoma and Other Forms of Contagious Ophthalmia, and by Dr. Frank Van Fleet, on The Laws of the State of New York Relating to Contagious Ophthalmia, the Results of their Enactment and the Desirability of Further Legislation.

A Sanitarium for Indigent Tuberculous Patients.—An association has been organized in New Jersey with a view to providing a sanitarium for indigent tuberculous patients, the following officers being chosen: President, Dr. Charles J. Kipp, Newark, N. J.; vice-president, Dr. Austin Scott, President of Rutgers College; treasurer, Col. Ed. A. Stevens, Hoboken; secretary, Dr. James S. Green, Elizabeth.

The Society of the Alumni of the Presbyterian Hospital.—On May 17th, when the society met for a dinner at the Arena, Dr. Charles K. Briddon delivered an address (see page 941). Some forty-five members, with honorary members and invited guests, were present. Following the dinner and the address by Dr. Briddon, other addresses were made by members of the visiting and consulting staffs of the hospital and by Dr. Booth, president of the St. Luke's Alumni Society.

A letter from Dr. Briddon was read presenting to the society a gold medal to be awarded every two years to that member of the Society of the Alumni of the Presbyterian Hospital presenting the most meritorious original essay on a medical, surgical, bacteriological, or pathological subject. The medal is to be awarded by a committee of three from the medical board of the hospital and the successful essay is to be published in the *Presbyterian Hospital Medical and Surgical Report*. In the event of none of the essays being of sufficient merit, the fund for the medal is to be used for the purchase of medical works for the library of the hospital. The medal to be first awarded was exhibited. It contains on its obverse a copy of a Greek bas relief representing Æsculapius greeting his disciples. A vote of thanks was presented to Dr. Briddon for his kind offer, which was accepted.

The American Orthopædic Association will meet at the Hotel Walton, Philadelphia, on June 5th, 6th and 7th. The evening of June 5th will be devoted to demonstrations with the plaster-of-Paris bandage, in the amphitheatre of the Jefferson Hospital, 1020 Sansom Street, the following programme being presented:

Dr. Reginald H. Sayre, New York, will demonstrate the method of upright suspension in the application of spinal jackets, and exhibit a rotary plaster saw.

Dr. R. Tunstall Taylor, Baltimore, will demonstrate the upright and small recumbent Kyphotones.

Dr. John Ridlon, of Chicago, will exhibit knives for cutting plaster.

Dr. Harry M. Sherman, of San Francisco, will exhibit a saw and separator and Plaster-of-Paris splints for club-feet, to demonstrate a method of anchorage.

Dr. Robert M. Lovett, of Boston, will exhibit a frame for the application of plaster jackets, with description of a method of application. Also some bandages and a practical bandage roller invented by Dr. S. Robinson.

Dr. Louis A. Weigel, of Rochester, will exhibit a removable plaster jacket and materials for making the same.

Dr. H. P. H. Galloway, of Toronto, will exhibit a very simple machine for making plaster bandages.

Dr. A. J. Steele, of St. Louis, will explain the advantages of wire gauze in connection with plaster bandages, and exhibit a saw and skin protector.

Dr. James K. Young, of Philadelphia, will demonstrate a method of applying plaster jackets in recumbency.

Dr. H. Augustus Wilson will exhibit a portable door-extension apparatus for applying plaster jackets. Also an apparatus for making plaster bandages. Also a circular saw and Reed's cutter.

American Medical Association.—A preliminary notice of the arrangements being made for the Saratoga Springs meeting was published in our issue for April 19th. Since that date further particulars of the programme have been made public by the committee in charge. All the passenger associations except the Southwestern Passenger Bureau have agreed to make a reduced rate of a fare and a third on the certificate plan good to return not later than June 17th. By depositing tickets with the agent in Saratoga Springs and paying a fee of fifty cents the ticket will be extended to July 2nd. Tickets will be on sale from June 4th to June 14th in the Trunk Line Association territory and earlier at distant points. All who wish to secure the advantage of this rate must secure a certificate from the ticket agent at the point of departure at the time that they purchase their tickets to Saratoga. These certificates must be turned over to Dr. William E. Swan on June 10th, 11th, or 13th, for endorsement and registration.

As already stated the United States Hotel will be the official headquarters of the association and the meetings of the general section will be held in the convention hall. The post office, the bureau of information, the bureau of registration and the general exhibits will be located in the Hathorn Spring Building. The pathological exhibit will occupy the ball room of Congress Hall, the House of Delegates will meet in the Supreme Court Room of the Town Hall. The meeting places of the several sections will be as follows: Practice of Medicine, Grand Union parlors; Obstetrics and Diseases of Women, Theatre Saratoga, Philadelphia Street, just east of Broadway; Surgery and Anatomy, Patterson Spring Building, Philadelphia Street, opposite theatre; Hygiene and Sanitary Science, United States Hotel, Broadway and Division Street; Ophthalmology, Laryngology and Otology, Y. M. C. A. Building, Broadway, opposite Caroline Street; Diseases of Children, Parish House, 17 Washington Street; Stomatology, G. A. R. Hall, Post-office building, opposite U. S. Hotel; Nervous and Mental Diseases, Grand Union Hotel; Cutaneous Medicine and Surgery, American Hotel, Broadway, opposite Philadelphia Street; Materia Medica, Pharmacy and Therapeutics, Grand Union Hotel.

Among the various subsidiary organizations which will meet at Saratoga Springs is the Association of American Medical Editors, of which Dr. Alexander J. Stone, of St. Paul, is president. The annual dinner of this association will be given at the Hotel Kensington on June 9th. The American Urological Association will meet at Saratoga Springs on June 13th and 14th, under the presidency of Dr. Ramon Guit  ras. Although only recently formed, this association has issued a preliminary programme for the June meeting, containing some twenty-two papers. Further information concerning the organization may be obtained from Dr. Ferd C. Valentine, 31 West Thirty-third Street.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 24, 1902:

DISEASES.	Week end'g May 17.		Week end'g May 24.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	20	8	26	5
Scarlet fever.....	385	29	414	37
Cerebro-spinal meningitis.....	0	2	0	4
Measles.....	582	19	564	12
Diphtheria and Croup.....	307	48	337	45
Small-pox.....	46	7	36	11
Tuberculosis.....	273	157	276	134

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week Ending May 23, 1902.

Smallpox United States.

California....	Los Angeles...	May 3-10.....	3 cases.	
"	San Francisco...	May 4-11.....	4 cases.	
Colorado....	Denver.....	May 3-10.....	7 cases.	
District of Columbia, Washington...	May 10-17.....	1 case.		
Florida.....	Jacksonville...	May 10-17.....	2 cases.	
Illinois.....	Belleville.....	May 10-17.....	2 cases.	
"	Chicago.....	May 10-17.....	19 cases.	1 death.
"	Freeport.....	May 10-17.....	4 cases.	
Indiana.....	Galesburg.....	May 10-17.....	4 cases.	
"	Indianapolis.....	May 10-17.....	23 cases.	
"	South Bend.....	May 10-17.....	3 cases.	
"	Terre Haute.....	May 3-17.....	4 cases.	
Kansas.....	Wichita.....	May 10-17.....	5 cases.	
Louisiana.....	New Orleans.....	May 10-17.....	1 case.	
Massachusetts.....	Boston.....	May 10-17.....	46 cases.	6 deaths.
"	Brockton.....	May 10-17.....	2 cases.	
"	Chelsea.....	May 10-17.....	1 case.	1 death.
"	Everett.....	May 10-17.....	3 cases.	
"	Fall River.....	May 10-17.....	3 cases.	
"	Lowell.....	May 10-17.....	6 cases.	
"	Malden.....	May 10-17.....	1 case.	
"	Newton.....	May 10-17.....	1 case.	1 death.
"	Somerville.....	May 10-17.....	2 cases.	
Michigan.....	Detroit.....	May 10-17.....	24 cases.	1 death.
"	Ludington.....	May 10-17.....	4 cases.	
Minnesota.....	Winona.....	May 3-17.....	43 cases.	
Missouri.....	St. Louis.....	May 11-18.....	6 cases.	
Montana.....	Butte.....	May 4-11.....	6 cases.	
Nebraska.....	Omaha.....	May 10-17.....	26 cases.	
New Jersey.....	Camden.....	May 10-17.....	3 cases.	
"	Hudson County, including Jersey City.....	May 4-18.....	74 cases.	17 deaths.
"	Newark.....	May 10-17.....	54 cases.	9 deaths.
"	Plainfield.....	May 10-17.....	1 case.	1 death.
New York....	Elmira.....	May 10-17.....	2 cases.	
"	New York.....	May 10-17.....	46 cases.	7 deaths.
Ohio.....	Cincinnati.....	May 9-16.....	7 cases.	
"	Hamilton.....	May 10-17.....	1 case.	
"	Toledo.....	May 10-17.....	1 case.	
Pennsylvania.....	Columbia.....	Apr. 28-May 5.....	21 cases.	
"	Erie.....	May 10-17.....	12 cases.	
"	McKeesport.....	May 10-17.....	1 case.	
"	Philadelphia.....	May 10-17.....	12 cases.	1 death.
"	Pittsburgh.....	May 10-17.....	9 cases.	2 deaths.
"	Seranton.....	May 10-17.....	2 cases.	
Rhode Island.....	Providence.....	May 10-17.....	1 case.	
Tennessee.....	Memphis.....	May 10-17.....	2 cases.	1 death.
Washington....	Tacoma.....	May 4-11.....	1 case.	
Wisconsin....	Green Bay.....	May 11-18.....	5 cases.	

Smallpox Insular.

Porto Rico....	Arecibo.....	Apr. 19-May 3.....	75 cases.	
"	Caguas.....	Apr. 19-May 3.....	36 cases.	
"	Camuy.....	Apr. 19-May 3.....	56 cases.	
"	Hatillos.....	Apr. 19-May 3.....	7 cases.	
"	Ponce.....	Apr. 19-May 3.....	30 cases.	
"	San Juan.....	Apr. 19-May 3.....	40 cases.	

Smallpox Foreign.

Austria.....	Prague.....	Apr. 12-May 3.....	19 cases.	
Belgium.....	Antwerp.....	Apr. 19-May 3.....	25 cases.	2 deaths.
"	Ghent.....	Apr. 5-May 3.....	3 cases.	3 deaths.
Brazil.....	Pernambuco.....	Mar. 15-Apr. 15.....	52 deaths.	
"	Rio de Janeiro.....	Apr. 6-20.....	11 deaths.	
Canada.....	Halifax.....	May 3-17.....	4 cases.	
"	Winnipeg.....	Apr. 16-May 10.....	11 cases.	1 death.
China.....	Hongkong.....	Mar. 29-Apr. 12.....	6 cases.	6 deaths.
Colombia.....	Catagana.....	Apr. 24-27.....	2 cases.	
"	Panama.....	Apr. 29-May 12.....	80 cases.	
France.....	Paris.....	Apr. 5-12.....	2 deaths.	
"	Paris.....	Apr. 10-26.....	1 death.	
Great Britain.....	Dundee.....	Apr. 26-May 3.....	2 cases.	
"	Glasgow.....	May 3-9.....	2 cases.	1 death.
"	Liverpool.....	Apr. 10-26.....	3 cases.	
"	London.....	Apr. 10-26.....	367 cases.	42 deaths.

Great Britain.....	London.....	Apr. 26-May 3.....	250 cases.	43 deaths.
"	North Shields.....	Apr. 19-26.....	23 cases.	
"	South Shields.....	Apr. 19-26.....	9 cases.	
India.....	Bombay.....	Apr. 15-19.....	5 deaths.	
"	Calcutta.....	Apr. 15-19.....	10 deaths.	
"	Karachi.....	Apr. 13-20.....	7 cases.	2 deaths.
"	Madras.....	Apr. 12-18.....	5 deaths.	
Italy.....	Palermo.....	Apr. 12-May 3.....	65 cases.	10 deaths.
"	Rome.....	Mar. 22-29.....	1 case.	1 death.
Mexico.....	Vera Cruz.....	Apr. 26-May 3.....	1 death.	
Russia.....	Moscow.....	Apr. 12-26.....	10 cases.	6 deaths.
"	Odessa.....	Apr. 12-May 3.....	19 cases.	2 deaths.
"	St. Petersburg.....	Apr. 12-26.....	16 cases.	2 deaths.
"	Warsaw.....	Apr. 5-12.....	1 death.	

Straits Settlements, Singapore.....	Mar. 15-29.....	1 death.	
Switzerland.....	Geneva.....	Apr. 5-19.....	2 cases.
Uruguay.....	Montevideo.....	Apr. 15-22.....	75 cases.

Yellow Fever.

Brazil.....	Pernambuco.....	Mar. 15-Apr. 15.....	1 death.
"	Rio de Janeiro.....	Apr. 6-20.....	67 deaths.
Costa Rico....	Port Limon.....	May 1-7.....	2 cases suspected.
Mexico.....	Vera Cruz.....	Apr. 26-May 3.....	7 deaths.

Cholera.

China.....	Hongkong.....	Mar. 29-Apr. 12.....	56 cases.	50 deaths.
India.....	Bombay.....	Apr. 15-22.....	3 deaths.	
"	Calcutta.....	Apr. 12-19.....	133 deaths.	

Straits Settlements, Singapore.....	Mar. 15-29.....	17 deaths.	
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Plague Insular.

Hawaii.....	Honolulu.....	May 7.....	1 death.
"	Honolulu.....	May 8.....	1 death.

Plague Foreign.

Brazil.....	Pernambuco.....	Mar. 15-Apr. 15.....		34 deaths.
China.....	Hongkong.....	Mar. 29-Apr. 15.....	5 cases.	5 deaths.
India.....	Bombay.....	Apr. 15-22.....		608 deaths.
"	Calcutta.....	Apr. 12-19.....		588 deaths.
"	Karachi.....	Apr. 13-20.....	161 cases.	132 deaths.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending May 24th, 1902:

ANDERSON, EVERETT A., Contract Surgeon, will report on the transport *Thomas* for duty during the voyage of that vessel to the Philippine Islands.

BAKER, CHARLES L., Contract Surgeon, will proceed to Fort Baker, California, for temporary duty.

BROOKS, JOHN D., Contract Surgeon, will proceed to Cairo, Montana, to join Troops A and C, Thirteenth Cavalry, now en route from Fort Assiniboine, Montana, to Fort Yellowstone, Wyoming. Upon his arrival at Fort Yellowstone Surgeon Brooks will report to the commanding officer for duty with troops in the National Park during the tourist season.

CALVERT, WILLIAM J., First Lieutenant and Assistant Surgeon, is relieved from temporary duty at Fort Barrancas, and will return to Fort McHenry.

ESPIN, J. M., Contract Surgeon. The leave of absence granted him is extended one month.

GLENNAN, JAMES D., Major and Surgeon, is granted leave of absence for fifteen days.

GRISWOLD, W. CHURCH, Contract Surgeon, will proceed to the Presidio of San Francisco for temporary duty, awaiting transportation to the Philippine Islands.

HICKS, JOHN R., Contract Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

JOHNSON, RICHARD W., Major and Surgeon, is assigned to duty as sanitary inspector of the Department, relieving JAMES D. GLENNAN, Major and Surgeon.

LYON, PALMER H., Captain and Assistant Surgeon, is granted leave of absence for ten days.

MEAD, JAMES E., Captain and Assistant Surgeon, will proceed to the Philippine Islands on the transport *Thomas*.

MILLER, JAMES E., Contract Surgeon, will proceed to Fort Canby, Washington, to relieve JOSEPH W. WALSH, Contract Surgeon, who will proceed to San Francisco for transportation to the Philippine Islands.

MOLONY, LOUIS A., Contract Surgeon, will proceed to the discharge camp, Angel Island, California, for temporary duty.

MOUNT, JAMES R., Contract Surgeon, will proceed to the Presidio of San Francisco for temporary duty.

NEWLOVE, GEORGE, Contract Surgeon. The leave of absence granted him is extended one month.

PERSONS, ELBERT E., First Lieutenant and Assistant Surgeon, is relieved from duty at Fort Snelling, Minnesota, and will proceed to Fort Flagler, Washington,

for duty, relieving JESSE P. TRUAX, Contract Surgeon, who will proceed to Skagway, Alaska, for duty.

PINKHAM, EDWARD W., First Lieutenant and Assistant Surgeon. The resignation of his commission as an officer of the United States Army has been accepted by the President, to take effect June 10, 1902.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon, will report at the General Hospital, Washington Barracks, D. C., for treatment.

SHEPHERD, JOHN M., Contract Surgeon, is relieved from duty at the General Hospital, Presidio of San Francisco, and will proceed to Fort Schuyler, New York, for duty, to relieve THEODORE C. LYSTER, First Lieutenant and Assistant Surgeon, who will proceed to San Francisco for duty at the General Hospital, Presidio of San Francisco.

WAKEMAN, WILLIAM J., Major and Surgeon. The leave of absence granted him is extended one month.

WINTER, FRANCIS A., Captain and Assistant Surgeon, is granted leave of absence for ten days, to take effect about June 1, 1902.

Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the United States Marine-Hospital Service for the Seven Days Ending May 22, 1902.

BURFORD, HUGH, Acting Assistant Surgeon. The Department letter of May 7, 1902, granting him leave of absence for two weeks, is amended so that said leave shall be for twenty-one days from May 15th.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for ten days from June 2nd.

RICHARDSON, S. W., Senior Pharmacist. Granted leave of absence for thirty days from June 10th.

WERTENBAKER, C. P., Passed Assistant Surgeon. Granted leave of absence for one day, May 20, 1902, under paragraph 179 of the *Regulations*. Detailed to represent the service at the meeting of the Association of Military Surgeons, to be held in Washington, D. C., June 5, 6 and 7, 1902.

Promotions.

COBB, J. O., Passed Assistant Surgeon. Promoted and appointed surgeon, to rank as such from April 20th.

CLARK, TALIAFERRO, Assistant Surgeon. Promoted and appointed passed assistant surgeon, to rank as such from March 27th.

HASTINGS, HILL, Assistant Surgeon. Promoted and appointed passed assistant surgeon, to rank as such from March 29th.

LAVINDER, C. H., Assistant Surgeon. Promoted and appointed passed assistant surgeon, to rank as such from March 27th.

Boards Convened.

Board convened, to meet at the Bureau, May 20, 1902, for the purpose of examining candidates for appointment Cutter Service as may present themselves. Detail for the Board: Surgeon R. M. WOODWARD, chairman; Assistant Surgeon B. S. WARREN, recorder.

Board convened, to meet at the Bureau, June 16, 1902, for the purpose of examining candidates for appointment as assistant surgeon in the Marine-Hospital Service. Detail for the Board: Surgeon P. H. BAILHACHE, chairman; Surgeon G. T. VAUGHAN, and Passed Assistant Surgeon H. D. GEDDINGS, recorders.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 24th, 1902:

CRANDALL, R. P., Surgeon. Detached from recruiting duty and ordered to San Francisco, and thence to Guam, L. I.

FIELD, J. G., Assistant Surgeon, retired. Ordered to recruiting duty.

GRIFFIN, W. E., Assistant Surgeon. Reported at Cavite, Philippine Islands, May 12th.

HOYT, R. E., Assistant Surgeon. Ordered to the *Wabash*.

JOHNSON, M. K., Passed Assistant Surgeon. Detached from duty at Guam, L. I., upon reporting to relief, and ordered home to await orders.

KERR, D. B., Passed Assistant Surgeon. Detached from the *Wabash* and ordered to the Boston Navy Yard.

OMAN, C. M., Assistant Surgeon. Reported at Cavite, Philippine Islands, May 2d.

STRINE, J. F., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Virginia.

TRAYNOR, J. P., Assistant Surgeon. Ordered to the Naval Hospital, New York.

Births, Marriages, and Deaths.

Married.

CHARLES—FOSTER.—In St. Louis, on Wednesday, May 21st, Dr. Joseph W. Charles and Miss Laura M. Foster.

LEWIS—POST.—In Buffalo, on Tuesday, May 20th, Dr. George M. Lewis and Miss Nellie E. Post.

HYDE—EARLE.—In Brooklyn, on Thursday, May 22d, Dr. Clarence Reginald Hyde and Miss Alice Cary Earle.

MCNAMARA—HARDER.—In Brooklyn, on Wednesday, May 21st, Dr. Sylvester J. McNamara and Miss Emilie M. Harder.

SMITH—BENNER.—In St. Louis, on Wednesday, May 14th, Dr. E. G. Smith, of Belleville, Missouri, and Miss Rose O. Benner.

Died.

ARCHER.—In Detroit, on Sunday, May 18th, Dr. George W. Archer, in the forty-fourth year of his age.

BURKE.—In Cheyenne, Wyoming, on Saturday, May 24th, Dr. William Craig Burke, in the ninety-sixth year of his age.

JACKSON.—In St. Paul, on Thursday, May 15th, Dr. E. B. Jackson, in the seventy-sixth year of his age.

MERCER.—In Kansas City, Missouri, on Sunday, May 18th, Dr. Stephen Francis Mercer, in the eighty-second year of his age.

PARSONS.—In Rye, New Hampshire, on Thursday, May 20th, Dr. Warren Parsons, in the eighty-fourth year of his age.

PENDLETON.—In North Stonington, Connecticut, on Thursday, May 22d, Dr. Edward Pendleton, in the sixty-second year of his age.

VEDDER.—In Saugerties, N. Y., on Thursday, May 22d, Dr. John Vedder, in the eighty-sixth year of his age.

WILLIAMS.—In Nashville, on Saturday, May 17th, Dr. Charles Williams, in the thirty-fifth year of his age.

WILSON.—In Denver, on Tuesday, May 20th, Dr. J. W. Wilson, of Evansville, Indiana.

ZAKRZEWSKA.—In Boston, on Tuesday, May 13th, Dr. Marie E. Zakrzeska, in the seventy-fourth year of her age.

OBITUARY NOTES.

PROF. ADOLF KUSSMAUL, who introduced the stomach-pump into medical practice, died at Heidelberg, Germany, on May 27th. He was born in 1822, near Karlsruhe. He taught successively at various universities, beginning with Heidelberg, in 1855, and ending with Strassburg. Of his books the one which attracted most attention was "Störungen der Sprache" (the Pathology of Speech), which formed one of the Ziemssen handbooks.

Pith of Current Literature.

Philadelphia Medical Journal, May 24, 1902.

Note on the Occurrence of Ascites in Solid Abdominal Tumors. By Dr. William Osler.—The author believes that this association is one to which the attention of the profession has not been called sufficiently often, and it is well to remember the possible ætiological relation that may exist between solid tumors and recurring ascites. The question of operation is an important one; the solid ovarian tumor is usually benign, and uniform recoveries are to be expected.

Insufficiëntia Pylori, a Sequela of Chronic Gastritis; with Report of Twelve Cases Successfully Treated. By Dr. Mark I. Knapp.

The "Fourth Disease" of Dukes, with Report of an Atypical Outbreak of Scarlet Fever. By Dr. J. Hall Pleasants.—The author does not consider that Dr. Dukes has established the existence of a new exanthematous disease. Under the so-called "fourth disease" he has included cases of undoubted scarlet fever, and probably also cases of rubella. In certain epidemics, scarlet fever may present an atypical picture, with many of the classical symptoms absent, rendering a diagnosis difficult or impossible in isolated cases.

A Discussion of the Morbid Conditions of the Upper Respiratory Tract Resulting from the Infectious Diseases. By Dr. Carolus M. Cobb.—The author emphasizes (1) the importance of the so-called catarrhal inflammation of the upper air tract, not only in relation to local disease, but to general systemic infection as well; (2) that nasal obstruction does not cause a catarrhal discharge *per se*; (3) the frequency with which the accessory sinuses are involved in the infectious diseases; (4) the neglect of the diagnosis of this involvement of the sinuses, either during the course of the primary disease or during convalescence; (5) the hypertrophy of the glandular tissue in the throat and nose following the infectious diseases; (6) the persistence of the Klebs-Löffler bacillus in the secretion of the nose, which may be a serious menace to the public; (7) the large percentage of cases of catarrhal disease, *i. e.*, where the complaint is of a nasal or post nasal discharge, which can be traced to the infectious diseases.

An Unusual Case of Diphtheria. By Dr. J. Newton Hunsberger and Dr. D. H. Bergey.

American Medicine, May 24, 1902.

The Physical and Dietetic Treatment of Valvular Heart Disease During the Stage of Perfect Compensation. By Dr. Carl von Noorden.—In the matter of rest for the heart, undue exertion must be avoided. Palpitation of the heart and shortness of breath must under no circumstances be produced, as such a strain is invariably accompanied by evil consequences. Mental shock should also be avoided. In treating obesity the quantity of food ingested should not be reduced to below two-thirds of the amount

necessary to maintain the patient's weight. Copious meals should be avoided. A reasonably mixed diet suits cardiac patients best. The most important precaution is to see that each meal leaves the stomach as soon as possible. The total quantity of liquids imbibed within twenty-four hours should not exceed one and a quarter litres. The stage of perfect compensation is the most auspicious time for "exercise," and the most perfect form of exercise for cardiac patients is walking uphill. Certain forms of massage (friction, vibration, tapotage), which exercise a strong stimulus upon the small blood vessels, may be employed with advantage. The value of the Nauheim baths is great. Unless, however, the daily routine is altered so as to suit exactly the requirements of the bath treatment, it is unwise to prescribe the artificial carbonated brine baths. The so-called half baths are also commended, and the author has obtained encouraging results from the use of the electric baths after the system of Dr. Schée.

Symptomatology, Diagnosis, and Differential Diagnosis of Neuritis. By Dr. Sydney Kuh.

The Vermiform Appendix as a Cause of Intestinal Obstruction. By Dr. J. E. Summers, Jr.—According to the author, when the appendix is low and its mesentery allows of great motility, the tip of the appendix may become attached by adhesive inflammation to some point of the peritonæum, so as to form a band or arch and thus produce intestinal obstruction. Loops of the small bowel are most commonly constricted by this mechanism.

Electrothermic Hæmostasis in Vaginal Hysterectomy for Cancer: Report of Two Cases. By Dr. Andrew J. Downes.

Two Cases of Stenosis of the Pylorus. By Dr. Frank M. Murdoch.

Suppurative Otitis Media and Some of its Dangers. By Dr. E. Oliver Belt.

Medical Record, May 24, 1902.

Radiotherapy for Cancer and Other Diseases. By Dr. William J. Morton.—According to the author, the x ray has a general application for the relief of pain. It has a curative effect in internal cancer and other internal diseases. A standardization, as to apparatus and its capacity, and as to the duration and frequency of the treatment and distance of the tube, is recommended. For superficial diseases a medium soft tube may be used, for internal cases a hard tube. X-radiation is recommended: (1) Prior to any operation, to clear the tissue of cancer particles and foci, and to circumscribe the disease; (2) after operation, to preclude a recurrence; (3) in place of an operation for the reason that operation secures but a comparatively moderate percentage of permanent recoveries, and because, up to date, the x-ray procedure shows a continued improvement in cases, and a percentage of cures that will, undoubtedly, compare favorably with surgical operations. There is danger to the patient or uncertainty as to what might be accomplished when the x ray is employed by immature operators.

Benign Tumors Complicating Pregnancy. By Dr. Bache M. E. Emmet.—The author would operate on all young women non pregnant, to remove any fibroid of the uterus which is accessible. Should the young woman be recently pregnant, such a growth should be removed, if it is large, wherever situated. If it is in the body, small, and of slow growth, it should be left, but should be removed if in the lower segment or neck. If midway in pregnancy, such growths in the body should be left alone; if in the lower segment or neck, we should temporize, seeking to crowd them out of the pelvis, and try to tide over until the uterus has become thoroughly accustomed to the pregnancy. If such growths are discovered in the later months, operation should be resorted to only if they grow in the neck of such a size as to threaten to impede delivery. Operation should be from below. Tumors, however, may be so general and threatening that one is obliged to remove the whole uterus, even early in pregnancy.

Malignancy Complicating the Pregnant State. By Dr. S. Marx.

Uterine Displacements Complicating Pregnancy. By Dr. Edward A. Ayers.

A New Substitute for Silver Nitrate. By Dr. Albert C. Barnes, and Hermann Hille, Ph. D.—The authors believe that silver vitelline will revolutionize the treatment of certain inflammatory diseases of the eye in which a silver salt, which is freely soluble, penetrating to the deeper tissues, non irritating, and containing at the same time a high proportion of silver, is regarded as a desideratum. Silver vitelline contains about thirty per cent. of silver, with greater penetrating action than silver nitrate, but without its caustic irritating properties.

Bilious Remittent Fever. By Dr. R. H. Phillimore.

Medical News, May 24, 1902.

Consumption Contracted in Colorado and Methods to Restrict its Spread. By Dr. S. G. Bonney.—In the matter of restriction the author suggests: (1) Compulsory notification and registration of all cases of pulmonary tuberculosis. (2) The education of the consumptive himself to secure his cooperation in sanitary precautions and his submission to conservative control. (3) Special detention-institutions for the ignorant or vicious who refuse to conform to established rules. (4) State sanatoria for the poor. (5) Segregation-hospitals for the hopelessly ill. (6) No interference with personal rights, unless rendered necessary by repeated infraction of prescribed regulations. (7) Periodical disinfection of apartments. (8) Prohibition of expectoration in any way not in accordance with the directions of the board of health. (9) Separate and distinct methods of instruction directed to the general public, all official information being essentially of a reassuring nature, though not minimizing the possible dangers resulting from the presence of the careless consumptive. (10) Government and municipal control of public buildings, tenement

houses, factories, commercial establishments, and conveyances.

The Treatment of Puerperal Eclampsia. By Dr. William E. Parke.—In the preventive treatment the diet should be of a digestible character and one containing a minimum amount of nitrogenous matter. All the emunctories should be stimulated. Sodium phosphate in hot water daily before breakfast, and fractional doses of calomel twice a week before retiring will secure free bowel action. The skin and the kidneys should be kept active. Suitable exercise is valuable in ridding the respiratory channel of a certain amount of waste. If preventive measures fail and there is evidence of increasing toxæmia, labor must be induced at once. If a convulsion has already occurred, forced delivery must be resorted to. The patient should be anæsthetized until the reflexes are abolished. For the treatment of the convulsions, venesection is of the greatest value in a strong full-blooded person; inhalations of chloroform to avert a seizure, and veratrum viride to relax spasm and reduce pulse-rate and tension, are commended. Chloral and bromide, and normal salt solution under the skin or into the bowel, are commendable procedures. The author does not approve of the use of morphine, inasmuch as it seems to oppose the elimination of the poison.

Venesection and Transfusion in Puerperal Eclampsia. By Dr. R. Abrahams.—The author asserts that the abstraction of blood in eclampsia produces (1) an immediately favorable change; cyanosis, muscle rigidity, spasms and twitchings, all stop at once. (2) The pulse loses its tenseness. (3) The coma yields, either abruptly or slowly, but surely. Transfusion (1) improves the pulse; (2) induces free sweating and free micturition; and (3) produces intense thirst which causes the patient to drink copiously.

Puerperal Hæmorrhage. By Dr. George Seymour.

How Shall We Treat Sepsis Following Abortion or Labor? By Dr. W. O. Henry.

The Ætiology of Puerperal Toxæmia. By Dr. A. Ernest Gallant.—Puerperal toxæmia is due to the implantation of pyogenic bacteria within the genital tract before, during, or after labor. Thriving, they produce toxins, which induce toxæmia and give rise to the symptom-complex designated sapræmia and septicæmia. The introduction of micro-organisms is in the larger proportion of cases, an avoidable offence. It is the imperative duty of the nurse, student, and physician to practice the strictest asepsis.

The Boston Medical and Surgical Journal, May 22, 1902.

An Abstract of Some of the Prevailing Opinions on the Periods of Incubation, Observation, and Isolation, of Some of the Infectious Diseases. By Dr. Elbridge G. Cutler.

Gunshot Wounds of the Knee-Joint by the Projectile of Reduced Calibre. By Dr. Louis A. La Garde.—The author finds that the mortality of gunshot injury of the knee-joint in the Civil

War was fifty-three and seven-tenths per cent., and, as amputation was universally done, all those who recovered escaped with the loss of a limb, unfit for duty. Thirty-three cases of gunshot wounds of the knee produced by the larger calibre lead bullet in the campaign, as reported by Reyher and von Bergmann, treated antiseptically, gave a mortality of eleven and one-tenth per cent. Sixty-two cases produced by a variety of missiles reported by the surgeon-general since 1898, similarly treated, gave a mortality of eight per cent., and forty-five and a half per cent. of those who recovered were restored to duty. Of nineteen cases in the Santiago campaign by the reduced-calibre bullet the mortality was *nil*, and seventy-three and a half per cent. of the wounded recovered fit for duty. It would thus seem that the humane features of the reduced calibre bullet have operated, not only in diminishing the mortality in gunshot wounds of the knee from about eight or eleven per cent. to *nil*, but in increasing restorations to duty twenty-eight per cent.

Notes in Cuba. By Dr. Charles C. Foster.

Birth- and Death-Rate as Influenced by Obstetric and Gynæcic Progress. By Dr. George J. Engelmann.—Whatever the motive, the distinct cause of diminishing fecundity is the intentional limitation of the family. In the unequal contest medical science yields to human vanity, and its influence is effaced so far as the population at large is concerned. Only in the somewhat lessening death-rate of child-bearing women do we see any evidence of its progress.

Two Cases of Tetanus Following Vaccination. By Dr. Lyman Allen.

The Journal of the American Medical Association,
May 24, 1902.

The Treatment of Inoperable Septic Peritonitis. By Dr. Horace G. Wetherill.—The treatment by surgical measures must be determined, (1) from a consideration of the source of infection; (2) from the virulence and diffusion of the infection; (3) from the time elapsed since the injection of the infecting material into the cavity. Infections from the intestines, vermiform appendix, and oviduct are apt to be dangerous in the order given. Physiological rest favors the limitation of involved area and the saving of life, and is best attained by the maintenance of an empty bowel and the avoidance of cathartics; this means lavage, fasting, and no salts. Enemata must be small in amount. Cases of diffuse peritonitis with profound local and general symptoms must be regarded as being inoperable. Early operation before diffusion has taken place is safe and in most instances to be advised if the environment is favorable and an experienced surgeon at hand. Interval operations are certainly advisable after recovery from a diffuse peritonitis from any source.

The Neuroses of the Heart. By Dr. Herman H. Hoppe.

Acute Congestive or Inflammatory Glaucoma. By Dr. Charles J. Kipp.—The author believes it a good rule not to use atropine or other mydriatic

for an inflammation of the eye, especially in elderly people, till we have assured ourselves that the pupil is smaller than normal, and that the tension of the eye is not increased. When an acute glaucoma is present, eserine or pilocarpine should be instilled. Cocaine in three-per-cent. solution may be used, and morphine should be given hypodermically to produce sleep. If marked improvement does not result within a short time iridectomy should be done without delay.

Case of Cæsarean Section under Spinal Anæsthesia. By Dr. S. R. Hopkins.

A Case of Blastomycetic Dermatitis (?). By Dr. John Glendon Sheldon.

Acute Anterior Poliomyelitis in a Youth of Eighteen Years. Remarks on the Sensory Symptoms. By Dr. Frank R. Fry.—The author asserts that the sensory symptoms are more than occasionally prominent. We must consider the possibility of (1) cases of acute anterior poliomyelitis with no noticeable sensory symptoms, which are rare; (2) cases with severe pain and hyperæsthesia in the paralytic members at the outset, lasting for a variable time, are also rare; (3) cases in which the sensory symptoms fall between the extremes of numbers 1 and 2; (4) cases of multiple neuritis with unusual sensory symptoms and distribution; (5) cases of so-called "multiple neuritis of the motor type," with little or no sensory symptoms; (6) cases in which multiple neuritis and poliomyelitis are associated.

Some Clinical Aspects of Chemistry. By Dr. Charles P. Emerson.—The author believes that the practitioner often needs, in doubtful cases, a clinical chemist to aid him.

A Plea for the Early Treatment of Squint. By Dr. Nelson Miles Black.—Treatment should consist of: (1) The maintenance of fixation in the deviating eye to prevent deterioration of vision in that eye. (2) The correction of all refractive errors. (3) The exercise of the fusion faculty and, when that is well developed, if the deviation is not corrected, resort to operative measures to produce approximate parallelism of the axes; the desire of fusion developed by the exercise of this centre will then maintain parallelism and binocular vision.

Attendants and Nursemaids. By Dr. Helen C. Putnam.

The Evolutionary Aspect of Infectious Diseases, with Especial Reference to the Local Venereal Diseases. By Dr. G. Frank Lydston.—The author asserts, as his belief, that the ætiology and pathology of infectious diseases of the future will stand, not upon the germ, but upon the myriad conditions yet unknown that lie behind the germ.

Acute Chorea, Recovery. By Dr. Charles S. Walker.

Two Cases of Peripheral Gangrene Associated with Localized Disease of the Arteries. By Dr. Henry M. Sherman, and Dr. Thomas W. Huntington.

British Medical Journal, May 17, 1902.

Dysmenorrhœa. By G. E. Herman, M. B.—Dysmenorrhœa means pain accompanying menstruation; only about forty per cent of women menstruate without discomfort; in about eleven per cent of young unmarried women the pain is so severe as to confine them to bed each month.

Menstruation is the expulsion of the broken-down endometrium. This mucous membrane is thin during childhood and becomes thick and vascular at puberty. When it has reached its full development, if no fertilized ovum comes in contact with it, it is broken down into a pulp, hæmorrhage takes place from the vessels opened up by the breaking down of the tissue, the cervix is dilated, and the blood and broken-down mucous membrane are expelled by uterine contractions, like those which expel the fœtus. There are two kinds of pain from which women may suffer when they menstruate. One pain is that produced by the physiological congestion of the pelvic organs, which precedes menstruation. This is a general aching diffused over the whole pelvic region, and is often accompanied by aching in the breasts. It is a continuous pain, which comes on gradually, and which is not relieved until the flow has become as copious as is customary for that patient. It is always better when the patient is lying down, and is never bad enough to produce objective evidence of severe suffering. Women who menstruate copiously suffer more than those who menstruate scantily.

The second form of dysmenorrhœa is due to spasmodic uterine contraction. There are no physical signs by which it may be diagnosed; it must be recognized by the character of the pain, which is far more severe than any other kind of menstrual pain. Patients cannot lie still, and in many cases it causes vomiting. The pain is of short duration, comes on suddenly, and its duration is usually less than twenty-four hours. Spasmodic dysmenorrhœa has no tendency to spontaneous cure; in cases of exceptional severity it may grow worse. Its natural cure is by pregnancy, but the disease is often accompanied by sterility, which may be cured by dilatation. The best drugs for the relief of uterine colic are antipyrine and phenacetine, but they are of service only in mild cases. The local treatment of spasmodic dysmenorrhœa is to dilate the cervix, which is best done by the passage of bougies; but dilatation does not invariably cure. If it and all other treatment fail, and the dysmenorrhœa is so severe as to wreck the patient's life, it can be cured by removing the ovaries. But this grave measure should not be taken without the most careful consideration.

The Problem of the Premature Infant. By Dr. J. W. Ballantyne.—After reviewing the anatomy and physiology of the premature infant, the author takes up its pathology. Here it stands midway between the fœtus and the new born child. Like the fœtus, it is readily infected by the umbilicus; the closure of the umbilical vessels is apt to be complete, septic organisms find entrance and set up either circum-umbilical inflammation or general sepsis without local reaction. Again,

the premature infant is specially liable to attacks of thrush, diarrhœa, and dyspepsia; these are due to infection through the gastro-intestinal canal, predisposed to by the defective secretions of the digestive organs; in this respect its pathology resembles that of the newborn infant.

In the management of the premature infant the three leading principles are: First, to prolong the most useful and the best features of fœtal life after birth (use of the incubator or *couveruse*); secondly, to supply some of the features which cannot be prolonged (addition of iron to the diet); and, thirdly, to awaken or strengthen the dormant or inefficient functions peculiar to post-natal existence.

If human milk is not available for the premature infant's feeding, then the prognosis for the child becomes much graver. The amount given ought not to exceed four teaspoonfuls at a time, and the intervals between feeding ought not to be longer than one hour and a half. Sterilization of the milk is a *sine qua non*, for the tendency to microbic infection by the gastro-intestinal tract is very great. To keep the infant in the dark is good, for the light may prematurely stimulate to incoordinated action of the muscles of the eyeball, and so lead to strabismus. The problem of the premature infant is a very real and pressing one; the premature induction of labor is a prevalent operation, and if it is to hold its own against symphysiotomy and Cæsarean section, it is essential that the infantile mortality and morbidity be greatly reduced.

An Analysis of Forty-Six Cases of Cancer of the Breast which have been Operated upon and Survived the Operation from Five to Thirty-Two Years, With Remarks upon the Treatment of Recurrent Growths, Including the Disease of the Second Breast, Operative and Otherwise. By T. Bryant, F. R. C. S.—The author's routine operation is to remove the whole breast that is diseased, with the skin and fat over the diseased area; when the axillary glands are enlarged, to dissect out the axilla and subpectoral spaces, and in every case, for examination purposes, to cut into the axilla and take away glands or lymphoid tissue which appears to be suspicious, but otherwise not to dissect it out, the incision into the axilla skirting the axillary border of the pectoral muscle. The wound is invariably drained through the axilla for the first few days. The pectoral muscle is dissected clean but not removed, although, should disease be found to have invaded the muscle, it must be freely taken away. The removal of the muscle as a routine measure is unnecessary. The forty-six cases here reported are tabulated in several groups; from their consideration the author concludes that the interval which may take place between the primary amputation of a breast for cancer and its recurrence in the scar or second breast, when such occurs, is most uncertain. While, in half the cases, recurrence took place in five years or less, in the other half the interval varied from six to thirty-two years. In at least two thirds of these cases it occurred after ten years, and when second or third operations were performed the prospects of life were not bad.

A Note On the Operation for Removal of Malignant Disease of the Breast. By Dr. D. Drew.—The author holds that in all cases of cancer of the breast where it is considered necessary to remove the sternal portion of the pectoralis major, a great advantage is gained by removing with it the whole of the pectoralis minor; by so doing the operation becomes more thorough in that the clearing of the axilla from the clavicle downwards is greatly facilitated.

Case of Vesico-Vaginal Fistula Cured by a Method Believed to be New, With Remarks On the Surgical Treatment of Vesico-Vaginal Fistula. By Dr. F. J. McCann.

A Case of Premature Senility of the Uterus. By A. W. Addinsell, M. B.

Case of Inversion of the Uterus. By C. G. Hoysted, L. R. C. P.

Lancet, May 17, 1902.

The Nature of Discharges and Douches. By Dr. W. Wingrave.—A douche or irrigant may have for its object: (1) The mechanical removal of morbid secretions, accumulations, and foreign bodies; or it may be used (2) for antiseptic purposes; or (3) for diagnosis.

The douche must conform to certain requirements: 1. The solution employed should, when practicable, be a solvent of the substance to be removed. 2. The reagent should be itself soluble in water and form a clear solution. 3. It should be non-irritating to mucous membranes and sensitive surfaces. 4. To ensure thoroughness, it should possess the power of penetrating the surface tissue. 5. It should be miscible—*i. e.*, chemically compatible with the most effective antiseptics. 6. It should be economical in cost and readily available. The different discharges and accumulations to be removed by douches may be grouped according to their nature and composition as follows: 1. Catarrhal products, as commonly met with in the nose and nasopharynx. The fluid consists chiefly of an alkaline solution of mucin, with globulin and serum-albumin. Epithelial cells and leucocytes will be suspended in the fluid. Mucin is readily soluble in weak solutions of alkaline salts, such as sodium bicarbonate. Cells and serum-globulin are readily soluble in weak solutions of neutral salts. 2. Serous discharges, which rarely call for special removal. Globulin is present in greater proportions than mucin, so that neutral saline solutions should be selected. 3. Pus, which may vary considerably according to the conditions of its production. All its constituents are soluble in weak solutions of either neutral or alkaline salts respectively. 4. Cerumen, being fatty in nature, is readily soluble in alkaline salts; but the plug is often so dense and hard, that a strong alkaline glycerin solution is often expedient as a preliminary to the douche. Cholesteatomata are composed of keratin, nuclein, cholesterin and fatty debris, all of which are soluble in alkalis. If pus is present neutral salts should be also used. 5. Plastic exudation, consisting chiefly of filamentous fibrin, which is extremely difficult of solution. The same is true of blood-clot.

Where it is desired to use a douche for antiseptic purposes it should be remembered that the most efficient antiseptics are precipitants of proteids; consequently it is more often expedient to irrigate first with a solvent and use the antiseptic afterward, as in the case of suppurative middle-ear disease.

In the neutral salts, especially sodium sulphate, we have by far the most trustworthy basis for an irrigant, especially when pus predominates. The following formulæ are based upon the foregoing principles, all having been thoroughly tested chemically and clinically:

1. Sodium sulphate, from 1 to 2 per cent solution.

2. Sodium sulphate, 1 to 2 per cent; sodium bicarbonate, 0.5 per cent.

3. Sodium sulphate, from 1 to 2 per cent; borax, 0.5 per cent.

4. Sodium sulphate, from 1 to 2 per cent; sodium bicarbonate, 0.5 per cent; glycerin of carbolic acid, 0.5 per cent.

5. Borax, 0.5 per cent; sodium bicarbonate, 0.5 per cent; glycerin of carbolic acid, 0.5 per cent.

6. Sodium sulphate, 1 per cent; chinosol, 0.1 per cent.

7. Sodium sulphate, 1 per cent; sanitas, 2 per cent.

8. Sodium sulphate, 1 per cent; bichloride of mercury, 0.02 per cent.

9. Sodium sulphate, 1 per cent; red iodide of mercury, 0.02 per cent; sodium iodide, 0.02 per cent.

10. Sodium sulphate, 1 per cent; potassium permanganate, 0.02 per cent.

11. Sodium bicarbonate, 0.5 per cent; potassium permanganate, 0.02 per cent.

12. Solution of calcium chloride (B. P.), 4 per cent sol.

(The pure exsiccated sodium sulphate should always be used in preference to the ordinary crystalline salt.)

Solution No. 1 is a simple irrigant for pus; Nos. 2 and 3 are for use when mucus is present or when the discharge is inspissated; Nos. 4, 5, 10, and 11 for fetid mucus or "crusts"; Nos. 6, 8 and 9 as antiseptics; and Nos. 7 and 10 as deodorants. No. 12 is chiefly employed for its hæmostatic property.

Septic Polyarthrititis. By G. A. Wright, M. B.—The author reports three cases of septic polyarthrititis, occurring in women, whose ages varied between twenty-two and thirty-five years. It is an affection which attacks many joints, though it may begin in a single joint; lasts for a long time, even years; may give rise to the most complete crippling; shows no tendency to cause extensive suppuration or even suppuration at all; may leave a joint intact; may subside and recur repeatedly; and does not give rise to any cartilaginous, nodular, or bony outgrowths, or to hydrarthrosis. Soft parts, other than joints, may be inflamed, and the skin and nails be the seat of trophic changes. The great point in treatment is to get rid of the septic focus as quickly as possible. As regards the joints, rest and soothing applications at first, with massage, inunction of oleate of mercury, and a course of potassium

iodide later, are probably the best measures. In these, as in most cases of stiff joints, active movement is of much more value than passive movement.

The Diagnosis of Malaria From the Standpoint of the Practitioner in England. By Dr. P. Manson.—The author calls attention to the importance of a thorough reliance on the three classical methods of diagnosing malaria: the clinical—tertian and quartan periodicity; the therapeutic—the curative effect of quinine; and the microscopical—the detection of the parasite or its products in the blood and the characteristic leucocytic variations.

Remarks on the Subsequent History of Children Born Whilst the Mother was Insane. By A. F. Tredgold, L. R. C. P.—The author concludes as follows: 1. The mental and physical condition of the child is in no wise influenced by the mere fact of the mother being insane during pregnancy. 2. Neither is the condition of the child influenced by the variety of the insanity, the duration of the attack, or the age of the mother, or even directly by the number of attacks from which the mother may have suffered. 3. But this condition is directly dependent upon the presence or absence of morbid hereditary influences.

Liquid Air as a Freezing Medium in the Laboratory. By Dr. W. H. B. Stoddart.

Some of the Surgical Aspects of Glycosuria and Diabetes. By L. C. P. Phillips, F. R. C. S.

Some Notes from an Inquiry Into the Action of Dinitro-benzene upon the Urine of Man. By R. P. White and Dr. J. Hay, and W. J. Orsman, F. C. S.

Gazette hebdomadaire de médecine et de chirurgie, April 13, 1902.

Acute Hæmorrhagic Miliary Tuberculosis.—By M. P. Londe and M. Brécy

Convulsions in Infancy.—M. d'Espine classifies the convulsive seizures in infancy as: I. *predisposing causes*, he mentions (a) heredity: 1. neuropathic predisposition; 2. alcoholism; 3. syphilis; 4. lead poisoning; 5. cachexias (tuberculosis, etc.). (b) Age, usually occur within the first six months. II. *Determining Causes*. (a) Dentition. (b) Rhachitis. 1. There is a variance in the reports of different authors; 2. the proportion of rhachitic infants attacked by convulsions is small compared with the total number of children suffering from the disease; 3. the coincidence of rickets and convulsions is explained by the fact that they are both due to the same cause, gastro-intestinal self-intoxication. (c) Convulsions of the newborn. (d) Asphyxia. (e) Poisoning, 1. by alcohol; 2. by lead; 3. by opium; 4. by santonin; 5. by other poisons, belladonna, carbolic acid, strychnine, etc. (f) self intoxication. 1. uræmia; 2. athyreoidism; 3. habitus lymphaticus; 4. gastro-intestinal self-intoxications. (g) Hypothermia. (h) Infectious diseases. (i) Traumatic eclampsia. (j) Reflex eclampsia, from some inflamed organ.

The author gives the symptomatology and diag-

nosis between these various causes of convulsions, laying stress upon the bacteriological diagnosis, and the data obtained by examination of the blood and of the cerebrospinal fluid.

Centralblatt für Innere Medizin, April 26, 1902.

Agglutination of the Pneumococcus.—Dr. F. O. Huber has satisfied himself that the serum of patients suffering from pneumonia will agglutinate the pneumococcus, although the experiments were difficult on account of the limited movement of the germ. The peculiar property of the pneumococcus, in growing in round balls in the serum of immunized animals, was taken advantage of, and is regarded as an agglutinating action, when grown in culture of the serum of individuals ill with pneumonia. In twenty-four hours, a ball of pneumococci was found in the bottom of the test-tube. The serum of patients with acute articular rheumatism, angina, and ulcerative endocarditis gave no result.

Centralblatt für Gynäkologie, April 26, 1902.

Lysoform in Obstetrics.—Dr. F. Hammer warns against the use of this preparation.

Injuries to the Vaginal Vault in Coitus.—Dr. G. Bohnstedt attributes injuries of this character to excessive sexual excitement of the woman, while Schæffer regards them as due to a cramp-like condition of the pelvic floor with great tension of the vaginal vault, probably due to a neuropathic state. The author does not regard the neuropathic basis as well established.

Münchener medicinische Wochenschrift, April 1, 1902.

Surgical Treatment of Puerperal Pyæmia.—Professor F. Trendelenburg suggests the ligation of thrombosed veins in cases in which the thrombus is septic. He reports a case in which the spermatic vein was thus ligated with satisfactory result, the patient completely recovering. The thrombosis is usually bilateral, but if it is unilateral, this can usually be determined by increased sensitiveness over the thrombosed vessel.

Extirpation and Regeneration of the Long Bones in Osteomyelitis and Tuberculosis.—By Dr. Fritz Berndt.

Operative Treatment of Multiple Liver Abscesses Due to Cholangitis and Cholecystitis.—Dr. M. Wilms reports a case in which opening of the abscesses combined with drainage of the purulent gall-bladder and ducts resulted in a cure.

Entrance of Bacteria into the Circulation the Cause of Urethral Fever.—Dr. R. Bertelsmann and Dr. Man, in recording a fatal case, conclude that certain cases of urethral fever arise from the entrance of bacteria into the blood from the genito-urinary tract where they flourish, or from the urine. The bacteria may sometimes be demonstrated in the blood, but whether they can or not, they frequently lead to sepsis. Urethral fever of the mildest kind is probably due to the entrance into the blood of non-pathogenic bacteria. The histological examination of the kidneys in the

case reported showed that the severe parenchymatous changes could be sufficiently accounted for by the circulating germs. All the grosser lesions were embolic and it was plain that the bacteria had come from a lower part of the genital canal.

Insufficiency of the Muscles and Its Surgical Treatment.—By Dr. F. Lange.

Treatment of Erysipelas in a Red Room.—By Dr. H. Krukenberg.

Progress with Finsen's Light Treatment.—By Dr. A. Sack.

Wiener klinische Wochenschrift, April 3, 1902.

Subphrenic Abscesses with Biliary Contents.—Dr. Karl Weiler reports a case of this kind, in which bile was found in the abscess, necessitating a communication at some time between the biliary passages and the abscess cavity. The author reviews the literature of the subject, enumerating the diagnostic points of a subphrenic abscess, as worked out by Leyden, Senator, and Pel.

Inflammation of Cavernous Tumors, Resulting in Enlargement of Old Angeliomata and Development of New Venous Ectasiæ.—By Professor O. Chiari.

Four Hundred Operations for Vesical Calculi.—(Continued). By Professor H. von Frisch.

April 24, 1902.

The Arsenic Dermatoses.—Dr. Rille doubts whether herpes zoster and alopecia can follow the administration of arsenic; but he has seen a hyperkeratosis develop. Arsenic keratosis is seldom seen in lichen ruber and the ordinary scaling diseases, but is more likely to occur after the use of arsenic in other cutaneous diseases.

Treatment of Chancre with Cold.—By Dr. A. Brandweiner.

Experiments on Urinary Antiseptics.—Dr. O. Sachs finds that by the internal administration of antiseptics that pass into the urine, the urine acquires bactericidal and inhibitory properties. The urine of patients taking urotropine, sixty grains, or more daily, had a decided bactericidal influence upon bacteria contained in it, or added to it. Urotropine was the strongest antiseptic, followed in turn by salicylic acid, santal oil, methylene blue, salol, copaiba, potassium chlorate, and boric acid. Uva ursi showed no perceptible influence upon bacteria.

Effects of Electricity on Animals.—By Dr. S. Jellinek. This paper is not suitable for abstraction, but the author has found central and peripheral changes in the nervous system in men and animals killed by strong currents of electricity or by lightning.

Riforma medica, April 7, 1902.

A Case of Muscular Contracture of the Adductor Longus Due to Syphilis. By Dr. Gravagna.—A man, aged thirty-one years, had contracted syphilis

eleven years previously. Sixteen months after the appearance of the initial lesion he began to complain of difficulty in contracting the adductors of the lower limbs and noticed a fibrous cord forming in the inner aspect of his right thigh. The same soon appeared on the left side and was unable to separate one heel from the other for a distance of more than thirty centimetres. On admission he presented the lesions of psoriasis and this difficulty in adduction. The internal surfaces of both thighs presented hard, thin cords corresponding to the adductores longi. Evidently the muscular tissue of these muscles must have atrophied and become fibrous. The galvanic and faradaic excitability of the affected muscles was very much diminished, and the movements of flexion, adduction, and forward rotation were limited on both sides. The author, quoting authorities like Fournier, attributes the origin of this contracture solely to syphilis. Specific treatment, instituted vigorously, improved the condition, considerably, and thus the test of treatment was successful.

April 8, 1902.

A Contribution to the Study of the Action of the Agglutinating Substances in Blood Serum upon the Red Blood Cells. By Dr. Achille Capoglossi.—Former researches published by the author showed that the blood serum of man was capable of agglutinating red blood cells of malarial patients. Since then, he has found that the blood of healthy individuals is also capable of being agglutinated in the same fashion, clumping red cells into masses of an irregular shape, even when added in a dilution of one part to fifteen in salt solution. On the other hand the blood serum of malarial patients does not possess the property of clumping red blood cells in masses, or, if it does, it loses this power when diluted with its own volume of salt solution. Among malarial patients, the cachectics give a more markedly agglutinating serum. The author was not able to confirm the experiments of Monaco and Panichi, who showed that the addition of quinine to the malarial serum destroyed its agglutinating powers. In his former paper he had expressed the opinion that the grouping of red cells in rouleaux was, in reality, a phenomenon of agglutination taking place in the blood itself. He supports this idea by arguments and experiments showing that, in the masses of cells in agglutinations of a strong variety, there are places where the cells lie in rouleaux. The reason why red cells do not always adhere in the form of coin-rolls in agglutinations, is that they are deformed by the action of the agglutinin.

April 9, 1902.

Kernig's Sign in Sciatica. By Dr. Aldo Magri.—The author reports the case of a man, aged twenty-six years, who was suffering from sciatica and who afterwards died of typhoid fever. The autopsy showed that his meninges were perfectly healthy, and yet he had presented Kernig's sign at the time of an acute attack of sciatica. In the horizontal position his body was at that time perfectly relaxed, and there were no contractures of any of the thigh muscles. But, when he attempted to change from the horizontal to a sitting posture, there occurred a distinct contraction of the thigh in

flexion, which could not be reduced by any attempts to force the limb to extend, and only relaxed when the trunk was allowed to fall backward. The remarkable feature of this case is, therefore, the presence of Kernig's sign, the contraction just described, in a case of sciatica, without any lesions, save a slight congestion, of the meninges. Kernig's sign cannot, therefore, be considered as pathognomonic of meningitis.

April 10, 1902.

Intravenous Injections of Corrosive Sublimate in Experimental Anthrax (Bacelli's Method of Treatment). By Dr. Pietro Spissu.—The author instituted a series of experimental inoculations of anthrax in rabbits with a view of determining the therapeutic value of Bacelli's method of treatment by injections of sublimate into the veins. He concludes that this method of treatment can have but little value in therapeutics. The rapidity with which the corrosive sublimate is eliminated from the blood, to become fixed in the tissues as mercuric albuminate, which is insoluble and devoid of antiseptic power, is an obstacle which stands in the way of corrosive sublimate as an efficient remedy for such an infection as anthrax, where the bacilli circulate in the blood and are not attacked by the mercuric salt *in vitro*.

April 11, 1902.

A Case of Anthrax Treated with Sclavo's Serum. By Dr. Claudio Mancini.—Since Ferrugio, in 1897, applied Sclavo's serum in practice, the number of cases treated with this serum has been increasing rapidly, and the statistics which have thus far been gathered prove abundantly the claims of this remedy as an antitoxine in anthrax. The case here reported concerns a man, aged thirty-seven years, who was infected while handling hides and developed a typical anthrax pustule on the anterior aspect of his neck. A bacteriological examination showed the pustule to be caused by anthrax infection, and 20 cubic centimetres of Sclavo's serum were injected. The condition of the patient continued to grow worse in spite of the daily injection of 20 cubic centimetres each, for the first three days of the disease. On the following day a fresh supply of the serum arrived, and ten cubic centimetres were injected. From this time forth the patient began to improve rapidly. Previously to this, the old serum, which had been kept for five months, was used, and no effect had been obtained from 70 cubic centimetres injected. Sclavo's serum, therefore, is efficient provided it is used in a fresh condition.

Roussky Vratch, April 20, 1902.

On the Mutual Relations Between the Nervous, Non-nervous and Vascular Elements. By Professor M. D. Lavdovsky.—In a previous article (*Vratch*, 1902, 12) the author showed the various modes of anastomosis possible between neurones, and concluded as a result of his studies that the method of union which most frequently occurred between neurones was by contact-anastomosis, i. e., not by anastomosis in the sense of flowing into one another, but in the sense of coming together more or less closely. Citing the recent

work of Menci (*Archiv f. mikrosk.*, Anat. Vol. 60, p. 181) he concludes that the process of division in nerve cells continues longer than that of other cells in the human body, for Menci has shown that there are instances in which nerve cells are actually connected with one another, by continuous protoplasmic processes. These cells are more numerous in younger animals, and in each instance only two cells took part in the union. The anastomosis in this class of cases is purely cytoplasmic, not a contact anastomosis. Such unions between neurones occur only occasionally, however, and are instances of cell division in the last stage. According to the present author this shows that the nervous system grows during life.

As regards the relations of the neurones to the neuroglia and the vascular elements, the author's careful researches showed (1) that the cells of the stroma of the brain, the glia, were undoubtedly connected with those of the vessels of the brain, and constituted in the brain a drainage net which served for the nutrition of the tissues. (2) That there never occurred an actual connection between the neurones of the brain or cord and the vascular elements. (3) Occasionally, in rare instances there might be a connection between a neurone and a glial cell. This phenomenon was only met with in the embryonic brain, because it represented an embryonic condition. The neuroglia cells, as well as the neurones, were the products of the bipolar embryonic cells (neuroblasts and spongioblasts), the undeveloped portions of which remained for life as ependymal cells in the walls of the central canal and the cerebral ventricles. It is not at all astonishing in view of this common derivation that there should be examples of nondifferentiation, even in the later stages of the brain's development.

On Penetrating and Punctured Wounds of the Abdominal Wall. By Dr. B. K. Finkelstein.—Finkelstein.—(Wounds of the Stomach, *Continued*). The stomach, thanks to its position, is wounded less often than other abdominal organs, but the diagnosis of stomach wounds is very difficult if there is not a prolapse of the organ, food particles in the wound, etc. Usually an enlargement of the wound is necessary for diagnosis. These wounds are accompanied by severe nervous phenomena, because the sympathetic system is involved. The author's material showed a mortality of 66 per cent. (two recoveries out of six). As regards the necessity of operative treatment, he notes that, in four cases out of fifteen, according to Hahn, there had been adhesions around the wound surface and the peritonæum which prevented peritonitis, but believes that this is a rare occurrence. In examining the stomach in stab wounds, etc., it is always necessary to inspect its posterior surface through an opening in the transverse mesocolon. If the diaphragm is wounded it should be sutured before the stomach is returned to the cavity, as thus a hernia is prevented. Drainage is the most essential thing in the treatment of the sutured stomach wound. After from eight to twelve days the deeper drains may be removed, unless suppuration has occurred.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

XIII.—Disregarding proprietary preparations, how do you direct cow's milk to be prepared for infant feeding? (Answers due not later than June 10, 1902.)

XIV.—How do you treat chronic ulcers of the leg? (Answers due not later than July 10, 1902.)

XV.—How do you treat rhus poisoning? (Answers due not later than August 11, 1902.)

XVI.—What is the best non-operative treatment of dysmenorrhœa? (Answers due not later than September 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. David E. Wheeler, of Buffalo, whose paper appears on page 919.

PRIZE QUESTION NO. XII.

THE TREATMENT OF A PERSON WHO HAS SWALLOWED A POISONOUS DOSE OF CARBOLIC ACID.

By DAVID E. WHEELER, M. D.,
BUFFALO.

(Concluded from page 922.)

THE GREAT VALUE OF ATROPINE.

Dr. Walter J. Cavanagh, of South Boston, Mass, says:

The treatment of one who has swallowed a poisonous amount of carbolic acid, to be effective must be prompt, for when this acid is taken with sufficient freedom it is a most fatal, rapidly acting poison.

Too much stress cannot be laid upon the importance of treating these cases of poisoning immediately, as I know of patients suffering from this poison, who, untreated, have been sent to the hospital, some distance from their homes, only to succumb in agony on the way; whereas, if treated when first seen, their sufferings might be alleviated if not life itself spared. The symptoms are usually developed very rapidly, and deaths have taken place within a few moments, and in a great majority of fatal cases in two hours.

The stomach pump or india rubber tube siphon

should be employed to cause emesis, if vomiting has not already taken place. Emetics avail but little, as the benumbing of the stomach from the acid is such that usually they will not act. After vomiting has taken place, an antidote should be given, such as sodium sulphate (Glauber's salt), *freely*, dissolved in water, or a solution of saccharated lime, which is probably the most efficient antagonistic remedy from a chemical point of view, *freely* and in large doses. It must, however, be remembered that the toxic action of carbolic acid is very speedy, and the chemical antidote may not have time to act; under these circumstances, it will be found that atropine is apparently a most certain physiological antidote. It has succeeded in some very unpromising cases, when life has been despaired of. I believe in giving a large dose by hypodermic injection of the sulphate of atropine, a twelfth of a grain, and half that amount for a second dose, being guided by the respiration and pupil in the repetition, increasing, or decreasing of the dose. In general terms, a sufficient quantity of the atropine is to be given to *MAIN-TAIN* dilatation of the pupil and to overcome depression of the circulation and respiration, as death takes place from the paralysis of the respiratory centres, although the heart is powerfully depressed and a fatal termination may come about by syncope.

The mucous membranes should be protected by demulcents, such as mucilage of acacia, mucilago ulmi, or mucilago sassafras medullæ. Efforts should also be made to keep the temperature of the body about normal by the use of blankets, hot cloths, hot irons, etc., and the prostration overcome by stimulants, such as aromatic spirit of ammonia. And elimination should be promoted by the free use of diluents. The patient should be kept as quiet as possible, and the feeding should be *per rectum* for a while, and during recovery the treatment should be on general principles.

ALCOHOLIC IRRIGATION AND THE USE OF MAGNESIUM SULPHATE.

Dr. Stanley R. Woodruff, of Bayonne, N. J., says:

In treating a case of carbolic acid poisoning, the cardinal thing to be remembered is that something that amounts to something must be done in a very short space of time. But it must also be borne in mind that in doing this "something" we are dealing with a very delicate structure that has already been most horribly maltreated, and all our efforts, though thoroughly and firmly carried out, should still be as gentle as possible. We should remember that any more laceration or rough treatment of the injured mucous membrane only adds to the shock and lessens the possibilities of our saving the patient.

As to the treatment itself, we must bear in mind

that we are dealing with a double poison. The acid not only acts as a corrosive but also as a systemic poison. Therefore the plan of treatment followed must be: first, local, to combat the effects of the destruction of the mucous tissue, and, secondly, to prevent the absorption, as far as possible, of the poison into the circulation and to aid in the elimination of that already absorbed.

The very first step to be taken consists in the neutralization of whatever amounts of the acid are still getting in their deadly work. The very best and quickest agent for doing this is alcohol. The form of alcohol used is not so important as some think. Take whatever you can get the quickest. Few households have on hand either pure or diluted alcohol. Whiskey and brandy are much handier, and you will generally find either in the house of one who has swallowed carbolic acid. Again, saloons where whiskey and brandy can be bought are more numerous than drug stores, to which you must send for alcohol. The administration of the antidote brings up the old question of the stomach tube. Much has been written both for and against the use of the stomach tube in carbolic-acid poisoning. The adherents of the tube hold that it is indispensable, while its opponents maintain that the injury to the already inflamed and bleeding tissue is irreparable. Still in my experience the gently handled soft-rubber tube has never to my knowledge caused any trouble. The tube should be gently passed through the pharynx and into the œsophagus only a short distance, and about eight ounces of whiskey, brandy or diluted alcohol allowed to flow in. After waiting a few moments, without removing the tube, about a pint of tepid water is allowed to run in. The tube is then carried down into the stomach and the organ emptied.

The alcohol must be of sufficient amount to cover well the lining of the stomach and open the folds of the mucous membrane, so as to attack any small pockets of acid that may have collected.

It is now well to run in about the same amount of alcohol or brandy as was done before, and again wash out with tepid water after waiting for about five minutes. It is well to continue washing with water till most of the trace of the acid has been removed and the washings become more or less odorless.

The next step is to prevent the absorption, as far as possible, of whatever amount of the acid may be remaining in the stomach. Theoretically, this is best done by putting into the stomach some substance that will unite with the acid and form an insoluble compound. This is best accomplished by the ordinary Epsom salt, which forms with the acid a more or less insoluble sulphocarbonate. A solution of the salt should be prepared in warm water and poured

through the tube. Just the amount of magnesium sulphate used does not make any material difference, but it should be at least four drachms.

During this period of stomach treatment the by-standers and assistant should be ordered to procure a number of bottles filled with hot water, stove covers, or warmed plates. These should be placed all around the patient, to aid in restoring the bodily temperature, which always falls from the toxic effects of carbolic acid. The patient should be well covered with blankets and attention directed to the failing heart and respiration. The very best stimulant for these is atropine given hypodermically, a fiftieth of a grain, to be repeated in an hour if necessary. Atropine dilates the contracted pupil, stimulates the respiratory centre, and causes a feeling of bodily warmth. To combat the vasomotor paresis, digitalis is indicated. Strychnine and nitroglycerin may be tried. In fact, almost any stimulant will do. Hypodermic injections of ether are especially valuable. Artificial respiration may be necessary, and in cases seen late an intravenous infusion of normal salt solution has apparently been tried with success.

Owing to decreased oxidation, the inhalation of oxygen, when possible, is to be greatly commended. For the pain, morphine is indicated, but it should be withheld if possible. The patient should be encouraged to drink freely of water and mucilaginous drinks. Pieces of ice may be swallowed with benefit. Milk is warmly praised by some, but there is sure to be more or less digestion of it in the stomach, and the formation of large curds is more or less objectionable. With the treatment I have mentioned milk is unnecessary, but under some circumstances it may be very valuable.

A good demulcent mixture is:

R Bismuth subnitrate,	1	ounce;
Olive oil,	2	ounces;
Castor oil,	1	ounce;
Mucilage of acacia,	1½	ounce;
Lime water, enough to make	6	ounces;
M. Sig.: A tablespoonful every hour.		

The after-treatment consists in rest for the stomach, demulcent drinks, and rectal feeding for three days. Only liquid foods should be given for at least two weeks. Special care should be taken to keep the bowels, skin, and kidneys open.

THE GREAT VALUE OF ALCOHOLIC IRRIGATION.

Dr. Lionel Sinclair Luton, of Grand Rapids, Mich., says:

In the case of a person known to have swallowed a poisonous dose of carbolic acid, the treatment, to be at all successful, must be energetic and pursued with a clear understanding of the primary corrosive action on the mucous membranes, the secondary de-

pression from its absorption, and the remote effects, including the complications.

The antidoting of the acid wherever it has come into contact with the gastro-intestinal mucous membrane is of vital importance, and in alcohol we have by long odds the best agent at our disposal for that purpose. Many strengths have been used, varying from a 10% solution to the strong alcohol, but as a routine practice a 50% solution meets all the requirements without, on the one hand, endangering the patient by the exhibition of the strong alcohol, and, on the other, relying on the weaker and less efficient dilute solution for the primary antidotal effect. The giving of the strong alcohol should be followed at once by a copious lavage of water. Any of the alcoholic stimulants, such as whiskey, brandy, wine, etc., can be used with good effect in an emergency. In the absence of any of these, the soluble sulphates such as sodium or magnesium sulphate, saccharated lime, dilute acetic acid, and the fixed oils may be used, remembering that rather than wait for something alcoholic we should use whatever is most serviceable at hand.

If the person has just taken the acid and can still swallow, have him quickly rinse out the mouth with a 50% dilute alcohol and then swallow from three to six ounces of the same solution. This is followed up by the introduction of the stomach tube and the complete washing out of the stomach with water or very dilute alcohol. From this on, the case should be handled the same as the one presently to be described. Very unfortunately, most victims of carbolic-acid poisoning, by the time we see them, cannot be treated in this way, and we must use the tube to bring our antidote in reach of the acid. The stomach tube, well lubricated, should be quickly passed into the stomach and from four to eight ounces of the solution (50% alcohol) poured in, and at the same time every effort should be made to bring the alcohol into contact with all parts of the mouth and pharynx by the use of a spray or by flooding the solution over the burned membrane and having at least some of it trickle down the œsophagus around the tube. After allowing the alcohol to remain for two or three minutes, the stomach should be washed, as also should the mouth and pharynx, with several pints of a diluted alcohol (5 to 10%) or plain water. There should then be left in the stomach an emulsion made up of 2 ounces each of olive oil, magnesium sulphate, and water, allowing as the tube is withdrawn some of this to come into contact with the œsophagus, pharynx, and mouth. If the alcohol is not at hand, either the sodium or magnesium sulphate, 2 ounces in 4 ounces of water, can be used, as can the saccharated lime or dilute acetic acid, bearing in mind the same details as in the case of the alcoholic antidote. Any of the oils, adminis-

tered in one- to two-ounce doses, prevents to some extent the absorption of the acid until the stomach can be washed out.

The treatment directed against the symptoms of collapse which to varying extents generally ensue should be started as soon as you see the patient. Several hypodermics of brandy or whiskey are to be given with the idea of neutralizing the absorbed acid. At the same time there must be injected a powerful heart tonic, such as the combination of strychnine sulphate 1-20 and nitroglycerin 1-100 of a grain. At short intervals stimulants are to be administered by the skin, and it is best to vary these from time to time, using, in addition to the strychnine, ether or the aromatic spirit of ammonia in 30-minim doses and caffeine citrate, 1 grain at a dose, the effect of these on the pulse and respiration to be carefully noted from time to time, and the stimulants pushed if it becomes necessary, for effect, rather than by any prescribed dose at any particular interval. External heat is to be maintained by hot bricks and plenty of blankets. The bladder should be catheterized and the urine tested for albumin and the carbolic-acid derivatives. If in a short time the patient does not show favorable signs, an enema containing from one to two pints of normal saline solution and two ounces of whiskey may be given; and in very severe cases the intravenous route should be chosen for the salt solution. With returning consciousness and improvement in the pulse and respiration, the pain is to be combated with small doses of morphine, and in some cases a cocaine spray. For the first twenty-four hours nothing should be given by the mouth, except small pellets of ice or sips of hot water, the thirst and hunger being overcome to some extent by the use, *per rectum*, of water and completely peptonized milk.

The return, during convalescence, to food by the mouth should be made very cautiously, using at first peptonized milk, gruels, broths, etc. If at the time of the first urinary examination or subsequently some urinary changes are found, the usual treatment for a mild nephritis is to be carried out. For some time the possibility of an ulceration or cicatricial stenosis should be borne in mind.

THE "ANTIDOTE BAG."

Dr. Bernard Weiss, of New York, says:

On being called to a case of carbolic acid poisoning, quick and energetic action is necessary. As a poison carbolic acid is both swift and strong. Indeed, one of the most characteristic features of carbolic poisoning is the swiftness of effect—a swiftness exceeded only by that of hydrocyanic acid. Out of a collection of thirty-five fatal cases, twelve patients died within the first hour after taking the poison.

Although carbolic acid is a sure poison, if the patient is treated in time and in a proper way, death can just as surely be prevented. In cases of this kind, with more justice than in any other, the physician may say "I have saved that life."

In going, or rather running, to the patient, it is necessary to throw into the satchel a stomach pump, a bottle of brandy (antidote No. 1), and some Epsom or Glauber's salt (antidote No. 2). When arriving at the house, at once order plenty of warm water and some more brandy, and select a person—the most intelligent at hand—to help you. For, if the patient has poisoned himself intentionally, he will resist your efforts to save him and you will need some one to help you.

Have all the windows thrown open, and place the patient in a recumbent position. Give him or force him to take as much brandy as he can. Dip the end of the stomach tube into warm water. Force the jaws open with a spoon, and, with the left hand pulling on the patient's tongue, with the right hand push the tube down into the stomach. Place a piece of wood between the jaws at the corner of the mouth. This will prevent the patient from biting your fingers or the stomach tube.

Pour into the warm water any quantity—about a few tablespoonfuls of the Epsom or Glauber's salt. Don't waste time in measuring. Stir this up and pour it into the funnel of the stomach tube. When the solution stops running in, bend the tube so that the funnel will be at a lower level than the patient's stomach. The contents of the stomach will then flow out. After one or two washings with the sulphate solution, use diluted brandy for washing out the stomach. Continue to wash the stomach with the sulphate or the brandy solution until there is no more odor to the return flow.

Your helper may now take charge of the stomach-tube and you can give the patient a hypodermic injection of atropine. Ether, 30 to 60 minims hypodermically, is better than atropine; but you are more likely to have the atropine at hand. Apply heat to the extremities and inject into the rectum as high as possible about a pint of hot black strong coffee, containing about an ounce of the sulphate of sodium or magnesium. This injection is to be retained. In desperate cases, if necessary, that is, if the patient is still unconscious or in convulsions, in spite of what you have so far done, perform venesection, and, while the blood is flowing, do hypodermoclysis with saline infusion.

Emetics are not to be trusted. They are slow in action, and, the lining of the stomach being anesthetized by the carbolic acid, emesis is not likely to result. The sulphate of sodium or sulphate of magnesium is a chemical antidote to carbolic acid, form-

ing when combined a non-injurious substance, the sulphocarbonate.

In cases of carbolic poisoning, do not always expect to find the tell-tale odor on the burned lips and tongue. Some persons bend the head backward and pour the carbolic acid directly into the pharynx, in the same way that some people drink whiskey. In such a case no white eschars are visible.

Alkalies, as such, are of no use as antidotes, because carbolic acid is no acid at all in a chemical sense, being neutral in reaction. Carbolic acid is not soluble in water and is heavier. Therefore, while washing the stomach, insert the tube as deep as possible, so as to touch the fundus of the stomach and thus draw off the pure carbolic acid. For this purpose the opening in the tube should be at the tip, rather than on the side. In inserting the tube gentleness is necessary so as to avoid further destruction of the mucous membrane. If the patient is to assume a recumbent position, he must not be placed on the floor, because you will not be able to hold the funnel at a lower level than the stomach, and siphonage will therefore not occur.

Carbolic acid is very soluble in brandy; hence if brandy is poured into the stomach, it must be washed out at once to prevent absorption. The sulphate solution, on the other hand, may be left in the stomach for absorption, to form the sulphocarbonate perhaps with the carbolic acid already in the blood. Ether must not be given by the stomach, because it is a solvent of carbolic acid. For the high rectal injection, the stomach tube may be used, and the liquid poured in through the funnel.

The after-treatment consists in the use of milk diet, the white of eggs, and demulcent drinks, such as barley water and linseed tea.

It is advisable for every physician to have one satchel exclusively for an "antidote bag." In this should be placed all the ordinary articles necessary in a case of poisoning. Every physician is liable to be summoned to such an emergency, and lives will be lost in searching for instruments and medicines or in going to the patient unprovided with suitable remedies.

A TERSE STATEMENT OF THE INDICATIONS.

Dr. Henry W. Cheney, of Chicago, says:

Carbolic acid is a poison which acts very quickly. In some cases its action may be so sudden that the person swallowing it may die in a few moments, while in others death may not occur for several hours. It therefore follows that, whatever the measures are that we employ in this condition, they must be carried out quickly and thoroughly. The indications for treatment of a person who has swallowed a poisonous dose of carbolic acid are—

1. Empty the stomach.
2. Neutralize the poison.
3. Stimulate and support the patient.
4. After-treatment.

Every physician should have accessible at all times a good stomach tube, because when he wants to use one, he needs it quickly and he needs it "bad." And this is one of the times to use it. Even if the patient has vomited, the stomach tube should be passed. This should be done most carefully, and no force should be used, because the escharotic action of the acid may have made the walls of the œsophagus or stomach very thin in places, and there is danger of perforation. After the tube is in place, the stomach should be washed with a solution consisting of one part alcohol and two or three parts water.

It has been recently shown, more particularly by Dr. Powell, of New York, that pure alcohol will positively neutralize the action of pure carbolic acid on any surface to which it may be applied. Therefore in using the above-named solution we not only wash away the remaining acid, but also, in part at least, neutralize it. The irrigation should be repeated several times until the solution returns with little or no odor of the acid to it.

If a stomach tube is not available or cannot be used, give hypodermically one tenth grain of apomorphine and repeat every fifteen minutes unless vomiting occurs or until three doses in all are given. Emetics which act locally on the stomach, such as zinc sulphate or mustard, are often of no effect, because the carbolic acid has previously destroyed the sensitiveness of the mucous membrane. But these should be tried if the first two methods cannot be used.

Two things will neutralize the poison. One, as mentioned before, is pure alcohol, and the other is any soluble sulphate, such as magnesium or sodium sulphate, familiarly known as Epsom salts and Glauber's salts. Either salt which is at hand may be used, and it may be combined with alcohol in the following manner: One ounce of the sulphate, one ounce of alcohol, and two ounces of water. Dissolve the sulphate in the water and add the alcohol to it. Make this mixture before the stomach tube is withdrawn and, after irrigation, pour the solution through the tube into the stomach, withdraw the tube, and leave the solution in the stomach for absorption. If the stomach tube has not been used, make the patient swallow the alcohol and sulphate solution. Besides the neutralizing effect of the alcohol, it will act as a cardiac stimulant. If several hours have elapsed since the acid was swallowed, the alcohol will not be so potent as an antidote, but the soluble sulphate should be given in any case. For, if the acid has been absorbed, the sulphate will be absorbed also and neutralize the acid, even in the

tissues and the blood-vessels of the body. If none of the above-mentioned remedies can be obtained, we may give white of egg, glycerin, oils, fats, or mucilaginous drinks.

If alcohol has been given, we shall get a stimulating effect from that. Strychnine or digitalis may also be given or any other stimulant which may be indicated or which may be at hand. The patient should be put to bed, external heat applied, and the extremities rubbed. If possible, nourishment should be given by the rectum for about a week or longer if necessary.

Stricture of the œsophagus or stomach and ulcer or perforation of either organ may result, and these will require surgical treatment later. This should be carried out according to any of the recognized procedures, which it is beyond the limits of this article to describe.

Book Notices.

Municipal Engineering and Sanitation. By M. N. BAKER, Ph. B., C. E., etc. New York: The Macmillan Company, 1902. Pp. viii-317. (Price, \$1.25.)

The subject is well treated in the book before us, and it seems advisable to mention the subdivisions under which the author has rather ingeniously classified his subject matter: Ways and means of communication; municipal supplies; collection and disposal of wastes; protection of life, health and property; administration, finance, and public policy.

Now that municipal affairs are so closely followed, both by the profession and by the laity, this book will recommend itself as dealing in a fair manner with the problems contained therein. The author among other matters recommends central heating plants for large cities, thereby purifying the air in dwellings and other buildings.

The work is very readable, and brings a vast subject before the public in a most persuasive, although not in a didactic or too technical, manner.

On the Cure of the Morphia Habit without Suffering. (Physiological Demorphinization). With a Note on the Physiological Method of Relieving the Craving for Drink. By OSCAR JENNINGS, M. D. (Paris), M. R. C. S. (Eng.), Fellow of the Royal Medico-chirurgical Society. Second Edition. Revised and Enlarged. New York: William Wood & Company, 1902. Pp. xii-211.

Alcoholism. A Study in Heredity. By G. ARCHDALL REID, M. B., C. M., F. R. S. E., etc. New York: William Wood & Company, 1902. Pp. xvi-293.

These two volumes concern themselves with two similar questions, morphinism and alcoholism, but the point from which they are viewed is essentially different. Dr. Jennings's book describes his method of treating the individual, while Mr. Reid's book is a study of alcoholism in relation to heredity and society. Dr. Jennings's effort is a remodelling, with

numerous additions, of his former publications on the same subject. The outline of his method of treatment is briefly as follows: He believes in restriction rather than restraint, discountenancing the forcible methods which other physicians so often find necessary in the management of patients addicted to morphine. He drops off the drug gradually, getting rid of the syringe as soon as possible and for a time giving the drug *per rectum*. On the theory that the craving is in large part due to the heart's having lost its customary stimulant, morphine, he recommends heart stimulants, especially digitalis. He gives it internally rather than by hypodermic injections.

Another factor in craving is hyperacidity. For this he uses bicarbonate of sodium. The hot air bath he believes has a moral effect as well as being an aid in elimination. This little volume contains many useful hints, the only objection to it being the author's too frequent claims for priority in all his methods and the insertion of letters from patients as evidences of his own professional success.

Mr. Reid regards drunkenness as an evidence of degeneration which it is impossible to control. He disapproves of temperance movements and legislative action. He believes that the one great penalty for drunkenness should be that the drunkard should not be permitted to have children. He says: "If drunkards were taken before magistrates, sitting in open or secret session, as the accused preferred, and, on conviction, were warned that the procreation of children would subject them to this or that penalty, say a month's imprisonment, the birthrate of drunkards would certainly fall immensely." It seems to us that this solution is one of the weakest ever promulgated and that, as far as the present volume is concerned, while it contains much useful information and many sound views of the question, it leaves the problem unsolved.

Essentials of Obstetrics. By CHARLES JEWETT, A. M., M. D., Sc. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, etc. Assisted by HAROLD F. JEWETT, M. D. Second Edition. Illustrated by 80 Woodcuts and 5 Colored Plates. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. viii-18 to 386.

For a short, concise statement of the salient facts of obstetric practice, this manual of Dr. Jewett's undoubtedly fills a place, since it is now in its second edition. There is considerable new matter added, and the whole work appears to have been thoroughly revised. Some new illustrations also appear.

The author has confined himself entirely to practical considerations, and in his effort to be concise has, we think, condensed his material a little too much. This is particularly true of the chapters on the pathology of labor, which might with profit be somewhat extended. Yet the book is wholly modern and thoroughly scientific, and if all practitioners knew its contents, it would be well.

A Laboratory Guide to the Study of Qualitative Analysis. By E. H. S. BAILEY, Ph. D., Professor of Chemistry, and HAMILTON P. CADY, A. B., Assistant Professor of Chemistry in the University of Kansas. Fourth Edition. Philadelphia: P.

Blakiston's Son & Company, 1901. Pp. 5 to 234. (Price, \$1.25.)

This work is manifestly arranged for class work and probably particularly adapted to the courses under this subject given at the University of Kansas. Each page is printed upon one side only, allowing the blank side to be used for taking notes of experiments, etc. The dissociation theory is closely followed, but it is to be regretted that reactions are not given the stress which they deserve, as very few of them are contained in the book before us. The typography is clear, and the mechanical make-up of the book is excellent.

Miscellany.

Suprarenal Diabetes.—Dr. F. Blum (*Deutsches Archiv für klinische Medizin*, 1901, Bd. 71) says that the suprarenal capsules contain a substance which, when injected into animals, induces slight glycosuria, consisting largely of dextrose. The author considers that this condition has undoubtedly a clinical analogue, and that there is such a thing as suprarenal diabetes.

Cardiopathies and Chloroformization.—Duret (*Journal des sciences médicales de Lille*, April 5th) in a communication to the *Académie de Médecine*, arrives at the following conclusions: 1. Both practical experience and the anatomical and physiological considerations herein advanced demonstrate that ordinarily the administration of chloroform in cardiac patients offers no grave dangers. Generally the anæsthesia is conducted throughout without accident. 2. There are no other relative contraindications than those laid down by M. Huchard and the preceding speakers—marked asystolia, toxic dyspnoea, fatty degeneration, etc. 3. Subjects of cardiac disease with pronounced lesions frequently present simultaneously contraindications both to anæsthesia and to operation. Because of their organic defect, such patients should only be operated on under dire necessity.

The Treatment of Lupus with Potassium Permanganate.—Dupuy (*Thèse de Paris*, 1901; *British Medical Journal*, April 5th) has modified Butte's method, which consists of a compress saturated with a lukewarm two-per-cent. solution of potassium permanganate applied for twelve or fifteen minutes daily for about a fortnight, after which the treatment is applied every two days. Dupuy's modification is as follows: A one-in-fifty solution was applied according to the Butte method, while in the case of non-ulcerated lupus a powder was used as giving the best results. The following is the method: The whole surface having been washed, with either an ichthyol soap or an emulsion of corrosive sublimate, tincture of benzoin, and soap, in distilled water, and carefully dried with tampons of absorbent wool, powdered permanganate is spread over the whole of the lupus patch with a spatula. Should the area affected be extensive only a portion is so treated at a time. A piece of dry absorbent wool is then applied, and the whole is left on for a quarter of an hour. At the end of this time the wool is removed and the surface washed with boric lotion and a simple wet dressing applied. Generally a single application of potassium permanganate suffices.

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CEREBRAL LOCALIZATION AND BRAIN FUNCTION.

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The credit for the earliest suggestion that the brain is a composite rather than a single organ is usually given to the phrenologist, Gall (1758-1828), whose work *Sur les fonctions du cerveau et sur celles de chacune de ses parties* appeared in 1825. M. Farabeuf, the distinguished anatomist of Paris, has discovered, however, a work by Joseph Baader, a professor at Freiburg-im-Bresgau from 1746 to 1750, in which it is clearly intimated that the sensory and motor functions of the brain may possibly be separated and localized. The work is entitled *Observationes medicæ succisionibus cadaverum anatomicis illustratæ*, was published separately in 1762, and was reprinted in Sandifort's *Thesaurus dissertationum* in 1778. Notwithstanding these early hints at cerebral localization, the scientific world continued to believe with Flourens (1794-1867) that all the faculties occupied the same place, that to perceive and to will constituted essentially the same faculty, and that this faculty resided in a single organ. The mapping out of the brain surface into sensory, motor and other areas is distinctly a recent advance in physiology; the explanation of the correlation of these areas, and of the dependence of mind upon brain, is still an unsolved problem.

The subject of cerebral localization is one of unequal magnitude according as it is looked at from the standpoint of the surgeon, the physiologist, or the psychologist. In the consideration of it, the practical bearings have been so generally uppermost, it has happened that only those parts of the brain have received the largest amount of study which could be reached by the surgeon's knife. Certain superficial sensory and motor areas have been the most completely established, though these areas probably represent the coarsest and most primitive

functions of which the brain is capable. It is obvious that other and deeper parts of the encephalon play an important, if not really a more important, rôle in the tout ensemble of brain activity, and that the localization of the functions of these parts is quite as much of a desideratum scientifically as is the localization of the sensory and motor areas of the cortex. The physiologist is called upon to explain the function and presence of the following deposits of gray matter in the cranium, the localization phenomena of some of which are already fairly well understood:

Cerebral cortex.

Olfactory lobes.

Corpora striata (caudate and lenticular nuclei).

Optic thalami (and pulvinar).

Corpora geniculata (external and internal).

Corpora mamillaria.

Corpora subthalamica.

Corpora quadrigemina (anterior and posterior)

Epiphysis.

Hypophysis.

Red nuclei.

Substantia nigra.

Cerebellar cortex.

Cerebellar nuclei.

Pontile nuclei.

Corpora olivaria.

Nodal nuclei.

Cranial nuclei.

These gray deposits have each their special function, and all doubtless play their part in the sum total of brain activity. It is a matter of extreme difficulty and of intense interest to the physiologist to define accurately these functions. The more exact diagnosis of focal lesions and the more rational explanation of mentalization both call loudly for a solution of this problem. The question involves much more than that of making a mere surgical diagnosis; it involves the whole subject of normal and abnormal mental and cerebral phenomena. Physiology must here proceed hand in hand with psychology and endeavor to localize the encephalic seat of such manifestations as memory, volition, intellection, imagination, etc., or at least the seat of their constituent elements. For the practical purposes of diagnosis and surgical interference, the study of the cerebral localizations must include also certain other parts of the encephalic mass, as, for

instance, the centrum semiovale, the corpus callosum, the internal capsule, the crura cerebri and other association and projection tracts.

In discussing, therefore, the cerebral localizations from the widest standpoint, one is obliged to discuss the function or functions of the entire encephalon, its psychoses as well as its neuroses. Only by such a wide discussion can one hope to avoid confusion and to prevent the splitting up of the theme into disconnected and irrelevant facts. As our knowledge of the functions of each part of the encephalic mass becomes more precise, the so-called schools of localizationists will become more and more amalgamated. The practical value of such knowledge will be incalculable, for it will afford a sound basis upon which the alienist, the neurologist and the surgeon will be able to make their diagnoses and apply their therapeutic measures.

Among the investigators of cerebral localization there are at present three schools of varying degrees of prominence. In a general way, it may be said that the English-speaking physiologists regard the sensory and motor areas of the brain as more or less separate and distinct, and as centres for the direct reception and emission of sensory and motor impulses. The Germans incline to the view that these areas are the centres for the direct reception and emission of nervous impulses, but they hold that they coincide or more or less intermingle. The French and Italian investigators study the question more from the psychological side, and place less stress upon the separation or commingling of the sensory-motor areas than they do upon the doctrine that the cortex is a general center for the representation of motor and sensory images. Psychosis, according to the latter, is a sensory-motor phenomenon, and mentalization is the product of the combined activities of the sensory and motor areas. They hold that the direct sensory-motor elements are lower down than the cortex; that impulses of cerebral origin are as much peripheral as are those starting from the skin; and that voluntary action is as much of a reflex as is an ordinary involuntary spinal reflex. This of course is a mere outline statement of the three views now in vogue. I will proceed at once to consider the functions of the several parts of the brain, so far as we know them at the present time.

The Cerebral Cortex.—Local disease of the prefrontal lobes does not give rise to any very definite localizing symptoms. It has been determined experimentally that at the base of the first and second frontal convolutions is a small area which controls the lateral movements of the head, the elevation of the eyelids, and the dilatation of the pupils. This has not been well established in man, however. Aside from these areas, the prefrontal lobes are usually credited with the expression of the higher

intellectual life. It has been observed that lesions of these lobes cause a change in the disposition and temperament, a lack of self-control, undue irritability, loss of the power of attention, loss of memory, general apathy, foolishness, and a tendency to laugh and cry immoderately without adequate cause. According to Flechsig, a delirium of grandeur accompanies irritative lesions, to be followed later on by a loss of judgment and general mental hebetude. In calculating the degree of mental deterioration, the observer must give due consideration to the patient's previous mental capacity. No motor or sensory symptoms are awakened by lesions limited to the prefrontal lobes. If the lesion, such as, for instance, a tumor, increases in size so as to produce an irritative followed by a destructive change in the neighboring convolutions, the above-mentioned symptoms will be accompanied by "neighborhood symptoms." Anosmia has been observed to follow disease of the basal parts of these lobes, but it may be a mere "neighborhood symptom" due to their proximity to the olfactory lobes and tracts.

According to Bruns, Oppenheim, Bernhardt, and others, tumors of the *frontal lobes* cause a disturbance of equilibrium identical with the so-called cerebellar ataxia. Moeli and Wernicke had already made mention of this frontal ataxia. A tract from the frontal lobe descends in the median part of the foot of the cerebral crus as far as the nuclei of the pons. These nuclei are connected by fibres running through the middle peduncles with the cerebellar hemisphere of the opposite side. Bruns, who was the first to call special attention to the probable cause of this frontal ataxia, argues that the highest volitional centres for the great trunk musculature send impulses to the cerebellum by way of this fronto-pontocerebellar tract and thus exercise a certain volitional control over the latter's coordinating function. Much uncertainty surrounds our knowledge of this tract, however. Mills declares that, in his experience, disturbance of equilibrium resembling cerebellar ataxia has not often been present in tumors of the frontal lobes. In two cases of cerebral tumor reported by Wiener, in which the neoplasm encroached upon the frontal lobe, there was pronounced ataxia. It may be that in certain cases of internal hydrocephalus in which there are a peculiar staggering gait resembling that of cerebellar ataxia and an absence of indications of pressure in and around the fourth ventricle, as in a case recently brought to my clinic, the ataxia is due to pressure upon the frontal lobes by the fluid in the lateral ventricles.

The *sensorial areas* of the cortex are made at the present day to include the gyrus fornicatus (Ferrier, Schäfer, Horsley, and Flechsig), the hippocampal convolution, the procuneus, portions of the parietal convolutions (von Monakow), and the posterior

part of the central convolutions (Flechsig, Hösel). In a general way the sensory area includes the postero-parietal parts of the hemispheres. This seems to be well established by pathological observations in man, as well as by experimentation upon animals. It must be remembered that Ferrier's observations in regard to the centres of sensation were made mostly upon monkeys and the lower animals and that focal epilepsies, which finally terminate in a general convulsion, indicate that the human is far higher and more intricate in structure than is the animal brain.

It is greatly to be regretted that patients presenting symptoms of a lesion in the motor zone of the cortex are not more frequently and minutely examined with regard to general sensation. In many of the cases of paralysis reported in literature there is no mention whatever of sensation; and in others in which the attempt has been made to discover the sensibility of the skin, the methods adopted have been so crude and unscientific, and the results obtained so meagre and indefinite, that the report, in this respect at least, is almost valueless. In comparison with the motor tests for the localization of a cortical lesion, sensory tests will probably always remain less efficient. The variation of the personal equation alone is enough to shake one's confidence in sensory symptoms; and to properly perform these tests there must be exercised an unusual amount of patience, shrewdness, and insight into human nature. The instruments of precision must be employed in every conceivable manner and frequently at most unexpected moments. Unlike the testing for paralysis, we are here made to rely almost solely upon the patient and his subjective feelings. Hence we must study closely the patient's idiosyncrasies and peculiar temperament, and make due allowance for his past experiences and present intellectual status. His entire physical condition must at the same time be taken into consideration, for if there be a paresis present, for example, a sensory response may be very materially modified by the inability of the muscles to act and manifest the appropriate motor response. I have known of erroneous sensory diagnoses being made just in this way. Notwithstanding all these difficulties and drawbacks, it is extremely desirable that every case of paralysis be carefully and accurately examined for general sensation; for our knowledge of the location of the sensory centres is at the present day much less definite than that of the motor centres. Moreover, the experiments of the laboratory seem to favor the view that the sensory areas of the cortex are separate and distinct from the motor areas, while clinicopathological data intimate that they are identical, or at least are partly coincident.

In regard to the location of the centres for cutaneous sensations—touch, pain, temperature, and

even the sensation commonly known as the "muscular sense"—many views have been advanced. The general consensus of opinion holds that the optic thalamus is the basal ganglion for the reception of sensory impulses from the outer world. Luys, Ferrier, von Monakow, Fournier and Crichton Brown so taught, though Flourens, Louget, Tambersini, and Schiff attributed motor functions to the ganglion. Above the thalamus the sensory paths radiate through the corona and terminate chiefly in the cortex of the parietal and temporosphenoidal lobes. Below the thalamus the sensory paths are clearly distinguishable from the motor. Do these two paths so unite or intermingle above the ganglion as to terminate in the same cortical areas, or do they remain sharply and wholly apart, one set (motor) going to the cerebral lobes, the other set (sensory) turning back to end in the postero-parietal lobes?

In his earlier experiments Ferrier found* that injury to the hippocampal convolution and cornu ammonis produced loss of tactile sensibility on the opposite side of the body. He therefore located the centre for tactile sensibility in the region of the hippocampus. This was confirmed by Yeo in his experiments upon monkeys. Horsley and Schäfer have extended the views of Ferrier, and as a result of their investigations have concluded that the whole of the limbic lobe (including the callosal and hippocampal regions) preside over the sensations of touch and pain, if not exclusively, at least to a very large extent. In some of their experiments the loss of sensation was accompanied by motor phenomena, which they attributed to unintentional injury to the motor area during the performance of the operation. As opposed to Munk and Schiff, who would possibly argue from this the identity, in part at least, of the motor and sensory areas, they state that in some of their experiments there was paresis of the lower limbs with anæsthesia of the upper limbs, and in others anæsthesia without paralysis. There seems to be some very intimate connection, at all events, between the limbic lobe and the central convolutions; for when we recall how frequently sensory, aural and other paræsthetical precede and accompany Jacksonian symptoms produced by a limited lesion in the motor cortex, we are compelled to admit the extreme intimacy, if not the identity of the motor and sensory areas. Many of these focal lesions do not extend deep enough to involve the radiating fibres from the sensory areas and their mutual influence must, therefore, be entirely cellular and transmitted from one to the other by associating neurones. The influence may be merely of an inhibitory sort, for clinically the anæsthesia accompanying such forms of local paralysis is never complete, but is rather of the inhibitory type. Brown-Séquard gave special attention to the extensive inhibitory functions of the nervous system, and in the light of his investigations

such an explanation is not entirely unwarrantable. If the sensory and motor areas were identical, it would be hard to comprehend how a limited focal lesion could give rise to a *complete* paralysis and *incomplete* anæsthesia in related parts of the body. Both sets of cortical cells would presumably be simultaneously injured and the anæsthesia would run parallel in extent and severity with the amount of paralysis. Ferrier's objection to the experiments of Munk and his followers, in this connection seems to me to be a weak one, when he remarks that in animals the loss of sensation is only apparent and not real, because the paralyzed animal is unable to express any sensation. This may do for animals, but in man there is an abundance of clinical observation to go to show that there is frequent loss of sensation with Jacksonian symptoms. Though the error is possible, it can be avoided.

All that can be affirmed positively, then, is that the sensory conducting tract passes to a large extent into the central convolutions, though its sphere of radiation is to be found elsewhere, particularly in the parietal lobes (von Monakow). Some hold that only touch and muscular sense are appreciated by the central areas, while other sensations, especially that of pain, are to be located in the gyrus fornicatus. The stereognostic sense is located by von Monakow in the central areas, by others in the parietal; but, as I have shown elsewhere, this is such a complex sense that it can hardly be justly assigned to any one special area. The parietal lobe is held responsible for the perception of the muscular sense by Nothnagel, Luciani, and others, a view which has been supported from clinical observations by Vetter, Beasset, and von Monakow. As I have also shown elsewhere, it is not at all improbable that even here in regard to the muscular sense, the motor zone has come into active play and had much to do with the sense of position. It is to be noted however that Charcot and Pitres doubted the sensory importance of the motor regions.

In regard to the cortical visual area there is still some dispute, though speaking generally it may be said to coincide with the occipital lobe (Monk). The cuneus and the parts around the calcarine fissure (Henschen) are usually assigned as its limits. Oppenheim teaches that the gyrus fusiformis (lateral occipitotemporal), lingualis (median occipitotemporal), and first occipital convolution should probably be included. As everybody knows, destruction of this area causes bilateral hemianopsia of the opposite side. The affected sides of the retinae are opposite that of the occipital lobe affected; this, of course, makes the field of blindness occupy the same side as the lesion. Total blindness follows extirpation of both occipital areas. Further localization of the visual conceptions of space, light, and color is quite

impossible, though there are many hypotheses proposed. The angular gyrus is no longer regarded as a centre for visual sensations. The disturbance of sight which Ferrier and others long ago attributed to injury of this gyrus is now believed to have been caused by involvement in the injury of the visual conducting paths that run through and near it. It has been recorded that lesions of the left inferior temporal lobe, the supramarginal gyrus, cause alexia—inability to read—without disturbance of the ability to speak.

The cortical area for the sense of smell has been localized in the gyrus uncinatus, as injury here has in some instances produced anosmia (Hughlings Jackson). In a case of anosmia reported by Schäfer and Frey there was atrophy of the olfactory tract and changes in the gyrus uncinatus and horn of Ammon. The olfactory apparatus is much atrophied in man as compared with the lower animals. From his comparative studies Edinger is led to assign the cortical areas for smell to the lobus pyramiformis and the cornu ammonis. Professor Onadi, of Budapest, notes that in a case of calcosmia there was found a tumor in the right gyrus hippocampi. Hallucinations of smell have been associated with tumors of the gyrus uncinatus and gyrus fornicatus, though Edinger doubts the power of the gyrus fornicatus to perceive sensations of smell. The calcosmia in this case may well have been a mere "neighborhood symptom." Hæmorrhages, emboli, and tumors of the temporal lobe have been accompanied by loss of smell, and the same explanation is probably applicable in these cases.

The cortical area for the perception of taste has not yet been discovered. It is probably near and closely related to the centre for the sense of smell. Paget believed that the perception of thirst and hunger was somehow associated with the basal surface of the temporal lobe.

The centre for hearing is somewhat better known, and is generally accepted as coinciding more or less with the upper convolution of the temporal lobe—that part of the convolution, according to Flechsig, which lies hidden in the fossa of Sylvius. Ferrier at first located this centre positively in the superior temporal convolution of monkeys. The experiments of Brown and Schäfer, however, showed conclusively that even when both temporal lobes were removed there was no loss of the power of hearing. In reply to Ferrier and Yeo, these experimenters remarked that they had "frequently observed that monkeys which have experienced no cerebral lesion whatever will sometimes fail to start or show any sign of hearing at the report of a pistol, whilst others will react very strongly to such a noise." Might not this be easily accounted for on the basis of the association of ideas, some monkeys having from their

individual experience in some way become fearful of certain kinds of noise, while others, lacking such experience, remain indifferent to them? If such were the case, it would open the way for the consideration of the superior temporal gyrus as a mere psychic or memory centre for hearing and thus harmonize the two opposing views of Ferrier and Yeo on the one hand and of Brown and Schäfer on the other. As a matter of fact, it is now pretty generally accepted that the superior temporal convolution is the seat of mind audition and that its destruction causes word-deafness, and not sound-deafness. This sensory aphasia literally consists of a loss of the power of recognizing word sounds and their constructive association. The victims of this form of aphasia are in the plight of one who is talking to a foreigner whose language he is absolutely ignorant of. When such a patient suffers from a bilateral lesion in the superior temporal convolutions he is said to have "cortical deafness."

In this connection it is well to remember that this psychic word centre is the most important of the group of centres involved in the production of speech. Its proximity to the island of Reil may account therefore for the fact that lesions of the island usually cause disturbance of the power to correlate the speech centres, and thus produce such symptoms as paraphasia, lapsus linguæ, defective word and sentence formation, etc.

Our knowledge of the *motor areas* of the cerebral cortex is much more definite, so far as their location is concerned, than is our knowledge of the sensory areas. The examination of motor manifestations, both in the laboratory experimentally, and at the bedside clinically, is susceptible of a high degree of accuracy and compared with the examination of sensory phenomena. As a result of extensive experimentation upon the lower animals and of clinicopathological observation in man, it has come to be established that the motor zone corresponds with the central convolutions on either side of the fissure of Rolando, the adjoining parts of the frontal and parietal lobes, the paracentral lobule, and the supramarginal gyrus. There are no known sharply defined boundaries to this zone. Its centre or rather centres of maximum energy seem to lie along the central convolution just in front of the fissure of Rolando. In comparison with both anterior and posterior central convolutions, the areas of the frontal and parietal lobes lying contiguous to them play a minor rôle. The so called motor areas thus indicated control each the musculature of the opposite half of the body. This control is not direct, but is exercised through certain lower deposits of gray matter. They are bilateral areas, therefore, and in both hemispheres subserve the representation of definite, and purposive movements produced by

groups of muscles rather than the individual muscles themselves. They are the teachable memory areas for acquired movements. Most authorities regard them as purely motor in function while others look upon them as sensory-motor.

Focal lesions of these areas provoke monospasms and unilateral convulsions, followed by an oncoming paralysis which may vary in type, according to the location, character, and extent of the lesion. The paralysis which succeeds the spasm is more or less localized in extent and degree. It is of the monoplegic type, involving, however, related muscles that functionate in the expression of particular movements rather than the single muscles. If the lesion is unilateral and extensive, the paralysis is of the faciobrachio-crural type, a true hemiplegia. This paralysis is accompanied by an exaltation of the spinal reflexes. It always begins in the same part—or rather the spasm that precedes it—in different attacks, as for instance, the toes, the fingers, the face. The hemiplegia is increased, the face and body being affected in the same side. There is no direct involvement of the nuclei of the cranial nerves. Muscles that usually work together, as for instance those of deglutition and respiration and which are equally represented in both cerebral hemispheres, exhibit but little paresis or else are so quickly compensated for in the unaffected hemisphere that their weakness passes unnoticed. The more complex and individualized the muscles are in their normal activity the more will they be paralyzed; hence the upper extremity shows a higher degree of paralysis than the lower. There is no atrophy of the muscles and the electrical reactions remain normal. Late contractures occur in the parts paralyzed.

In the lower third of the central convolutions, just above the fissure of Sylvius and embracing the lower end of the Rolandic fissure, are located the centres for the face, the tongue, and the upper part of the oesophagus. Just anterior to this centre, at the posterior extremity of the third frontal convolution, lies Broca's well-known centre for speech, while behind it is a small area that controls the movements of the larynx. The laryngeal muscles are rarely paralyzed as they work together and in lesions of one side or the other are quickly compensated for. The speech center is a bilateral centre, but is only active apparently on the left side in right-handed people. The right speech centre is active in left-handed people and can by training be made to compensate in some cases for loss of the left centre. These centres are the memory centres for the emission or motor part of speech, hence their disease gives rise to ataxic aphasia.

Passing upward along the fissure of Rolando, we

meet seriatim the centres for the fingers, the hand, the arm, and the shoulder, the maximum points of the centres seeming to occupy especially the middle third of the precentral convolution.

In the upper third of the convolutions are the centres for the leg, the foot, the toes, and the hallux, the last being found close to the margin of the hemisphere and even extending well over into the paracentral tabule. On account of the nearness of these marginal centres of both hemispheres to one another, paraplegic conditions are relatively frequent, as Charcot pointed out.

Just in front of the upper part of the precentral convolution the great trunk musculature is said to be represented. Horsley and Schäfer locate the trunk centre in the marginal convolution. Munk believes that it lies in the frontal lobes, while Jackson assigns it entirely to the cerebellum.

It must be remembered that all of these centers shade off into one another so that no sharp outline can be assigned to any one of them individually. They are the only cortical molar areas that can be accepted at the present day with anything like a degree of positiveness in man. Experiments upon the monkey have indicated that these areas may again be subdivided and smaller areas detected for the representation of small and special forms of movement. Within the lower centres, for instance, we find clearly represented the laryngeal, masticatory and deglutitory muscles, though there is some discussion as to the accuracy of all of them in regard to certain details. Lateral movements of the head, elevation of the eyelids, and dilatation of the pupils are all represented, according to the observations of Ferrier upon monkeys, in the posterior ends of the first and second frontal convolutions.

The visceral muscles and vasomotor system do not seem to have any representation at all in the cerebral cortex, though that hardly seems possible when we remember how the emotions affect the circulation of the face and how even the viscera are perceived at times in the realm of consciousness. Their bilaterality and close unity of function, as well as the fact that all the organs of vegetative life are more especially under the control of the specialized sympathetic nervous system, may account for the lack of their higher representation in the cortex. Some authorities declare that a regulating influence upon the heart and blood vessels, upon the heat production and upon the visceral nervous apparatus is exercised in the opposite half of the body by centres located in and near the central convolutions. These, however, together with the centres for the bladder and rectum and for the trophic regulation of the musculature in general, though supposed to reside in and about the motor zone, are all entirely hypothetical. Certainly no symptoms in unilateral dis-

ease of the cerebral cortex have yet afforded us any basis whereon to locate or even to assume the existence of such centres.

Those who maintain that the histological structure of the central convolutions affords a clue to their proper function reason beyond the facts. Gowers says, for instance, that "it is instructive to note that in this part are found the largest ganglion cells met with in the cortex, cells comparable to, though exceeding in size, the certainly motor cells of the anterior corner of the spinal cord." On the other hand, we find in the hippocampal convolution, which is admitted to be sensory in function, pyramidal cells very similar to those found in the central convolutions. They lie just beyond what is known as the stratum radiatum. Furthermore, these large cells have never as yet been absolutely proved to be motor. They may be muscular, in the sense that they are in immediate connection with the musculature of the body and capable of a grosser and more vigorous form of activity than are the more delicate receptive sensory cells. Neurones, whether of the motor or sensory type, are all alike in their intimate structure so far as we know, and their exhibition of neurility is to all intents and purposes the same everywhere. When we remember that sensation itself is but a mode of motion, we can understand that these giant-cells may differ from the smaller ones in degree rather than in kind. The reflex character of most of the sensory-motor phenomena would seem to indicate that both sets of neurons possess the faculty of receiving and emitting nervous impulses and it is hard to escape the conclusion, therefore, that the essential differences in their functions are the result of the nature of the terminal end-organs with which they are respectively connected. As an essential part of the neurone doctrine, it is now taught even more emphatically than heretofore that the terms sensory and motor as applied to the nervous elements have more regard to their peripheral end-organs than to their innate structure or even to their central connections.

Physicists are resolving all phenomena into molecular motion, the differences in the phenomena into the different forms of molecular motion. Light, heat, electricity are but the expression of the different modes of movement among the molecules of matter. Nervous activity has not infrequently been likened to electricity, but whether the comparison be true or not, it is more than probable that the former is as much a mode of molecular motion as is the latter. Chemical changes accompany both and chemical changes are the result of atomic transformations. Both sensory and motor phenomena, nervous as well as muscular, are alike the result of molecular movements. The simple muscular contractions are recognized as the direct ex-

pression of molecular vibrations within the muscular elements and the reflex circle, beginning in a peripheral irritation, running through the centre from sensory to motor cell and finally passing out again to terminate in gross muscular contractions, is simply the transmission of the same molecular disturbance, differing in degree, but not in kind, throughout the various parts of the arc. This is so universally accepted now by science that its reiteration seems almost like a truism, but for my present purpose of showing the universality of the one phenomenon needs to be repeated. If the reader cares to pursue this line of thought further, he may consult Gowers's admirable little brochure entitled *The Dynamics of Life*, in which the author most elaborately and convincingly elucidates the fact that all neuro-muscular phenomena are but the manifestation of chemical phenomena and that these phenomena are but the expression of atomic and molecular motion, the origin of which motion is to be attributed primarily, so far as we are capable of knowing, to the solar influence through light and heat. Nay, more. Even the higher, psychic manifestations of nerve force can be reduced by analysis to real or representative movement, even the gross muscular movements, as has been well pointed out by Romanes in his *Mental Evolution in Animals*.

The most positive knowledge we possess in regard to the functions of the cortex is that the central convolutions somehow preside over the movements of the body. And yet, as Gowers says, "We need not conceive that these parts subserve no other function (we shall presently see reason for believing that they have sensory as well as motor functions)." Injury to these convolutions produces spasm or paralysis; and so far as we know, these symptoms are not produced by cortical lesions outside of these convolutions or their immediate neighborhood. That these are not the only centres which preside over voluntary movement is to be inferred from many experiments upon animals. A rabbit whose entire cerebrum has been removed can still run; and according to Goltz, there was no complete paralysis, but only a slight anæsthesia observed in a dog whose whole brain except one occipitoparietal lobe was excised.

It is an old established fact that removal of the cerebral hemispheres, olfactory ganglia, optic lobes, corpora striata, and optic thalami does not eventuate in the loss of voluntary motion and general sensibility. There is loss of intelligence and of rational inhibition, but the animal still executes purposive, instinctive movements which are quite different from the simple reflex acts depending upon the spinal cord. Hence arises the question, what is the nature of these disturbances of voluntary motion caused by the destruction of the cortical motor

areas? A dog deprived of his two sigmoid gyri does not manifest motor paralysis, if by that term is meant absolute loss of motility. There is not a single physiologist who denies such an observation; hence the ground for the criticisms of Goltz, the distinguished opponent of the localization theories. The motor areas must preside therefore in some special way over the muscular apparatus and not directly, as at first seemed to be the case. In 1876 Hitzig spoke of the effects of cortical lesions in the motor area as "the expression of an abnormal representative action"; in other words, as the result of a destruction of the motor images belonging to certain voluntary movements. The muscles of the animal are not paralyzed, but the animal no longer possesses the mental pictures or ideal representations of the movements it should make or desire to make.

Nothnagel and Bastian favor the theory of Hitzig, but they differ with him in locating a centre for the "muscular sense" outside of the central lobules. The former declared to the Sixth Congress for Internal Medicine, held at Wiesbaden, that he had never known focal lesions of the motor zone to produce loss of the muscular sense, but that such lesions were often accompanied by loss of the tactile sense. In a paper recently published in *Medicine* I have suggested that the so-called "muscular sense" is but a differentiated expression of the tactile sense. Nothnagel places the sensory area in the parietal lobes, where he also locates, with Seguin, the special centre for the muscular sense—a sense which Mills sees no reason for separating from that of general sensation. Nothnagel further affirms that the parietal lobes bear the same relationship to the central and paracentral lobules that the convolution or area of Broca bears to the cortical hypoglossal and laryngeal motor areas. Injury to the parietal centres may produce ataxia without true paralysis, and injury to the central areas may cause paralysis without the loss of the muscular sense. This is somewhat of a return to the limitation views of Ferrier as originally propounded; and, in fact, both Nothnagel and Charcot separate the motor areas from the centres for cutaneous and muscular sensibility. For Charcot, however, the cortical motor centres are the seat of motor representations or conceptions which must necessarily precede the accomplishment of any conscious voluntary movement, while the muscular sense or kinæsthetic sensibility of Bastian is subserved by the cortical centres for sensation.

According to Schiff, the so-called motor areas are entirely sensory; their activity is largely of the nature of a reflex; and the paralysis due to their destruction is really the result of the loss of tactile sensibility. Munk does not believe that these centres determine movements directly or in any sort of reflex manner, but merely by the awakening of the

mental images or representations of both general sensibility and motility. These ideational centres are not in immediate connection with the individual muscles, nor do they exert their influence directly for their individual activity. As Dr. Theodore W. Fisher tersely puts it, "The will can only control and the mind is only conscious of movement in the mass." The fact that stimulation of certain areas of the cortex produce movement of certain groups of muscles and eventuate in the coordinated movements of the segments of the limbs shows that movements and not muscles are represented in the cortex. Many of the opponents of Ferrier have lost sight of this fact because this investigation insisted so strenuously upon the anatomical destruction and separation of the sensory and motor areas, and upon the sharp limitation of the latter to the central lobes.

Munk's theory is popular in Germany and makes the so-called motor areas entirely sensory. The activity of these centres results in "conceptions of movements" rather than in movements themselves. They are the psychical source of the impulses which farther down the tract (possibly in the basal ganglia or anterior cornua of the cord) are transformed into the true motor stimuli that set the muscles into action. The cortical motor area is therefore named by Munk the "Sense-sphere" (*Fühlsphäre*). Gowers's objection to this theory is that the "sense of innervation," an element of the threefold "conception of movement," is a sense of something which is not itself sensory and which is commonly termed motor and that destruction of this region causes loss of this "motor" function out of all proportion to any demonstrable sensory loss. The first of these objections seems feeble to me; for it is a fact as Stricker and others have shown that movements are preceded by psychical representations, which representations must obviously be of a sensory character. Franck inclines to the theory of a reflex action being the essential function of the motor areas. He believes that the motor, like the sensory, zones are only the points of departure for voluntary motor impulses while the true motor apparatus or executive centres are to be found in the cellular elements of the medulla oblongata and spinal cord. All of the cortical areas, according to this author, are merely centres of voluntary association. We know that the sensory and motor elements of the cortex are united by associating tracts, just as they are lower down in the cord to complete the reflex arcs. The reflex phenomena, both spinal and cerebral, necessarily presuppose such a functional union of the sensory and motor radicles. This it seems to me is quite adequate to explain the occasional association of the two sets of symptoms when the lesion happens to be limited to one or the other area.

Formerly all reflex functions were supposed to belong exclusively to the spinal cord; but to-day we consider the cerebral centres as much the centres for reflex action as are the spinal. Many of the Jacksonian epilepsies are undoubtedly of simple reflex origin. Mills reported a case in 1880, clearly Jacksonian in type, in which there had been seizures for eleven years as the result of a fibroma in the hand. When the tumor was excised, the epileptic seizures ultimately disappeared. "In the normal brain," Mills writes, "no reflex actions can be performed without exciting to action secondary volitional movements, which no longer require the stimulating influence of a reflex action." The absence of gross cortical lesions in some forms of Jacksonian epilepsy and Heidenhain's experiments in hypnotism, with other observations and facts, all prove conclusively the reflex function of the cortical areas of the brain.

Franck speaks of them as psychomotor centres because they control by their psychical influence the true, lower motor apparatus. He says that "in examining the movements produced by the excitation of points under the control of the cerebral cortex, they may be regarded as analogous to reflex movements; but the essential difference between the movements so started and the ordinary reflexes consists in the point of departure of the original impulse. In one case it is cerebral, in the other cutaneous; but in every case it is peripheral in relation to the centre of motion (medullary centres)." Strictly speaking, then, the pyramidal tracts transmit *afferent* and not *efferent* impulses to the motor cells of the cord and medulla. Marique adopts, in part, this reflex theory as explanatory of the functions of the cortical motor areas; for he found that simple separation of the motor from the sensory areas, as a result of cutting the associating tracts, produced the same form of paralysis as when the cortical motor areas themselves were removed. He concluded therefore that the motor areas could not act of themselves, but that functionally they were dependent upon the impulses transmitted to them from the sensory areas of the parieto-occipital region. This question is far from being settled, however, since such varying results have been obtained in the experiments of Franck and Pitres, Marique, Vareth, Exner, and Paneth.

(To be continued.)

Dr. Anna E. Bromall has resigned her position as head of the Department of Obstetrics of the Women's Medical College of Philadelphia after twenty-four years of service, on account of the pressure of private practice.

THE COMPLICATIONS OF PHIMOSIS, WITH TREATMENT.

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A recital of the causes of phimosis involves a study of various factors, namely, the histological, the traumatic, and the venereal.

The older writers seem to have generally agreed that this condition could be either congenital or acquired; some surgeons going so far as to state that phimosis was almost universal, and adherent prepuce the natural condition at birth. Hyde considers phimosis a normal condition at birth, the future outcome depending upon whether or not the glans and foreskin growth are proportionate. White and Martin agree as to the great majority of cases, but consider that at the age of from five to seven years distention of the preputial orifice takes place.

A number of observers, however, and my experience bears out their observations, hold that phimosis is uncommon at the birth of the male infant, but comes on as a post-natal condition.

True congenital phimosis where lack of development generally of the inner layer of the prepuce gives rise to the condition, must be considered rare.

Houston, an anatomist early in the last century, pointed out that the prepuce was always longer than the glans in infancy and it was only at the period of puberty when the penis became fully developed that the glans equalled the length of the foreskin.

At the outset we must recollect that it is not the length of the foreskin but constriction which constitutes phimosis. Most male children at birth will be found to have a redundant prepuce, and, observed casually, will give the appearance of what in later years, upon venereal contamination, too often resolves itself into a constricted condition of the part. While a close connection will be found to exist between the inner layer and the glans, the accumulation of smegma will be found in all but a very few cases to have acted as a lubricant, preventing constricting organization. When, however, the stimulation of birth sets all the excretory functions of the body into activity, unless carefully tended during the first weeks of life, irritation from urine at the junction of the mucous and skin layers of the foreskin, or the inspissated accumulations from the odoriferous glands about the base of the glans, combined with abraded epithelial cells, will cause in an increasing number of cases, as closer examination is carried out, contraction and adhesions going on to organization.

Pressure of the growing glans against the inelastic inner layer must also affect the nutrition of the part furthering contraction.

Traumatic phimosis most often follows as a result of direct injury; a peculiar instance being that reported by Page, of a Norwegian whose penis, when an infant, became frozen to the floor after urinating. Upon being picked up his foreskin was found lacerated. Uncared for, healing resulted in a phimosis with a pin-hole opening midway between the meatus and the corona on the dorsal surface. Dr. West reports the case of a man, intoxicated, who, in falling, set fire to some fuses in his pocket and was burned over the lower part of the abdomen, thighs, and genitals. The patient recovered, but with an extreme degree of phimosis.

During sexual life specific venereal infection is the common cause of the condition. Uncleanly habits may indirectly act as a causative factor.

A condition, similar to phimosis, in which the hood of the clitoris becomes bound down to the glans in females, giving rise to a train of reflex nerve symptoms, was pointed out by the elder Sayre, and later by Morris.

The pathology of the formation of phimosis consists in a scar tissue replacement of the elastic cellular meshwork between the two layers of the foreskin, following inflammatory reaction to irritation.

That progressive degenerative changes may follow as a secondary result of phimosis is shown from post-mortem examinations. Dr. Golding Bird reports, in a young child patient of his, the condition of the bladder and ureters as being like those of a man who had suffered long from stricture of the urethra. Mr. Hilton, corroborating this, spoke of having seen similar cases.

Dr. Reese has reported a full description of a case of his in a child aged three months, suffering from phimosis with pinhole aperture. Constipation with colic commenced the attack, accompanied by difficult urination; later came jaundice, hectic, and the passage of pussy urine, followed by death at the end of six days. Post-mortem examination a few hours later showed the body well nourished but jaundiced; chest cavity normal; intestines distended with gas, but containing no fecal matter; stomach contents, brownish mucous; liver of twice the normal size for a child of that age; gall bladder normal; spleen enlarged. Kidneys lobulated with capsules slightly adherent. The pelves contained pus and urine, the lining being congested. Bladder contracted and congested, containing pussy urine, with free blood cells found under the microscope. The diagnosis made was phimosis following irritation, infection with absorption through the urethra from the glans, followed by

general septicæmia and death. Dr. Taylor, an English surgeon, at the post-mortem of a man aged eighty-three years, who, having enjoyed previous good health, was found dead in a field, found a meningeal hæmorrhage but no broken vessel. Arteries throughout the body were hard, but good. The middle lobe of the prostate was enlarged. Phimosis was present. The man was the father of several children.

Dr. Roberts reports a case of a young adult, ill developed. The kidneys were hollowed out by numerous sacculations, the cortical wall being but $\frac{1}{8}$ of an inch thick in parts, pelves greatly dilated. Ureters much enlarged and forming tough, thick-walled tubes. Bladder thickened, with mucous membrane dark colored and greatly corrugated. Phimosis had been present since infancy.

Atrophic changes are well shown from the history of a case of a young man aged twenty-two years, who suffered with phimosis, and whose erected penis was of the size of a little finger. Driven by the raillery of a sexual partner he sought relief. Circumcision cured the phimosis, and at the end of three months the organ would enlarge under excitement to twice its former size.

The complications arising from an elongated and constricted foreskin may be divided into (1) those which follow as a direct result of the local condition; and (2) those occasioned through sympathetic nervous connection.

Under the first division may be named balanitis and posthitis, separate or combined, adhesions, œdema, hypertrophy, extravasation, cellulitis, gangrene, arrested development, herpes, eczema, paraphimosis, preputial calculi, urethritis, cystitis, dilatation of the bladder, ureters, and pelves of kidneys, difficult urination, impotence, prostatitis, fissures, hæmorrhoids, perineal abscess, prolapse of rectum, hernia, hydrocele, cancer, anæmia. Many statements of phimosis being a predisposing cause of epithelioma of the penis have been made; Gross, however, held opposite views.

Second: enuresis, hair-trigger orgasmal condition, with heightened or lessened erotic tendencies, the "reflex paralyses" of Sayre, incoordination, petit mal, melancholia, convulsions, bladder tenesmus, symptoms resembling calculi, gastro-intestinal catarrh, nasal and eye disorders, false diabetes.

"Concealed trouble," meaning thereby simple inflammatory discharge, gonorrhœa, chancroid, or syphilis, combined with phimosis, is the condition in which acquired phimosis in the male adult presents itself to the surgeon's notice.

Balanitis and posthitis result from the irritation and excoriations caused by urine or urethral discharges mingling with smegma. Unrelieved, organization takes place during healing, with adhesions, as in the case which I saw.

D., aged forty-five years, father of eight children by a first wife, no venereal history. Phimosis present. Patient had never been able to uncover the glans; the whole left side of the glans and portions of the right side organized to the foreskin.

Œdema and cellulitis, due to inflammation and infection. Fissures and eczema the result of excoriation following irritation.

An example of extravasation, complicating phimosis is well shown in Mr. Fergusson's case of a man aged thirty-five years, with phimosis from infancy. When twenty-nine years old he acquired syphilis, and the chancre being burned with silver, closure of an already small opening at the preputial orifice, with extravasation of urine took place.

Gangrene due to phimosis or paraphimosis involves, usually, but the skin envelope, the glans and body of the penis escaping; it is explained by the cutting off of the blood supply by constriction. Ulceration into the urethra has occurred.

Arrested development, combined with a double hydrocele apparently due to phimosis, occurred in a case which I saw, of a child, aged eighteen months, in whom the penis appeared to be simply a well-formed glans attached to the root. Effusion into the tunica vaginalis of both sides had been progressive for the past half year, until, at the time I saw the child, the estimated contents in each sac was two ounces. Compression upon the scrotum did not cause the fluid to disappear into the general peritoneal cavity. Constriction of the foreskin had taken place, leaving but a minute opening at the preputial orifice. After release of the glans the fluid was rapidly absorbed, and the body of the penis commenced to regain its balance of growth.

Herpes seems to be due solely to a peripheral irritation; in one case of my own, in which a partial phimosis was present, after a year, during which at intervals a number of local applications were tried with poor success, circumcision was performed, with the removal of a large patch of the herpetic vesicles, and was followed by spontaneous disappearance of those upon the body of the penis.

Gaither states that acquired phimosis due to venereal warts is rare, but that when present, their gradual growth will be apparent to the patient. I have found that where circumcision has been performed for phimosis associated with vegetations, the latter heal under very simple treatment without the use of caustics.

Paraphimosis commonly occurs upon the first retraction in early life of a partially phimosed foreskin, or, in later years, in those with slight degrees of constriction, in whom after coitus a partial erection prevents the replacement of the prepuce.

Many cases of preputial calculi, formed by the action of urinary salts upon smegma, have been reported. Whisham speaks of a special tendency of

East Indiamen to this complication of phimosis.

Urethritis as a complication of phimosis may be due to infection from an acrid discharge gaining access through the external meatus, or, in a "concealed trouble," the gonococci or the mixed infection from a chancroid may be the cause of the discharge.

Cases of progressive infection along the urethra resulting in cystitis from this cause have been reported by Van Buren and Keyes; in their case after circumcision no return of bladder symptoms had occurred after an interval of six years. Coulson has also reported a similar case with a like result in a boy aged seven years.

Difficult urination, hypertrophy followed by dilatation of the bladder, ureters, and pelves of the kidneys, result from a damming back of urine.

Impotence would seem to be caused when the preputial orifice is not in line with the urinary meatus, as in a case of my own, of a man who, during the closing days of a cardiac affection, required catheterism. The man was married and had lived an active sexual life for thirty years. His wife was healthy, but they were childless. The opening of his foreskin was small and in valve-like folds, placed midway from the frenum to the corona. The preputial pouch capacious, and still further distensible, capable of holding an ounce of fluid. It was readily conceivable how an emission would be held intact, to filter gradually away after the erection had subsided.

Prostatitis results as a consequence of infection or mechanical obstruction.

Perineal abscess may follow œdema, extravasation, or burrowing infection into the cellular tissue of the ischio-rectal space.

Implication of the rectum as a complication of phimosis is accounted for by proximity; Hyde reports a case of prolapse of the rectum in a three-year-old child, two inches of the lower bowel accompanied by bloody discharge, were forced out at every stool. The boy always cried, strained, and sometimes fainted, when a movement of the bowels occurred. Circumcision of the foreskin was followed by a single attack of prolapse upon the second day, after which time recovery was uneventful.

Cases of hernia may be continued or produced by phimosis. Hyde reports a case of double inguinal hernia which occurred in a boy aged eight years, who had a tight foreskin accompanied by almost constant priapism; the genitals might be said to have been on edge. Stretching and retraction of the foreskin with the removal of retained smegma cured the condition. Chapman reports two cases in boys aged five and eleven years, respectively. Phimosis with concretions was removed by operation. Trusses aided the subsequent treatment of the hernias. Dr. Sayre reported the cases of twins with a like condition, for which circumcision was performed, but we are not told as to the result. A case I saw, in which phi-

moses seemed to be an important factor, was one of a child aged seven months. The mother, with no milk of her own, used canned condensed milk, with a resulting product of baby to be expected. With a belly like a drum, at the umbilicus a hernia protruded more than an inch; at the right and left external inguinal openings were hernias of lesser size. Phimosis with an orifice through which a fine director could hardly be pointed was present, from which drops of urine were ejected at short intervals. The scrotum was relaxed, and all about the thighs and genitals there was a dermatitis. The child was in a nervously exhausted state, the mother affirming that he never slept.

After a circumcision, performed without aid of an anæsthetic, the mother took the baby to the country. Three months later she returned to show me a well child.

Beginning with Sir Astley Cooper, Hey, Holmes, and Hutchinson regard phimosis as the predisposing factor in the causation of malignant disease of the penis. Wallace speaks of a precancerous stage, in which the presence of venereal warts shows the morbid activity of the epithelial tissue of the organ.

A case which presents features of serious complications, due wholly, I think, to phimosis, is at present under my notice:

G, a boy, aged thirteen months. Since the age of two months, to use the mother's words, the child has "looked queer" about the genitals. Upon examination no penis is apparent, it being lost within the scrotum, which is enlarged to the size of a fist. On palpation, a double oblique inguinal hernia, which can be partially replaced, is manifest. The meatus urinarius can be seen by rolling back folds of foreskin. On asking if there was difficulty in urination, the reply was "no," that the child was "never dry."

In addition, when a movement of the bowels occurs, there is a prolapse of the rectum, of three inches, combined with pain and mucous discharge, sometimes blood tinged. A three weeks' stay in the hospital last July improved the condition somewhat. The treatment carried out at that time, so far as I could learn, was local medication to the prolapsed bowel. The child is in a highly nervous condition, but of good development for its age.¹

Anæmia follows from absorption of poisonous urinary, or infection products, or is due to nerve exhaustion.

Enuresis, when present, may be due to the direct peripheral irritation, or may occur secondarily through the sympathetic nervous system. That such serious forms of paralysis as those described by Sayre could be due to phimosis was received with incredulity by many in the profession. The forms of "child hysteria" in children of both sexes, due to phimotic conditions, are multitudinous.

Convergent strabismus and ozæna may be due to reflex irritation, through the general sympathetic

¹ Circumcision was performed later on this child, and resulted in a disappearance of the hernial and rectal complications besides removing the impediment to free urination.

system, to the special sense organs involved.

Roswell Park recites the cure by circumcision of a chronic diarrhoea, which occurred in two children, aged three and five years, respectively, who had phimosis.

Dr. Maxwell reports a case of false diabetes as a reflex complication of phimosis in a patient of his, with an abrupt disappearance of sugar from the urine after the operation of circumcision was performed.

The diagnosis of phimosis is made by attempting to expose the glans. The condition found will vary from obliteration of the preputial orifice to a tight constriction of the cervix of the glans by the retracted foreskin.

The functions of the frenum, which are, by its elasticity to replace the retracted foreskin and to prevent urine from entering the preputial sac, are lost. When retracted, the frenum of a phimosed foreskin draws the lips of the external meatus downward and backward, closing the urethral orifice and causing the glans in the erected organ to point downward.

The stream of urine being deflected, stretches the sac of the foreskin, causing the condition of "ballooning."

The treatments of phimosis may be enumerated under the heads of hygienic, forcible dilatation, incision, excision, and circumcision. As had been stated by many authors, a large percentage of patients will (or would if looked after hygienically in infancy) recover spontaneously by gradual breaking up of adhesions. According to Van Buren and Keyes, when we can retract the foreskin sufficiently to see the glans at birth, we may be assured that, at puberty, normal conditions of the part will have come about.

The importance of early examination of the genitals of children cannot be overestimated. Dr. Morris calls it a step forward in the advance of civilization to have this fact generally appreciated. He found that 80 per cent. of Aryan American women had been allowed to grow up with a bound-up clitoris, a similar condition so far as the nervous element is concerned to phimosis in the male. He considered phimosis to be a degenerative process in man.

In negroes, except when of mixed white blood, the condition was rare. After freeing the atrophic glans of the clitoris, he has found within a few weeks that development to normal size has taken place.

The earlier retraction is effected after birth, the better for the child. The one who gives the baby its first bath should be instructed carefully to retract the foreskin, and to complete the toilet of the parts by removing retained secretion, wiping the parts thoroughly dry of all moisture before replacing the prepuce. Should there be any difficulty in retraction, the physician, who is meanwhile busied with the

mother, can, with forceps or director, break up adhesions and stretch the preputial orifice sufficiently in the great majority of cases. Where more radical methods are required, it will be good treatment to dilate the opening widely enough, and in line with the external meatus, to obtain a free flow of urine, and wait until the child is a few weeks old before incising.

Many forms of stretching instruments have been invented by surgeons for the forcible dilatation of a phimosed prepuce, but the ordinary dressing forceps may be utilized for the purpose when an instrument can be employed. A point of value to be observed when carrying out the dilatation is, not to dilate too frequently; this does not mean uncovering of the glans by retraction. If stretched more than once in two or three days, fissures in the mucous layer of the prepuce are likely to occur; these will be replaced with scar tissue, thus treatment will defeat the end desired.

The use of artificial lubricants had better not be advised, except perhaps during the manipulations of the surgeon, when sterilized lanolin seems to be least irritating to a delicate skin. The proper toilet of the glans and foreskin is to remove excess of smegma, but not to dry out or substitute moisture for a natural lubrication of two delicate skin surfaces which are in more or less constant motion, as even in walking a certain amount of movement of the foreskin upon the glans occurs.

Cullerier has advised for treatment a subcutaneous division of constricting bands combined with stretching.

The incision and excision treatments constitute a modified circumcision form of treatment, and are usually employed as temporary relief measures. At times, where the constricted foreskin is not over long, a simple dorsal incision, made with scissors or a curved bistoury upon a grooved director, from the orifice to the cervix along the middorsal region, with a single suture upon either side will, in young children, be found to fulfil all the indications. Within a comparatively short space of time the organ will appear to have been circumcised, the two flaps having shrunk and been drawn flat.

In cases of the acute form of phimosis, where local medication and continued baths of water as hot as can be borne (this last being the best treatment of any I know for phimosis secondary to venereal infection), do not allow retraction to take place, and where there is risk of infection of any incisions made, the simple dorsal incision becomes of most value. The amount of hæmorrhage is usually of little consequence, benefit from the relief of pressure of the blood and serum on the œdematous parts fully compensating.

The specific for phimosis is circumcision, however, the question of whether the operation should

be performed in every case must depend upon circumstances and the judgment of the surgeon.

Whether the circumcised is more exempt from venereal infection than the uncircumcised may be debated. Wallace reports the history of an infected woman and four men, two circumcised and two phimotic, in which the circumcised escaped infection while the phimotic both contracted disease a few hours later.

That the skin covering the glans becomes hardened, after circumcision there can be no question, but after circumcision the formation of smegma, the natural lubricant and protective of the glans, to a great extent ceases. Chancres are all too readily obtained about the matrix and joints of examining fingers, which are covered by well formed epithelium, not to allow credit to be given to this lubricant as a protective. I find in my genito-urinary clinic that the Hebrew is as prone to venereal infection as others; that he often takes greater chances of becoming infected there can be no doubt, from the histories which I have heard, but that there is less protection from gonorrhœal infection of those circumcised near the time of birth, when most frequently the frænum is not included in the surgical procedure, is evident. The Mongolian, whose almost universal habit, I have been told by an habitu   of Pell Street, is to inject silver solution into the external meatus after sexual contact, has a far surer protective against the gonococcus, and I think it true that, while there are many Chinamen with syphilitic disease being treated throughout the city, there are very few gonorrhœal patients.

The fr  num left undisturbed becomes bound to the circular scar; this causes a downward pull upon the lips of the meatus, so that on examination we find a closer contact of the lips, and sometimes contraction of the external orifice. One author places this contraction at 95 per cent. of early circumcisions, but thinks it is due to incomplete tearing of the inner layer of the foreskin, and speaks of very often having young adult Hebrews come to him for what they call a "second circumcision," namely a meatotomy. This percentage seems high, but without a record I can agree in part, for, in many instances where I have treated venereal disease in Hebrews, I have performed a meatotomy as a precaution or as being needful in the treatment of the case.

In the absence of positive data I have followed the practice of advising those who come to me for treatment of phimosis or its complications, and who carry on promiscuous intercourse, to be circumcised. The advice of the surgeon, John Howard, in the seventeenth century, that "men who indulge in promiscuous venery should acquire the habit of keeping the glans uncovered to harden the foreskin and glans" is of great value.

If by a postnatal circumcision the child until puberty should avoid the knowledge of being a sexual animal, this alone would commend the operation as a prophylaxis to the nervous and mental sexual conditions which are oftentimes pitiable, of the growing male. Dr. Otis is satisfied that, where the parts of a phimosed penis are kept in a sodden condition, the foreskin constantly poulticing the glans, there is a loss of nerve power through the engorgement and hyper  sthesia which results being transferred to the seminal vesicles.

The operation which is advised to be performed by most surgeons is that with a circular incision made by one sweep of the knife or scissors in front of a forceps which firmly holds the foreskin anterior to the glans at the line of incision, and the tearing or incising of the inner layer. Anger, of Paris, after tracing an ink line on the skin over the corona, draws the prepuce forward and applies a ligature of whipcord behind the tracing. He claims for this method of a single incision, but short, sharp pain, with no h  morrhage; no sutures are required and patients are dismissed in two days.

The galvanocautery, in the form of a wire loop, has been advocated for the performance of a perfect circumcision, which will require but little after treatment.

Dr. Bryant operates in a somewhat similar manner to Anger, by the aid of a clamp, and seeks to leave the glans partially covered, to retain sensitiveness of the corona, and to afford protection. Unless union by first intention is secured, the danger of scar-tissue formation causing a new condition of phimosis must not be overlooked.

The fault in the technics of the single circular incision for circumcision lies in the uncertainty as to the line of incision, unless outlined with ink, iodine, or silver nitrate, which consumes time, the surgeon will be at a loss many times with the unaided eye, if not to the same extent as the writer when performing this operation for the first time on a young child. The surgeon under whose direction I was working asked me if I had removed the glans with the first incision. Owing to the tension of the inner layer against the glans, h  morrhage was profuse, and, until incision and retraction of the mucous layer showed the glans intact, it looked very much as though an amputation instead of a circumcision had been performed.

A method which has some strong advocates, and one which has given me the best results, is as follows: During the previous twenty-four hours, as often as is convenient I direct the patient to bathe the organ in hot water; this lessens the cleansing needed at the time of operation, when the parts should be washed with hot water and green soap, making a thick lather, but using gentleness in the

manipulations. Rinsing off the soap, a square foot of gauze is passed over the penis through a hole torn in the centre.

The question of anæsthesia is at the present day narrowed down, in the great bulk of cases, to the use of cocaine hydrochloride, and, under the teaching of Dr. Bodine, I employ the drug in strength varying from $\frac{1}{2}$ per cent. to $\frac{1}{8}$ per cent. in a weak soda solution.

A ligature about the body of the penis I find unnecessary in ordinary cases, but should not hesitate to use it when a too free hæmorrhage showed its need. The only disadvantage to its employment is distortion of the parts when making the flaps.

As the success or failure in the production of anæsthesia by the use of small quantities of cocaine depends on the mental control of the patient, the surgeon must not hesitate, or doubt the assertion of his promises not to cause pain. Pinching up the skin over the middle of the cervix behind the glans, he must explain away the sensation of the first thrust of the needle point. By the use of a small quantity of carbolic acid applied by touching the skin surface at the point of proposed first puncture from a small cotton swab puncture pain may be done away. The smart of the acid which is but momentary seems to be preferred by the patient. After reaching the cellular tissue between the two layers, the surgeon will gradually swell the tissues in a broad line toward the preputial orifice. When possible, gradually roll back the foreskin over the point of the inserted needle, depositing the solution into the mucous layer by so doing, until the cervix is reached. Extending down either side from the point of commencement of the anæsthesia with a broad base, to the frenum, where much care is needed, the tissues are filled with solution; keeping well back of the corona so that the insertion of sutures will not cause pain. As it is the idea of being cut which most affects the patient, he should have it explained that the passage of a grooved director through the preputial orifice and over the glans to the cervix in the middorsal region is simply for a guide. Adhesions may oftentimes be readily broken up by this means. A curved bistory is to be passed along the director to the tip and plunged upward and outward through the layers of the foreskin, coming out well back of the corona. The dorsal incision through the foreskin is then to be completed. If the glans is too tender for the insertion of the director, a scissors dissection will be needed. Turning back the flaps made of the skin layer of the prepuce, they are to be removed by scissors, following posteriorly to the corona as a guide, down to the frenum. Picking up the inner layer in a similar manner, it is to be turned out over the corona and trimmed. Being careful to have plenty of solution about the frenum, it is removed with the layers of the divided foreskin, which are now free except at this point. After applying forceps

to bleeding points, the bulging cellular tissue which is left is to be dissected away, this being the framework for excessive scar tissue formation. The dorsal vein and frenal artery sometimes have to be tied. The severed ends of the two layers of the foreskin are now to be brought together; cat-gut should be employed as suture material. The first suture should be placed in the middle of the dorsal region or at the frenum; the second directly opposite, and one on either side midway between. If these are left with ends four or five inches long, a simple dressing, which has been for some time before the profession, can be applied. Intermediate sutures, as many as are necessary, may be inserted between these cardinal ones.

A small roll of gauze, or a two-inch gauze bandage doubled in three or four lengths, is laid in the middle between the ends of the suture at the frenum and fixed by knotting the suture ends; a ring of gauze is made by tying in place on either side and at the top by means of the ends of catgut. The disadvantage of this dressing is, that if secondary hæmorrhage or early infection takes place, it becomes very painful to remove, as it rapidly hardens by clotting. This dressing is calculated to reduce to the minimum contamination of the wound by urine; as an additional precaution it has been my habit to have the patient touch away with a little tuft of cotton the last drops after each urination.

A dressing which I have employed with success in cases where infection was feared, is made from a cuff formed of a strip of rubber tissue an inch wide, and held in place by a few turns of a narrow, gauze roller bandage. A narrow strip of adhesive plaster an inch or two in length is oftentimes of advantage to attach the dressing to the skin of the body of the penis.

To prevent subsequent effusion it is well to apply an outer bandage of muslin to the penis, and, by means of a broad muslin roller in addition, to bind the whole to the body; the outer dressings to be removed in a few hours or at the first urination.

If the wound does well, the ring dressing will require no further attention, but will come away in the course of the following week or ten days, leaving a scab which allows healing to go on uninterrupted; the second form of dressing may be removed upon the second day, and thereafter at intervals of one or two days, for a cleansing with a solution of varying strength of hydrogen peroxide.

Some variations in the trimming of the flaps are advised by Roser, who forms a triangular flap, and Keyes, whose incision takes the form of a brace.

Acute cases of phimosis, from whatever cause, should be treated for active inflammation, reserving circumcision for a later date. Where there is ignorance of the conditions from a concealed sore, the writer would not hesitate to operate, as in one case which proved to be chancroid; as it got rapidly worse

under local treatment, circumcision was performed, with a resultant infection of the entire wound. By the aid of daily baths of hydrogen peroxide the condition was controlled, and a good, though protracted, recovery secured.

In young children, where the simple dorsal incision will be sufficient for present purposes, an anæsthetic will not be needed.

In other cases, while we shall not all be enabled to attain such felicitous results in operating as Dr. Moses, who has operated upon sleeping children who only awakened at the first incision, lapsing into a tranquil slumber during the completion of the operation, it were better to cause pain where the complete operation is required than to endanger life with general anæsthesia.

When the frenum is removed, which I think in the majority of instances is of direct advantage, as has been pointed out, care must be taken to secure the frænal artery by twisting, sutures, or a ligature. In young children it is often of little moment, but in one case, in an adult, where I failed properly to close this vessel, after a period of four hours I found the man shocked, his clothing drenched with blood, and a large clot with the vessel still pumping beneath.

A common error of judgment in the performance of circumcision is that in which too little of the foreskin is removed. In a number of cases where practically all of the skin of the penis has been removed good recoveries have been reported; doubtless the operators who found themselves in this predicament carefully saved all of the mucous layer possible.

An instance which I saw, where the inner layer was removed too close to the corona in the person of a young adult, under cocaine anæsthesia, resulted in continuous hæmorrhage, which tight bandaging, ice, or position could not subdue. It became necessary to employ general anæsthesia and apply a great number of additional sutures in close proximity about the wound surface, and, even after this was done, owing to the effusion and black staining of clotted blood, the body of the penis seemed for several days about to slough.

That the operation is not without some remote danger is shown by mentioning the case of Dr. Bond, of a man aged seventy-one years, who acquired phimosis. Circumcision was performed under 4-per-cent. cocaine anæsthesia, in the early days of the use of this drug. The foreskin was filled up with solution. There was slight hæmorrhage at the sites of puncture, but the operation seemed successful until the third or fourth day, when gangrene of the penis and scrotum marked the beginning of a fatal issue of the case.

However, by a careful attention to the details, circumcision, which has been designated a minor operation of major importance, will be performed with no question as to the result.

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SOME CONSIDERATIONS ON THE HYGIENIC AND PROPHYLACTIC TREATMENT OF MYOPIA.*

By ALEXANDER DUANE, M. D.,

NEW YORK.

The question of what we shall do to prevent the development or retard the progress of myopia is a matter much too large for treatment in a paper like the present. I shall confine myself, therefore, to the consideration of one or two of the more important points, about which there is still some controversy, hoping thereby to evoke discussion that shall throw light upon a subject which is of such importance to us all in our daily practice.

For purposes of more convenient consideration I shall divide the cases of myopia into three classes.

The *first class* comprises the cases in which the myopia does not develop until late youth or until adult life, and never rises much above 2 D. Generally, if not always, I think, such myopia can be traced either to the use of the eyes for near work in excess or under unfavorable conditions, or to the wearing of improper glasses. It is, moreover, usually associated with astigmatism. It is probable that this association is not fortuitous, but that the astigmatism is the primary cause of the myopia, *i. e.*, that a patient starting with a hyperopic astigmatism converts this in his efforts to see distinctly, first into a mixed, and then into a myopic astigmatism. If this view is correct, this form of myopia can usually be prevented from developing at all, if we are careful to correct astigmatism precisely. This, indeed, would constitute the most important means of prophylaxis against myopia in those who have to do prolonged and exacting near work, as in bookkeepers, engravers, etc., but, as an additional precaution, we should not neglect to regulate as far as we can the illumination and other conditions under which the patients work, and restrict the excessive use of the eyes to reasonable limits. For instance, I should advise such patients not to use their eyes much in the evening after their day's work was done, and should tell them that during the day they must not bend continually over their books, but must rest their eyes by straightening up from time to time and looking off into vacancy with head erect.

After such a myopia once develops, the indication

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is to give the full correcting glass as found under a cycloplegic. This will tend to check any further progress. Apart from a rather more rigid insistence upon the hygienic precautions above laid down, this will constitute the whole of the treatment, since this form of myopia has but little tendency to advance, and is not associated with sclerochorioiditis posterior and rarely even with a simple crescent.

The *second set* of cases comprises those in which the myopia develops in childhood, and progresses steadily, or more often discontinuously, up to the age of twenty-one or twenty-two, when it comes, practically¹ to a standstill. Its maximum amount varies from 2 to 10 D, very rarely more. Often, though by no means always, it is associated with a simple, sharply defined myopic crescent, rarely with a terraced or annular conus or with those evidences of chorioidal stretching and atrophy that we group under the name of sclerochorioiditis posterior.

A myopia, which at the age of seven had not advanced beyond 2-3 D, nor at the age of ten beyond 5 D, particularly if the evidences of chorioidal stretching were absent, would in general be placed in this category.

This is the typical "school myopia" of the Germans. Whether it is actually a school myopia or not seems, however, very doubtful. It is true that an enormous mass of statistics has been gathered to prove that myopia is of lower degree and also less prevalent in the lower schools than it is in the higher schools and in the colleges; and the inference has been drawn that the myopia originates from the moderate application of the eyes in the lower schools, and is then enhanced by the further and greater strain imposed upon the eyes by the more complex work of the higher institutions. This inference is probably in part correct, but it is by no means warranted by the statistics. For myopia, being a progressive affection and increasing naturally with age, would of necessity be more frequent and of higher grade in the older pupils, whether they used their eyes for near work or not. Moreover, it is quite frequently the case that myopia, especially myopia of high degree and rapid progress, develops in those who use their eyes but little for near work—*e. g.*, in peasants and in our illiterate dispensary patients.

Tscherning, it is true, from statistics gathered in quite a different way, has given apparently convincing reasons for the belief that myopia is really most prevalent in those who have been the most engaged in eye-taxing work. But this at best would prove that near work is a factor in producing myopia, and does not prove that it is responsible for the advance of the myopia after it is once initiated.

I believe, indeed, that the influence of near work in producing myopia, or at least in causing its increase, has been considerably overrated. And, while I also believe that none of the hygienic precautions laid down with regard to proper print, proper illumination, and proper attitude during work should be omitted, I feel that a more important matter still is the prescription of the right glasses for these patients. In fact, just as soon as the first evidences of myopia develop in a child, I believe that we should prescribe for that child the full strength of the glass correcting his myopia and astigmatism, and make him wear that glass constantly both for distance and near. This, I am persuaded, will do more to prevent the progress of the myopia and hence also to prevent the development of subsequent fundus complications than will any other procedure.

If this is done, there seems to be no good reason why the eyes should not be used for any ordinary work and study, nor why the patients should be debarred from entering upon any profession, excepting only one which like the practice of engraving, etc., would call for an extreme overtaxing of the eyes. In other words, persons with a medium degree of myopia may be allowed to do any reasonable kind and amount of near work, provided their near sight is corrected. Yet this is no reason for neglecting the ordinary hygienic precautions, and, as a matter of fact, I usually advise that these patients should not use their eyes much by artificial light, should keep early hours, have a proper amount of out-of-door exercise, and should, in reading or studying even by daylight, rest their eyes every fifteen or twenty minutes, either by looking up from their book and gazing off into vacancy for a moment or two, or by getting up and walking briskly about the room.

In regulating the habits of life in myopes (and indeed in others too if they have to use their eyes excessively), I pay particular attention to the *illumination*. When an artificial light is necessary, I try to make this as like diffused daylight as possible. One point in particular, laid down by one of our oculists some years ago, I regard as specially important, and that is that the patient should never be dependent upon a single bright light over his head, but should have at least one other side light in the room, so as to diminish the intensity of the shadows and obviate the sharp and trying contrasts of light and shade that would otherwise meet his eye in glancing from the lighted page before him to the remoter corners of the room.

Other points to which considerable attention has been devoted are: (a) the relative height of the seats and desks in a school, these being so disposed that the scholar shall not have to bend over to his

¹ I say "practically," because these cases like those of class 1, which are not myopic to start with, may acquire a little myopia in adult life as a result of some excessive strain imposed upon the eyes.

work nor sit in any constrained attitude; (b) the size and legibility of the print used in the text-books, this being sufficiently large and clear to be read with ease even by the unpracticed; (c) the quality and tint of the paper on which the books are printed, a glaring white and particularly a highly glazed paper being avoided; (d) the character of the handwriting, vertical script being regarded as the most advantageous. There is no question as to the importance of attending to all these points. By so doing we shall certainly conduce to the physical well-being and to the comfort of the pupils, whether myopic or not. But that by these means we shall succeed to any great extent in preventing the development of myopia or in arresting it when developed, seems very doubtful. Hygienic measures of the kind indicated, however valuable on other accounts, would seem to be of subordinate importance so far as the prophylaxis of nearsight is concerned.

I think it wise to have these patients with myopia of medium amount *report at intervals* of a year or so for reexamination in order to see if the near sight has increased. If it has, I give them their new correction at once.

The *younger the patient* and the *higher the myopia*, the more rigidly should we insist upon carrying out all the hygienic precautions above detailed, and the more frequently ought we to reexamine our patients.

The third class of cases comprises those of *pernicious progressive myopia*. In direct contrast with the cases we have just been considering, and which with Tschering I should class as quasi-physiological, since the eyes are otherwise healthy, these cases of pernicious myopia seem to be pathological from the very outset. The myopia begins in early childhood, advances rapidly, being from 6 to 10 D at ten years, and, most important of all, keeps on advancing in adult life. Such a myopia almost invariably gets to be associated at some period of its development with a large, annular or conical, often terraced crescent and with the degenerative or pigmentary changes of a *sclerochoroiditis posterior*. It is particularly the form of myopia in which we apprehend the more serious accidents (*hæmorrhages*, central chorioidal degeneration or pigment infiltration, and detachment of the retina).

How shall we avert these accidents and, as far as may be, stay the progress of the myopia? We must realize that here we are dealing with an eye which from the outset is diseased; an eye which is so distensible that even a slight and ordinary increase in its tension will cause additional protrusion and further weakening of its coats. We cannot subject it, therefore, to even ordinary strains.

The procedure that multiplied experience has

shown to be the most advantageous in such cases, particularly with children, is, first, to apply the glass fully correcting the myopia, and require its use for distance and near; second, to restrict very greatly the use of the eyes for near work and to have the patients lead as far as possible an out-of-door life and take up some out-of-door occupation; third, to do everything possible to reenforce the general physical condition; fourth, to reexamine the patients at intervals of six months or less to see if any change in their correcting glasses is required.

I believe that by treating our cases in this way we shall in not a few instances succeed in arresting the myopia and in preventing its serious consequences.

In considering these cases of medium and high myopia we have had reference particularly to children. In *adults* quite the same line of treatment is indicated, the correction with glasses being here also of the first importance. In adults, however, the treatment is more difficult to apply, and it may require considerable patience to carry out. Sometimes, although not so very often, we have to undercorrect the myopia for a time at least, and particularly for near points. Yet here also I hold that our aim in myopia of 18 D or less (and in selected cases in myopia of even higher degree) should be ultimately to give the full correction for distance and near, and require it to be employed steadily—it being understood that this is done not merely because it gives the patient good sight, but because it affords the best prophylaxis against the further development of the myopia.

In addition we enforce the same hygienic rules as in children.

To recapitulate:

The prophylactic treatment in myopia consists in the following:

1. Making the patient employ the *full correction* of his myopia all the time and both for distance and near. This is of prime importance in all varieties of myopia, low, medium, and high, and, if applied early, may check the progress of the myopia altogether.

2. Proper attention to *illumination*, the size and legibility of the *print*, the quality of *paper* used in the books read, the relative height and disposition of the *seat and desk*, and the many other factors that have been brought out by the zealous investigators into the subject of school hygiene. These are important but subsidiary matters.

3. In low and medium myopia, *moderate restriction of near work*, or rather its better^r distribution, so that it is done mainly by daylight and not for too long at any one time. Furthermore, momentary *rest of the eyes* at frequent intervals during the work. These rules to be the more strictly enforced, the higher the myopia and the younger the patient.

4. In high myopia with evidences of progress, much more stringent restriction of near work. Open-air work to be encouraged and the adoption of confining and eye-taxing occupations forbidden.

5. In medium and especially in high myopia, plenty of sleep and out-of-door exercise.

6. *Reexamination of the patient at frequent intervals* (which in the case of high myopia should be very frequent), to determine how much the myopia has increased. If it has increased, the glasses should be increased also up to the full strength, and the hygienic regulations above detailed modified accordingly.

GUNSHOT WOUNDS OF THE STOMACH, WITH A REPORT OF A CASE.*

By PAUL F. EVE, M. D.,

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There is perhaps no field in surgery that is receiving at present more attention than gunshot wounds of the stomach, and when early diagnosticated, there still remains the mooted question as to how these injuries should be treated.

The diagnosis of a gunshot wound of the abdomen is, as a general rule, clearly ascertained by the history and examination of the patient; a penetrating wound seen in this region, together with an escape of its contents, marks such an injury. There are, however, certain other defined symptoms which lead us to the conclusion that the stomach has received an injury, this diagnosis depending more or less upon the condition of the stomach when injured, whether this viscus is empty or full. In case of injury to this organ when full, we may have, besides the contents of the stomach passing out of the gunshot wound, vomiting, the ejected matter in many cases being tinged with blood, while there is a greater or less amount of shock which follows, owing to the extent of the injury. While considerable shock does occur in the vast majority of cases, the presence or absence of shock is not by any means an indication for or against the existence of gunshot wounds of the stomach. Many cases have come under the observation of surgeons where extensive injuries of the stomach existed, and where the patient has walked into the office or hospital with little or no inconvenience and shock, who has subsequently died from septic peritonitis, as the result of such an injury. Another symptom presenting itself is internal hæmorrhage, characterized by pallor, with dilated pupils, weak pulse, and faintness, and where you will be able to find dulness upon percussion in the loins.

In some cases air enters through the wound into

the abdominal cavity and the dulness which ought to present over the liver disappears, while in a few cases there is a burning pain over the region of the stomach, attended with thirst. It is estimated that in gunshot injuries of the abdomen the death rate is nearly 90 per cent. It is true that recoveries have taken place in gunshot wounds of the stomach, especially where the bullet is small, this being easily explained by the fact that as a general rule the mucous membrane of the stomach projecting out through the wound acts as a temporary plug, thus facilitating the building of tissues around this opening, permanently sealing it. In some cases a temporary or permanent fistula results, the contents of the stomach having never gained entrance into the abdominal cavity.

In the treatment of gunshot wounds, we have palliative and operative measures. In the recent wars which have occurred, it has been shown that where a small-calibre, long-range rifle is employed, the aperture in this organ is so slight that the indications for operative measures are less imperative, especially in those cases where the wound has been received after long periods of fasting. It has also been shown by these records that there are not a few cases in which the patients recover without operation. Viewing the mortality resulting from operative interference which has occurred in the past eight or ten years, many of the military surgeons have decided that in the vast majority of such wounds received on the battle field the abdomen should not be opened.

The palliative treatment consists in absolute rest, the smallest if any quantity of fluid being taken into the stomach, the use of opiates for relief of pain, and remedies for counteracting shock.

It is a well known law in surgery that in the vast majority of gunshot wounds where the bullet alone entered, without carrying any portion of the clothing or other materials with it, the wound is, as a general rule, an aseptic one, and the bullet, even though it remains, becomes encysted, giving rise to but little or no inconvenience. Should it at any time present symptoms warranting its removal, it can be done at a subsequent operation. We have thus a number of military surgeons, together with a few civil surgeons, who favor non-operative procedure in many cases of gunshot wounds entering the abdomen.

In the light of calm reason, let us look at the treatment which generally governs punctuated wounds; the law laid down is to cut to the bottom of such a wound and allow it to heal from that point upward; while in penetrating and perforating wounds, especially in the abdominal cavity, in the vast majority of which cases the patients die if left alone, and, as suggested above, even with operative

*Read before the Medical Society of the State of Tennessee, April 8, 1902.

interference, the deaths are almost 90 per cent., due for the most part to septic peritonitis, not so much from the bullet as from the contents of the abdominal viscera. We, living as we do in this antiseptic era of surgery, should do something to decrease this frightful mortality. I am fully persuaded, viewing this great mortality of injuries of the abdominal cavity, that there is but one sure and safe line of treatment, viz.: immediate operation. In all cases where internal hæmorrhage is recognized, this plan is not only recommended but urged, the first great law of surgery being to arrest hæmorrhage, the loss of that vital fluid, the blood, upon which all living tissues exist. It is impossible for me to conceive how, in the hands of a competent surgeon under anything like favorable circumstances, an experimental laparotomy could do any great harm. If there is nothing found demanding further operative measures the abdomen can be closed with but little shock following the operation; on the other hand, if an opening should be found in the stomach or other viscera, it is the duty of every surgeon to close such a wound with sutures and thus prevent the patient from dying with septic peritonitis.

In opening the abdomen for gunshot wounds of the stomach great care should be exercised in the examination of this viscus; unless the bullet has merely grazed one border of the stomach, it is a rule that can be safely laid down that this organ has been perforated in more than one place. If only one opening exists, it becomes the duty of the surgeon to inflate the stomach and search for other openings. In a few reported cases of gunshot wound of the stomach, where only one wound was located by the operator, and believing this to be the only injury to that organ, this wound was brought together by sutures and the abdomen closed, only to find after a lapse of a few days that the patient died from septic peritonitis, an autopsy afterward revealing the fact that another opening occurred in the posterior portion of the stomach, allowing its contents to escape into the abdominal cavity. This rule is especially to be carried out in the injury of the stomach at its cardiac end. My manner in dealing with such injuries is as follows:

After defining clearly that the wound has penetrated the abdominal cavity, I immediately perform a laparotomy, and make careful search for visceral lesions; and if any are found, the serous and muscular coats are brought into apposition by inverting the apertures and closed by Lembert's sutures. In a few cases where the openings were quite small, I have used a purse-string suture, strengthened by one or two Lembert's sutures. I have always made it a rule, after repairing the wounds of the stomach, to flush out the abdominal cavity with a copious saline solution, using as much as three to eight gal-

lons in each individual case. I do this from the fact that I do not believe we can with certainty determine whether or not any portion of the contents of the stomach has passed into the abdominal cavity. In my after-treatment of these cases I exercise great care in feeding the patient. I do not allow anything, even of a liquid nature, to pass into the stomach until after the fourth or fifth day, maintaining my patient during this time solely by rectal nutritious enemata. After the fifth or sixth day, the patient is allowed at intervals of from two to four hours a small quantity of egg-albumen, augmented by beef-juice, administered about the end of the eighth day. I do not allow my patient to take solid food into the stomach under eighteen or twenty days from the receipt of the injury, and am very guarded even after this period to withhold from them any article of food which would produce fermentation.

In this connection, I desire to report a very interesting case that recently came under my observation:

Mr. J. M., aged twenty-five, of fine physique and weighing about 188 pounds, while in company with some friends, received a gunshot wound of the abdomen on the evening of November 28, 1901. It was impossible to exactly state the position which he occupied when he received the gunshot wound, but from the course of the bullet he was evidently standing, his body slightly inclined to the right side. The gunshot wound was a penetrating one, having a wound of entrance and one of exit, the bullet passing from the right side of the abdomen to the left. The patient was as soon as possible removed to the City Hospital, where I arrived shortly and made a cursory examination. The patient at the time of examination did not show any very great symptoms of shock, his pulse being about 80 to the minute and rather full, his respiration 40 per minute, his temperature a shade below normal, and he was in a semi-conscious condition.

The following history was obtained from one of his friends: They had about one hour before the accident partaken of a very hearty supper and were engaged in conversation when the shot was fired. When shot, the patient staggered and vomited very copiously; he, however, was perfectly conscious and continued so until the arrival of the ambulance which conveyed him to the hospital. My examination revealed a gunshot wound of the abdomen, and I suggested a laparotomy, which was concurred in, and the patient was rapidly prepared for this operation. Ether was the anæsthetic chosen, but shortly after its administration the patient again had a copious emesis. His pulse at this time became quick and feeble, with slight symptoms of shock, which, however, soon disappeared. Assisted by Dr. Ray, Dr. Tigert, and others, and in the presence of some other professional friends, an incision was made in the median line between the two openings and the contents of the abdominal viscera were examined.

The course of the bullet was found to be as follows: Its point of entrance was opposite the costal cartilage of the right ninth rib, about one inch to its left side; the point of exit lay between the cos-

tal cartilages of the tenth and eleventh left ribs, about half an inch to the right of them, the bullet having ploughed twice through the stomach, no other abdominal viscera having been injured. The first opening into the stomach, which corresponded to the wound of entrance, was of almost the size of a silver dollar and situated in the anterior border of the stomach; the second opening, almost opposite the wound of exit, was in diameter much larger than that of a silver dollar and involved in its tear some of the attached portion of the great omentum at the greater curvature of the stomach. The abdomen was found quite full of clotted blood, and several portions of clothing were removed with this blood. The wound of entrance and the wound of exit in the stomach were both turned in and sutured after the Lembert plan, the first wound requiring about ten stitches, the second wound about eighteen stitches, and the torn portion of the omentum was sutured to the greater curvature of the stomach. The abdominal wound was then closed by three tiers of sutures, while the wound of entrance and the wound of exit of the abdomen were cleaned from portions of clothing and threads of tissue and brought together, and a saline transfusion was administered. The patient's temperature when he was placed in bed was 97° , his pulse 100, and his respiration 42. During the night another saline transfusion was administered together with $1/50$ of a grain of nitroglycerin and $1/15$ of a grain of strychnine. He rested fairly well, sleeping in all four and a half hours. During November 29th his temperature ranged from 98° to 100° , his pulse rate from 88 to 92, and his respiration from 42 to 36. Complaining of intense thirst at this date, he was given one pint of saline solution per rectum, which was repeated at stated intervals. On November 30th, his temperature ranged between 98.6° and 99° , pulse 88 to 76, and respiration 46 to 24. His kidneys from the time of the operation acted freely and he had four bowel movements during this night. On December 1st his pulse rate was 76, his temperature 99.2° , and respiration 28, and peptonized milk with beef juice and whiskey were given at intervals per rectum. Between this date and the 4th his pulse rate ranged from 80 to 85, his temperature from 98.4° to 99° , and his respiration from 26 to 24. He complained occasionally of slight pain in the stomach and slight nausea, but did at no time vomit. At this date egg-albumen was given him by the mouth, and as the patient complained of being hungry, the rectal injections were still continued. On December 9th meat juice, together with the egg-albumen, was given him at stated intervals, but no solid food administered by the stomach until after the eighteenth day. My patient, comparatively after the first few days, had a normal temperature and respiration, and he made an uneventful recovery, being dismissed from the hospital on December 24, 1901. At this date his articles of food consisted of soft-boiled eggs, crackers, oatmeal gruel, and soup, but all foods of a fermentative character were prohibited. The stitches in the abdominal wound were removed on the eighth day, the wound being found to have healed by primary union.

On December 26th, possibly one of the coldest days of the season, the patient came to my office for

examination, and his condition was found excellent; but careful measures were still adopted in his diet. He, however, did not stick strictly to this diet, and shortly afterward, being very hungry, he ate such articles of food as light bread, potatoes, etc., which produced fermentation and some distention of the stomach. On January 6, 1902, he was taken with a chill, his temperature rising to 103.5° , and Dr. Witherspoon was called in consultation. Upon examination, we found the stomach very much distended with gas, his respiration about 46 per minute, with intense pain in the right side of the chest, located between the fifth and tenth ribs. The patient was placed upon antifermentative treatment and sponge baths were administered, under which course his temperature dropped to 100° , but his respiration still continued at from 40 to 42. During the next eight or ten days, the patient had several slight rigors with rise and fall of temperature and colligative sweats. On January 18th the patient showed clear and marked symptoms of pneumonia, which were followed by empyema of the right lung. On the 21st an aspirating needle was introduced and pus of a very offensive nature was drawn. On January 22nd the patient was removed to our infirmary, and an operation of thoracotomy done; the eighth rib was removed for an extent of about one inch, and the cavity drained by two tubes. The patient at first showed great improvement, but shortly afterward, on account of the greatly exhausted condition from the stomach wound and his inability to partake of nutritious diet, he died of exhaustion, February 2, 1902.

The question that is now perplexing me in this case is as to whether the infection spread from the original wound of the stomach, which had never thoroughly healed and been completely cured, or, on the other hand, whether it was a new infection caused from taking cold in the intense cold weather to which he exposed himself.

A CASE OF TRANSVERSE FRACTURE OF THE STERNUM.

By WALTER J. ROBBINS, M. D.,

NEW BRITAIN, CONN.

The patient was a well-developed, muscular man, twenty-seven years of age. He had attempted to push a belt into position on a rapidly revolving wheel with a block of wood. The wood was whirled from his grasp, and he received a violent blow on the manubrium.

The accident occurred at 5:30 p. m. October 29, 1901; I first saw him at 10 p. m., four hours and a half after the injury. At this time he was suffering from shock; the pulse was 124, respiration was abdominal, 30 a minute, dyspnoea was present, and the patient coughed frequently and raised blood. There was an abrasion of the skin immediately below the sternal notch, about three inches in width and one inch in vertical diameter. The subcutaneous tissue was emphysematous over an area extending downward and outward to the nipples, and upward to the mastoid. This emphysematous condition was espe-

cially marked over the manubrium and upper portion of the gladiolus, where there was distinct bulging with each respiration. The gladiolus was fractured transversely at the level of the attachment of the third costal cartilage, and the upper fragment was depressed behind the lower. The left clavicle was fractured about one inch from the sternal end.

A pad was placed between the scapulæ, to extend the chest, and a compress over the seat of injury to limit the effusion of air into the subcutaneous tissue. The anterior and lateral surfaces of the entire chest were strapped with adhesive plaster. Morphine and strychnine were given hypodermically. The following day, October 30th, the temperature ranged between 100° and 101.4° F., the pulse was 110, and the respirations 24. The subcutaneous emphysema was diminished. The patient coughed occasionally and raised dark clotted blood. Coughing was painful. Percussion showed an area of dullness around the seat of injury, extending outward to the mid-clavicular line on the right side, and an inch further on the left. Moist râles were heard over the anterior surfaces of the lungs, except over the lower lobes.

During the succeeding five days the patient's condition improved, the temperature ranging between 101° and 102° F., the pulse between 90 and 108, and the respirations between 22 and 26, reaching normal on November 4th.

Eight days after the injury, November 6th, reduction of the fracture was effected by pressure backward on the shoulders and lower fragment, assisted by deep inspiration by the patient. There was no tendency toward recurrence of the deformity, but a posterior figure of 8 bandage of the shoulders was applied, and the chest was again strapped with adhesive plaster. At this time cough and expectoration had ceased.

Convalescence from this time was uneventful. Union was firm at the end of four weeks, but, as a matter of precaution, the patient was not allowed to sit up until a week later. He was discharged cured December 26th, eight weeks after the injury.

Therapeutical Notes.

For Eczema of the Ears.—The *Rivista Medica* for March quotes from the *Pratica oto-rino-laringologica* the following as the best application for the exudation and crusts of eczema of the ears:

R Zinc oxide 10 parts
Starch 10 "
Petrolatum 20 "
Calomel 2 "
M. ft. unguentum.

In the foregoing prescription for the calomel may be substituted carbolic acid, $7\frac{1}{2}$ grains; salicylic acid, from $7\frac{1}{2}$ to 15 grains; xeroform tribromophenol bismuth, 30 grains; or ichthyol, 15 to 30 grains.

For Treatment of Cough.—Although cough constitutes a symptom common to many affections of the respiratory tract, it may result from the excitation of other organs; but the pneumogastric

nerve is always found in the reflex arc. Professor Rummo (*Riforma Medica*, December 18, 1901) describes cough as a reflex act originating in a sensory nervous terminal, or "tussiferous zone," arriving at a "tussigenous zone," and being reflected thence to a motor terminal, or "spasmodic zone," thus provoking a forced expiration with closure of the glottis. The arc may be incomplete and the impulse originate from its central point. The best medicament for a cough is often an emetic. Sometimes it is necessary to calm the exaggerated excitability directly. With this object recourse is had to drugs which affect (a) the sensory fibres, as antispasmodics, or (b) the motor fibres or the bulbar centre, as sedatives, or to drugs of mixed action.

Opiates belong to the first of these categories, and, among others, Professor Rummo gives the following formulæ:

R Morphine hydrochloride ... $1\frac{1}{2}$ grain
Cherry-laurel water 150 minims

M. Twenty drops contain about 15-100 of a grain.

Ten drops may be repeated six times in the twenty-four hours

R Morphine hydrochloride / . of each $1\frac{1}{2}$ grain
Cocaine hydrochloride...
Neutral atropine sulphate. 1-13 of a grain
Cherry-laurel water 150 minims

M. Twenty drops contain about 15-100 of a grain each of morphine and cocaine hydrochlorides, and about 1-133 of a grain of atropine sulphate. From five to ten drops, repeated so as not to exceed forty drops in the twenty-four hours, in a little sugar water, or on sugar.

In cases of cardiac debility the following is recommended:

R Morphine hydrochloride $1\frac{1}{2}$ grain
Neutral sparteine sulphate $7\frac{1}{2}$ grains
Distilled water 150 minims

M. Fifteen drops may be injected subcutaneously for a dose.

For Flatulent Dyspepsia.—Dr. John V. Shoemaker (*Medical Bulletin*, April) prescribes the following:

R Creosote 1 minim
Podophylotoxine..... $\frac{1}{8}$ grain
Peppermint oil 1-20 minim
Pepsine 2 grains
Strychnine sulphate 1-80 grain

M. For one capsule. One such capsule may be taken four times daily, or, if too aperient, three times daily.

A Cough Mixture.—The following is quoted from the *St. Louis Medical Review* for March 8th:

R Syrup of licorice of each 1 ounce
Syrup of squill. /
Syrup of senega..... 6 drachms
Syrup of ipecacuanha..... 2 drachms
Syrup of wild cherry..... 1 ounce
Ammonium chloride.... 30 grains

M. ft. mist. One teaspoonful every three hours.

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HUMAN AND BOVINE TUBERCULOUS DISEASE.

A most interesting address on The Intercommunicability of Human and Bovine Tuberculosis was recently delivered by Dr. M. P. Ravenel, the bacteriologist of the State Live-stock Sanitary Board of Pennsylvania, at the annual conversational meeting of the Pathological Society of Philadelphia. The address is published in full in the May number of the *University of Pennsylvania Medical Bulletin*. It is well worthy of attentive study. Dr. Ravenel thinks that we may admit that, as a rule, cattle show a high degree of resistance to the human tubercle bacillus, and that for all experimental animals the bovine bacillus has a pathogenic power equal to that of the human bacillus, while for the great majority it is vastly more pathogenic, but these facts do not by any means show that man is not susceptible to infection by the bovine organism, and we have abundant proof that it is quite possible to infect cattle with the tubercle bacillus from human sources. This contention is fortified by citations from experimental work by Chauveau, Bollinger, Klebs, Kitt, Crookshank, Martin, Thomassen, Nocard, de Jong, Arloing, and others.

"The differences noted between tuberculosis of man and tuberculosis of cattle," says Dr. Ravenel, "are scarcely greater than those noted between the latter and tuberculosis of swine, yet nothing is easier than to infect swine with the milk or other products of tuberculous cattle. The infection here is by natural methods, and, in fact, is most often noted where nothing was further from the wishes or intentions of the unconscious experimenter. The origin of the infection is unquestionably bovine, yet the disease produced differs markedly, but not essentially, from that seen in cattle. The evidence, then, leads us to

conclude that such differences as are commonly seen between human and bovine tuberculosis are in no sense essential."

Dr. Ravenel's conclusion is that the evidence at hand forces us to infer that human and bovine tuberculous disease are but slightly different manifestations of one and the same infection, and that the two are intercommunicable. He therefore considers bovine tuberculous disease as a menace to human health; while we are not at present in a position to define the extent of the danger positively, he says, its real existence cannot be denied. Whatever tendency to exaggeration there may have been in the past, we are not now justified in any attempt to belittle the risk, and it is folly to blind ourselves to it. Viewed from the point of view of the bearing of bovine tuberculous disease on human health, its extermination becomes a public duty.

HEPATIC INSUFFICIENCY.

Using this term to cover all abnormalities of the liver that cripple its functional capacity, not so much as a bile-producing organ, but rather as a hæmatopoietic and antitoxic agency, M. A. Charrin presented some interesting observations on the subject before the Sixth French Medical Congress recently held in Toulouse (*Gazette hebdomadaire de médecine et de chirurgie*, April 10th). The late Rev. Henry Ward Beecher once spoke of the liver as the devil's den, and there was none to say him nay, but perhaps the offenses of the liver in a pathogenic way are not so much due to any peculiar and positive power for evil that it possesses as they are to the comparative ease with which its capability for good is impaired. We know, says M. Charrin, that our organs are made up of a greater amount of tissue than the demands made on their functional power call for; it is known that a fraction of the pancreas or of the thyroid gland, and a very small one at that, suffices to prevent pancreatic diabetes or myxœdema, and that a tuberculous subject ends by breathing with one tenth part of his lungs. The liver seems to be the only exception; however, there is this saving grace in the case of the liver, that the disappearance of its structural elements in accomplished slowly, and consequently, by a sort of accustoming process, the functional activity of the organ remains adequate in spite of its manifest reduction from the anatomical point of view.

At the present time, says M. Charrin, more and more importance is getting to be attached to hepatic insufficiency in the production of eclampsia; of all organs, the liver is most constantly found affected, as well as most profoundly, in eclamptic conditions, so that in the opinion of many authors the functional inadequacy of the organ constitutes the substratum of the morbid process. In women who have died of puerperal eclampsia there are almost invariably found profound and extensive changes in the liver plainly resulting in its functional insufficiency. Most commonly they consist of hæmorrhages, multiple and often considerable in amount, whether into the parenchyma or beneath the capsule of Glisson; in its other parts the organ is pale and sometimes greasy to the touch, its degeneration being manifest and fatty infiltration generally diffuse. But the liver is not primarily at fault; its fatal insufficiency is brought about chiefly by intestinal torpor resulting in coprostasis and the absorption of toxic substances. Moreover, the liver is not usually alone in inadequacy; the kidneys are commonly crippled in function, and often the spleen is affected also.

THE MEAT HABIT IN CHILDREN.

It is but a few years since starchy food for young children was regarded with horror by most physicians, but that feeling is rapidly giving way, so far as concerns children whose salivary apparatus is sufficiently developed, before such considerations as have recently been set forth most ably by so wise a physician as Dr. Joseph E. Winters.¹ Dr. Winters's pamphlet deals with the dietetics of childhood in a comprehensive way, advancing from the requirements of the new-born infant to those of older children, but our limitations in the matter of space will not permit of our noticing more than one feature of the essay, namely, that which refers to the easy acquisition of what may be called the meat habit by young children.

One of the most unfortunate evil consequences of an early and liberal meat diet, says Dr. Winters, is the loss of relish it creates for the physiological foods of childhood—milk, cereals, and vegetables.

"A child that is allowed a generous meat diet," he adds, "is certain to refuse cereals and vegetables. Meat, by its stimulating effect, produces a habit as surely as does alcohol, tea, or coffee, and a distaste for less satisfying foods. The foods which the meat-eating child eschews contain in large proportions certain mineral constituents which are essential to bodily nutrition and health, and without which the processes of fresh growth and development are stunted." These mineral constituents, he goes on to say, cannot be introduced into the system in an assimilable form except in organic combination with an albuminous molecule, and in such combination they are found in sufficient proportions to meet the child's needs only in certain vegetables and cereals. Not only will a lack of these mineral constituents "cause all vigor and vitality to dwindle and die out," but indeterminate morbid processes supervene in consequence.

Moreover, to over-stimulation of the child's delicate nervous system with meat and to the defective oxidation of the elements of such food Dr. Winters attributes abnormally high acidity of the urine, with consequent incontinence of urine, rheumatism, chorea, rheumatic inflammation of the tonsils and torticollis, night terrors, urticaria, angioneurotic œdema, anæmia, convulsions, and pettimal. "There is more so-called nervousness, anæmia, rheumatism, valvular disease of the heart, and chorea at the present time in children from an excess of meat and its preparations in the diet than from all other causes combined," he declares.

THE LEAKAGE FROM GAS MAINS.

A very interesting and instructive paper was read on May 26th before the Medical Society of the County of New York, by James C. Bayles, Ph. D., on Gas Leakage and the Public Health. Dr. Bayles computed that not less than eight million cubic feet of illuminating gas escaped daily from the mains between the factories and the consumers' meters. He dwelt upon the explosive and toxic properties of the gas, the latter being infinitely more dangerous than sewer emanations, and explained how, having lost its odorous properties in percolation, it penetrated through sewers and other ways into houses, in such a manner as to render sickness inevitable. Dr. Bayles is known as a careful investigator, and while we trust that the picture of the extent of danger has been somewhat overdrawn, we must recognize the fact that the leakage constitutes an increasingly se-

¹ *The Food Factor as a Cause of Health and Disease during Childhood, or the Adaptation of Food to the Necessities of the Growing Organism.* By Joseph E. Winters, M.D., Professor of the Diseases of Children, Cornell University Medical College, New York: William Wood and Company, 1902.

rious menace to the public health, and urge thorough investigation with a view to its being dealt with as speedily as possible.

THE SARATOGA MEETING.

At the time of our going to press there is every indication that next week's meeting of the American Medical Association will be very largely attended and that the proceedings will be of unusual importance to the association's future. The work of the House of Delegates is to be inaugurated, from which much is hoped, and it is expected that Dr. Rodman's scheme for a voluntary board of national medical examiners will meet with the association's approval. Best of all, the programme consists of titles which guarantee the excellence of the scientific work of the meeting.

THE SENSELESS DREAD OF SMALL-POX.

Some of the newspapers recount that in a municipality adjoining New York a man was recently discovered to be affected with small-pox, whereupon he was ejected from his abiding place and left to shift for himself. He appealed to a policeman, who forced him to travel—at a safe distance ahead—to a point within the limits of the city of New York, and then, of course, abandoned him. The man made his way to a vacant lot and sank to the ground exhausted. He lay there for the better part of two days, unsheltered, without food or drink, and without aid of any sort. Conscientious through all his suffering, he warned passers by of the nature of his disease and sought to keep them away from him. Nevertheless, a throng of curious cowards hovered about him, but at a prudent distance, without offering any assistance. Finally the board of health sent a vehicle to convey him to North Brother Island. If the facts are as reported—and there is every likelihood of their being so—what a commentary do they suggest upon the senseless popular dread of the most preventable of all grave diseases!

THE COSMOPOLITANISM OF MEDICINE.

Day by day the cosmopolitan unity of the healing art becomes more and more emphasized. A somewhat unique instance occurred recently in the banquet given last month to Dr. Rottot, Dr. MacCallum, and Sir William Hingston by the medical profession of Montreal. Dr. Rottot, as dean of Laval University, represented the French, and Dr. MacCallum, as emeritus professor of McGill, the English section of the profession. Sir William

Hingston, though an Irish physician, is identified with both the French hospital and the French college. The banquet proved a typical reunion of both races and languages, the seal to which was set by Sir William Hingston, who, in his response, first addressed the assemblage in French, and then in English. It is not too much to hope that in the near future the art and science of medicine, especially in its most cosmopolitan development, that of sanitation, will prove the unifying element in the much to be desired "brotherhood of nations," the federation of the world.

THE OHIO STATE MEDICAL ASSOCIATION.

As is set forth in our news columns this week, the old Ohio State Medical Society has been reorganized in entire conformity to the plan recommended to State organizations by the American Medical Association last year, and has changed its name to the Ohio State Medical Association. Our brethren in Ohio have been quick to see the wisdom of such a change, and it was eminently fitting that Dr. Reed's own State society should so promptly do its full part in carrying out his beneficent ideas. We of the State of New York recognize with gratitude the efforts of our Ohio friends to further a similar work in our own State.

MEDICAL MEN IN THE FRENCH LEGISLATURE.

Our French brethren have for years set us a good example in the frequency with which they accept legislative office. Not that they seek it for its emoluments, or that those who consent to hold it are the comparatively unemployed, for it will be remembered that the late Professor Robin was for several years a senator. It seems that in the newly elected Chamber of Deputies there are forty-three physicians. Let us reflect upon what good that number of medical men could do in our Congress. We should learn that duty to one's patients does not cancel duty to one's country.

SUNLIGHT AND MALARIA.

The *Charleston News and Courier*, after summarizing our recent editorial on Dr. King's theory of the action of light in favoring the sporulation of the *Plasmodium malarie* and thus developing malarial disease, ingeniously suggests that a crucial test of the question would be to ascertain whether or not men who work all day and habitually in mines in malarious regions ever have malarial fever. Such an investigation seems to us well worth while.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynaecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, June 10th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, June 11th.—New York Pathological Society; American Microscopical Society of the City of New York; Society for Medical Progress, New York; Philadelphia County Medical Society.

THURSDAY, June 12th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia; Church Hill Society of Richmond, Virginia.

FRIDAY, June 13th.—Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, June 14th.—Obstetrical Society of Boston (private).

Meetings of National and State Medical Societies for the Coming Month:

AMERICAN ACADEMY OF MEDICINE (annual), Saratoga, N. Y., June 7th to 9th.

AMERICAN MEDICAL ASSOCIATION (annual), Saratoga, N. Y., June 10th to 13th.

AMERICAN CLIMATOLOGICAL ASSOCIATION (annual), Coronado, California, June 10th.

AMERICAN PROCTOLOGICAL ASSOCIATION (annual), Saratoga, N. Y., June 10th.

COLORADO STATE MEDICAL SOCIETY (annual), Pueblo, June 17th.

DELAWARE STATE MEDICAL SOCIETY (annual), Newark, June 10th.

MASSACHUSETTS MEDICAL SOCIETY (annual), Boston, June 10th and 11th.

MICHIGAN STATE MEDICAL SOCIETY (annual), Port Huron, June 26th and 27th.

MINNESOTA STATE MEDICAL SOCIETY (annual), Minneapolis, June 18th.

MEDICAL SOCIETY OF NEW JERSEY (annual), Atlantic City, June 24th to 26th.

Found, a Pocket Surgical Case, on Saturday afternoon, May 31st, at the scene of the fatal accident, automobile races, Staten Island. Owner may have the same by proving title to property. Apply to John A. Cutter, M. D., Equitable Building, 120 Broadway, New York.

The Manhattan Eye and Ear Hospital.—Dr. A. Edward Davis has resigned from the medical staff of this institution.

Dr. Robert Luedeking, professor of diseases of children in the Medical Department of Washington University, St. Louis, has been elected dean of the department to succeed Dr. Shapleigh.

Boston: The Withdrawal of the Petition for an Osteopathy Board.—The joint committee on the judiciary, on May 26th, reported leave to withdraw on the petition for the appointment by the governor of a Board of Registration in Osteopathy.

The St. Louis Medical Society.—At the last regular meeting, on Saturday evening, May 31st the following paper was to be presented: Sarcoma of the Testicle and Kidney, with presentation of specimen, by Dr. Henry Jacobson, and the following resolution was to be considered:

"Whereas, the St. Louis Medical Library Association has submitted a proposition by which members of the Society may enjoy the rights and privileges of the St. Louis Medical Library Association upon the payment of \$2.50 per member per annum.

"Resolved, that the St. Louis Medical Society of Missouri accept the proposition of the St. Louis Medical Library Association by which the members of the St. Louis Medical Society of Missouri become Associate Members of the St. Louis Medical Association."

Dr. Justus Ohage Reappointed.—Dr. Ohage who resigned the office of Director of the Public Baths, and that of Health Commissioner of the City of St. Paul, Minn., because his efforts to obtain a safe approach to the public baths on Harriet Island were unsuccessful, has been reappointed at his own request, the public having heartily endorsed his stand in the matter.

The Monroe County (N. Y.) Medical Society held its annual meeting at Rochester on May 28th. The following officers were elected for the ensuing year: President, Dr. Charles Barber; vice-president, Dr. Wheelock Rider; secretary, Dr. William M. Brown; treasurer, Dr. C. A. Greenleaf. Dr. John Acheson, Dr. William Ward, Dr. Perry A. Bly, Dr. Joseph S. Campbell, and Dr. Myron B. Palmer, were elected members of the society.

McGill University.—Dr. Gilbert P. Girdwood has resigned the professorship of chemistry.—Mr. James Henderson, B. Sc., Ph.D., senior demonstrator of chemistry in the faculty of applied science, has also resigned, and Mr. Douglas McIntosh, A. M., M. Sc., has been appointed to fill the vacancy.—Dr. Wyatt Johnston, assistant professor of hygiene, has been promoted to the full professorship.—It is proposed to make arrangements to superannuate professors at a certain limit of age.

The Society of Medical Jurisprudence, at a recent meeting passed the following resolutions:

Resolved, That the term "to practice medicine" means the art of healing, no matter how it is practiced, whether by drugs, suggestion, laying on of hands, hypnotism, faith cure, or by any other name; and it is further

Resolved, That a committee of five members be appointed by the president to work in conjunction with other societies to procure necessary legislation, that the art of healing by any means whatsoever should only be undertaken by those who have made a scientific study of health and disease.

The Medical Association of the Greater City of New York.—The next regular meeting will be held at the New York Academy of Medicine on Monday evening, June 9th, at 8.30. The following papers will be presented for discussion: The Therapeutic Value of the Internal Use of Carbolic Acid, by Dr. S. Henry Dessau; Time-saving and Labor-saving Devices in the Office Work of Surgeon and Gynecologist, by Dr. Robert L. Dickinson; and The Serious Vomiting of Pregnancy, by Dr. Ransford E. Van Gieson.

Fine for Failure to Vaccinate Employees.—Under a by-law enacted December 27th a spice manufacturer of Montreal, Canada, has been fined \$5 for refusing to have all his employees vaccinated and to supply the department with the necessary certificates. This being the first case brought to trial under the law, a merely nominal fine was imposed. It is stated that the city officials propose to proceed against all employers who fail to comply with the requirements of the law. The punishment for non-compliance is a fine not exceeding \$40 and imprisonment not exceeding two calendar months.

The American Röntgen Ray Society will hold its next meeting in Chicago on December 10 and 11, 1902, under the chairmanship of Dr. Ralph R. Campbell, of that city. The local committee of arrangements will be composed of well-known physicians, among whom are Dr. John B. Murphy, Dr. Louis E. Schmidt, Dr. M. L. Harris, Dr. W. L. Baum, Dr. H. G. Anthony, and Dr. W. A. Pusey.

A general invitation to attend the meeting and participate in the work of the society is extended to physicians who are interested in the legitimate uses to which the discoveries of Professor Röntgen may be put. Further information may be obtained from the secretary of the society, Dr. James B. Bullitt, 205 West Broadway, Louisville, Ky.

St. Bartholemew's New Clinic at 215 and 217 East 47th Street was opened for inspection on May 21st. The building, architecturally, resembles St. Bartholomew's Church, to which it belongs and near which it is located. It is absolutely fireproof, no woodwork appearing in the finished structure. The window and exterior door frames are covered with copper, and the sash and interior doors are covered with kalsomined iron. There are no angles or projections in the building above the basement. All inter-

sections of all surfaces meet with a uniform curve. This embraces not only the walls, ceiling, floors, but also the stairs, shelf and table standards, window recesses, etc. All the furniture used in the building is of steel, finished in white enamel. A very perfect ventilating system has been installed. The radiators used in heating are suspended on the wall so as to avoid the accumulation of dirt which usually takes place under a radiator which rests on the floor.

Cornell University Medical School.—The commencement exercises were held in Carnegie Hall on Wednesday evening, June 4th, in the presence of a full house of spectators. The graduating class consisted of fifty-three members, nine of whom were women. The diplomas were presented and degrees conferred by the president of Cornell University, Dr. J. G. Schurman. Professor T. Gaillard Thomas delivered an impressive address to the new graduates, which will appear shortly in our columns. The honor roll, consisting of ten members of the class, was read by the dean, Professor William M. Polk. The graduates who received prizes and honors were: Benjamin W. Zipser, first prize, \$150; Harry I. Johnston, second prize, \$100; Edward R. Hildreth, third prize, \$50; and Charles M. Mix, a set of instruments for the best work in otology. Honors were also conferred on: Christian W. Janson; Nan G. Seymour, Theodore J. Edlich, Royden M. Vose, Anna Irene von Sholly, and Robert S. MacDonald.

The Lying-in Hospital in Need of Funds.—The Board of Governors of the Society of the Lying-in Hospital, have issued an appeal to the public for funds for the support of the institution in Stuyvesant square, which is said to be the most complete and best equipped maternity hospital in existence. The members of the Board desire to correct an impression that the Lying-in Hospital is or is likely to be richly endowed. J. Pierpont Morgan erected the hospital building for the society at a cost of about \$1,500,000, but he has not endowed it, nor does he intend to do so. He feels that the public should support it. When the new building was opened it was determined that during the first year only about one-third of the capacity of the hospital should be put to use. It is estimated that the expense of operation and maintenance will be about \$90,000 a year, which, after the application of its income of about \$30,000, will leave a deficit of about \$60,000 a year, for which the society must be dependent upon the public. Its actual income from its investments is a little more than \$13,000 a year, and the Board appeals for annual or other donations and desires to accumulate an endowment fund for the hospital, either by considerable gifts or by legacies.

The American Laryngological Association held its annual meeting in Boston during the last week in May. Numerous papers were read and the following officers were elected for the ensuing year: President, Dr. J. H. Bryan, of Washington, D. C.; first vice-president, Dr. George A. Leland, of Boston; second vice-president, Dr. T. Melville Hardie, of Chicago; secretary and

treasurer, Dr. James E. Newcomb, of New York; member of the council, Dr. John W. Farlow, of Boston. It was decided not to fill the office of librarian this year. Dr. Cornelius G. Coakley of New York, and Dr. Charles W. Richardson of Washington, D. C., were elected to active fellowship, and Dr. Paul Heymann of Berlin, Dr. Marcel Lermoyez, of Paris, and Dr. St. Clair Thompson of London, were elected to corresponding fellowship. The next congress of the association will be held in Washington, D. C., in connection with the triennial congress of the Association of American Physicians and Surgeons.

The Academy of Medicine of Cleveland was formally organized at the Chamber of Commerce in Cleveland, O., on May 23rd. Dr. F. E. Bunts was elected president; Dr. W. T. Howard, vice-president; Dr. W. H. Merriam, secretary; Dr. J. M. Ingersoll, treasurer, and Dr. C. A. Hamann, Dr. M. Rosenwasser, Dr. J. B. McGee, Dr. J. E. Cook, Dr. H. E. Handerson, and Dr. W. H. Humiston, trustees. The membership of the Cleveland Medical Society and the Cuyahoga County Medical Society, which two organizations are now combined in the Academy of Medicine of Cleveland, exceeded three hundred. The governing body of the academy is a council composed of the officers, trustees, and the chairmen of the permanent committees of the organization, the latter yet to be appointed. The academy is to meet monthly and sections devoted to various branches of medicine and surgery are to be formed. These are to meet from time to time at the rooms of the Cleveland Medical Library on Prospect street.

The Confederation of Members of Reciprocating State Medical Examining and Licensing Boards.—Representatives from the Wisconsin, Indiana, Illinois and Michigan Boards were present at the meeting of the Confederation held at Chicago the 20th ult., and the details for the reciprocal exchange of certificates between Indiana, Wisconsin and Michigan were perfected upon the basis of the two qualifications passed at the January meeting of the Confederation, viz.:

1. That a license or certificate of qualification of at least one year's date and based upon presentation of a satisfactory diploma, and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued.

2. That a license or certificate of qualification issued by a State Board of Registration or Medical Examiners of at least one year's date, based upon presentation of a satisfactory diploma and upon the recommendation of a State Board of Registration or Medical Examiners as to the reputability of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued.

The boards interested have meetings in June and will take such action then as will result in the immediate exchange of certificates. The following officers were elected: President, Dr. J. R. Currens, Two Rivers, Wis.; first vice-president, Dr. J. M. Dinnen, Fort Wayne, Ind.; second vice-president, Dr. W. F. Curryer, Indianapolis, Ind.; secretary, Dr. B. D. Harison, Sault Ste. Marie, Mich., and treasurer, Dr. W. A. Spurgeon, Mun-

cie, Ind. Executive Council: Dr. Harvey B. Dale, Oskosh, Wis., member of the Wisconsin Board of Medical Examiners. Dr. Wm. Bell, Belding, Mich., President of the Michigan State Board of Registration in Medicine. Dr. J. C. Webster, Lafayette, Ind., member of the Indiana State Board.

A Tribute to the Late Dr. Arthur T. Muzzy.—

The following was read at the meeting of the Society of the Alumni of the City (Charity) Hospital held on Wednesday, May 21, 1902:

Dr. Arthur T. Muzzy, who at the time of his death, was the President of the Society of the Alumni of the City (Charity) Hospital, deserves our thoughts as we are gathered at this the one hundredth meeting of our organization. Previous to his election to the presidency Dr. Muzzy had served the Society with a conscientious devotion to our welfare that was not always recognized because with an unflinching zeal there was so much modesty that we did not know of his efforts. He never mentioned his own part but praised others. Such a man is rare, especially in a great city given over to commercial pursuits with personal advancement always prominent. Our late President was a man of broad and scientific training. He expressed his opinions in a simple, direct manner that showed him to be a well read and experienced clinician. Not only was he a valued consultant but he was a painstaking practitioner in the specialty to which he gave so much of his professional life. Expert in his operations he had a knowledge of pathological processes that enabled him to carry to a successful issue many a doubtful case. He wrote little for publication but all that he put in print will bear comparison with similar articles.

Dr. Muzzy's personality was gracious and winning. Honest and true he never expected others to be anything else than honorable. In his death this Society has lost more than its presiding officer, it has lost its association with a man who was not only a scientific physician but also a friend and an upright christian gentleman. We can bear him no better testimony than to acknowledge the benefits that accrue to all who realize the value of a high personal standing among the members of our profession.

J. B. BISSELL,

WILLIAM L. STOWELL,

WALTER LESTER CARR,

Committee.

The Reorganization of the Medical Profession of Ohio.—The Ohio State Medical Society held its annual meeting, in Toledo, on May 28th, 29th, and 30th, and reorganized under the title of the Ohio State Medical Association. The constitution and by-laws adopted, with modifications, were those promulgated by the committee on reorganization appointed by the American Medical Association. The purpose of the reorganization, as set forth, was "to federate and bring into one compact organization the entire medical profession of the State of Ohio and to unite with similar associations in other States to form the American Medical Association." Thereupon all

recognition, direct or inferential, of the code of ethics of the American Medical Association was stricken out by unanimous vote. The county society was made the unit of the organization, and each member of a county society becomes, by virtue of that fact, a member of the State association. It was provided that, as the county societies "are the only portals to the State association and to the American Medical Association * * * every reputable and legally registered physician who is practising, or who will agree to practise non-sectarian medicine, shall be entitled to membership." The entire instrument embracing the foregoing provisions was adopted without a dissenting voice.

The officers elected were: President, Dr. W. C. Chapman; vice-presidents, Dr. George M. Crile, Dr. C. M. Taylor, and Dr. M. Stamm; secretary, Dr. P. Maxwell Foshay; treasurer, Dr. J. A. Duncan; representatives to the House of Delegates of the American Medical Association, Dr. Frank Warner, Dr. P. M. Foshay, and Dr. Charles A. L. Reed; alternates, Dr. Edwin Ricketts, Dr. George Goodhue, and Dr. T. Clark Miller.

The following resolution was adopted:

Resolved, That the Ohio State Medical Association, as a constituent organization of the American Medical Association, views with extreme satisfaction the negotiations now in progress to consolidate the New York State Medical Association and the Medical Society of the State of New York into one organization under the auspices of and in affiliation with the American Medical Association; and the representatives from the association to the national House of Delegates are hereby instructed to use every possible means to secure a final consummation of such consolidation at the meeting of the American Medical Association to be held at Saratoga in June prox.

The Cholera in Manila.—A private letter recently printed in the *San Francisco Bulletin* gives some interesting details of the methods being utilized in Manila to prevent the spread of cholera. The letter was written some weeks ago immediately after the first appearance of cholera: "Here we are not at all frightened, because we know just what to do and everything that is being done to make it safe for us and keep it within bounds. It is interesting to be here and see how a disease like this is fought and the courage and discipline displayed seem wonderful. Although the first cases died only two days ago the city is already divided into districts and each district has a chief surgeon, under whom are doctors, inspectors, police and helpers. To-day the filling up of all surface wells has begun and General Chaffee has had the river, which is the source of the water supply, guarded from its source along its entire length to the Deposito, where it is stored in underground cisterns. Our ice plant is installing another boiler and will supply 13,000 gallons of distilled water a day. This is given away and placed in different quarters of the city. Every Nipa shack where a death occurs will be burned. All the inmates of the houses where there has been a death are taken to a camp of detention outside the city and

quarantined for five days. All vegetables become a Government monopoly, and will be sold cooked. All this means a tremendous amount of work. Dr. Bourns has charge of the kitchens that are to be established in different quarters of the town, where all may buy cooked vegetables. Rice and potatoes are the exceptions, for the natives can't eat them uncooked. No fruits will be brought into town. Already the ice-cream and sorbette makers are corralled, and only allowed to sell ices made in the vicinity of the cold storage and distillery plant. They are given distilled water, and their freezers are examined by the sanitary inspector. You cannot imagine anything more prompt and clever than the ways and means used by the Government to stamp out the disease. I do not feel at all afraid. My kitchen would satisfy the most exacting sanitary fiend. The water is boiled and bottled tight, ice chests scalded, butter, sugar and other articles put in cans with tight-fitting covers. All raw vegetables and uncooked salads are forbidden, and fruit banished from the table. Our plates and eating utensils are scalded in boiling water just before using, and all bread eaten is toasted. My Chinese are greatly frightened, and ready to do anything to avoid it. Dr. Thomas came in from Bohol, and was at once put in charge of the worst district. General Chaffee is doing everything in his power, for he realizes what a terrible thing it would be to have it get among the soldiers. It is great good fortune that the commission has the power and knowledge to deal with this matter. Major Maus, who is chief of the Board of Health, is the right man in the right place, and is most untiring and energetic in his work."

The Connecticut State Medical Society held a banquet on May 29th, at its one hundred and tenth anniversary meeting. Among the guests present were the mayor of New Haven, and President Hadley, of Yale University. Dr. Hadley replied to the toast of "The College." His speech was full of mirth and enthusiasm, and touched upon the college life and curriculum, referring especially to the medical school. The newly elected president, Dr. G. A. Shelton, replied to the toast of "The Doctor." The following papers were read during the session: Report on the Progress of Medicine, by Dr. J. E. Loveland, of Middletown, and Dr. E. K. Loveland, of Watertown; Report on the Progress of Surgery, by Dr. N. R. Hotchkiss, of New Haven, and Dr. A. G. Cook, of Hartford; Inflammatory Rheumatism, by Dr. N. R. Hotchkiss, of New Haven; The Pathological Relations of the White Blood Corpuscles, by Dr. O. T. Osborne, of New Haven; The Diagnostic Value of a Leucocyte Count, by Dr. A. M. Rowley, of Hartford; The Determination of the Species of Blood, by Dr. C. J. Bartlett, of New Haven; The Dangers from the Indiscriminate Use of Morphine, by Dr. T. D. Crothers, of Hartford; Connecticut's Influence in the Development of the American Hospital for the Insane, by Dr. Charles W. Page, of Hartford; A Case of Extensive Resection of the Intestines, by Dr. G. R. Harris, of Norwich; Melancholia, Periodical Depression and Other Depressions, by Dr. J. M. Keniston, of Middle-

town; Causes and Results of Sclerosis of the Coronary Arteries, by Dr. A. B. Coleburn, of Middletown; Alcoholic Psychoses—Clinical Aspects and Differential Diagnosis, by C. E. Stanley, of Middletown; Rational Therapeutics, by Dr. J. C. Kendall, of Norfolk; Posterolateral Empyema, by Dr. P. D. Bunce, of Hartford; Empyema, by Dr. P. D. Bune, of Hartford; Acute Observation of Bowels, with Treatment, by Dr. J. B. Voucher, of Hartford; A Study of the Health Reports, by Dr. George Clary, of New Britain; A Valuable Nerve Tonic of Recent Origin, or the Glycerophosphates, Particularly the Glycerophosphate of Sodium, by Dr. P. W. Street, of Suffield; the Eyes of School Children, by Dr. H. S. Miles, of Bridgeport; Therapeutic indications in Gynecology, by T. A. Emmet, of New York; Typhoid Fever—Its History, Etiology, and Mode of Infection, by Dr. W. S. Randall, of Shelton; Its Diagnosis and Pathology, by Dr. G. R. Hertzberg, of Stamford; Its Treatment, Dietetic, Hygienic, and Therapeutic, by Dr. Frank Terry Brooks, of Greenwich; Classification of Gynecological Cases, as to Whether Medical or Surgical, by Dr. H. F. Brownlee, of Danbury; The Attitude of the Profession Toward Certain Evils, Notably Proprietary and Patent Medicines and Appliances, by Dr. Henry L. Swain, of New Haven; Tuberculosis of the Respiratory Organs—the early diagnosis, by Dr. O. T. Osborn, of New Haven; The Sanitation of the Tuberculous Patient, by Dr. F. W. Wright, of New Haven; The Home Treatment, by Dr. C. E. Munger, of Waterbury; Some Newer Aspects of Heredity in Tuberculosis and the Sanatorium Treatment, by Dr. C. R. Baldwin, of Saranac Lake; Congestion of the Prostate, by Dr. E. S. Moulton, of New Haven; Erythema Induratum Scrofulosorum, by Dr. E. D. Chipman, of Waterbury; Symphysiotomy, by Dr. M. Mariana, of New Haven; Uterine Displacements—the Causes and Results, by Dr. C. A. Tuthill, of New Haven; the Surgical Treatment, by Dr. H. G. Anderson, of Waterbury; the Non-surgical Treatment, by Dr. E. P. Pittman, of New Haven; Pott's Fracture, by Dr. L. C. Sanford, of New Haven; Report of an Epidemic of Dysentery, by Dr. L. N. Gompertz, of New Haven; Dr. Shelton's Presidential address was on the Relation of the Practitioner to Growing Children.

Hospital Buildings and Endowments.

The emergency hospital of Denver was taken up permanent quarters in the building leased for its occupancy, at the corner of Curtis and Fourteenth Streets. The hospital was to be ready to receive patients by the middle of May, and the formation of a medical staff was under way.—Residents of the Bronx are bestirring themselves to have the new hospital built in that borough without delay. Senator Hennessy succeeded in securing the passage of a bill through the Legislature at the last session, authorizing its construction, which has received the Governor's signature.—The various public organizations in the Bronx will endeavor to get the

\$500,000 bond issue authorized at once and work commenced without the delay of years.—The Trustees of the Arnold Home for the Aged and Hospital for Incurables at Detroit have accepted the offer of the Baldwin estate of the use of the old Governor Baldwin home at 110 Fort Street West.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 31, 1902:

DISEASES.	Week end'g May 24.		Week end'g May 31.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.	29	5	26	4
Scarlet fever.	411	37	323	26
Cerebro-spinal meningitis.	6	4	0	3
Measles.	564	12	545	12
Diphtheria and Croup.	337	45	294	36
Small-pox.	36	11	61	2
Tuberculosis.	276	134	212	118

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week Ending May 31, 1902.

Smallpox—United States.

California.	Los Angeles.	May 10-17.	5 cases.	
"	San Francisco.	May 11-18.	1 case.	
Colorado.	Denver.	May 10-17.	1 case.	
Illinois.	Chicago.	May 17-24.	14 cases.	
Kentucky.	Covington.	May 10-24.	22 cases.	
"	Lexington.	May 10-17.	2 cases.	
Louisiana.	Shreveport.	May 17-24.	1 case.	
Massachusetts.	Boston.	May 17-24.	28 cases.	6 deaths.
"	Fall River.	May 17-24.	1 case.	1 death.
"	Lowell.	May 17-24.	3 cases.	
"	Malden.	May 17-24.	2 cases.	
"	Melrose.	May 17-24.	2 cases.	1 death.
"	Somerville.	May 17-24.	1 case.	
Michigan.	Detroit.	May 17-24.	6 cases.	
Minnesota.	Minneapolis.	Apr. 18-May 17.	23 cases.	
"	Wmuna.	May 17-24.	4 cases.	
Missouri.	St. Joseph.	Apr. 1-30.	50 cases.	
N. H. on.	Nashua.	May 17-24.	2 cases.	
New Jersey.	Camden.	May 17-24.	2 cases.	
"	Newark.	May 17-24.	53 cases.	8 deaths.
New York.	New York.	May 17-24.	39 cases.	11 deaths.
"	Yonkers.	May 10-23.	1 case.	1 death.
Ohio.	Cincinnati.	May 10-23.	14 cases.	
"	Cleveland.	May 9-16.	8 cases.	4 deaths.
"	Dayton.	May 17-24.	2 cases.	
Pennsylvania.	Johnstown.	May 17-24.	4 cases.	
"	Philadelphia.	May 17-24.	30 cases.	3 deaths.
Tennessee.	Memphis.	May 17-24.	8 cases.	
Utah.	Salt Lake City.	May 1-11.	1 case.	
Washington.	Tacoma.	May 11-18.	1 case.	

Smallpox—Foreign.

Belgium.	Liège.	Apr. 26-May 3.	1 case.	1 death.
Canada.	Winnipeg.	May 10-17.	3 cases.	1 death.
France.	Paris.	Apr. 26-May 3.	4 deaths.	
"	Rheims.	Apr. 25-May 4.	2 cases.	1 death.
Great Britain.	Glasgow.	May 9-16.	1 case.	
"	Jarrow on Tyne.	May 3-10.	2 cases.	
"	London.	May 3-10.	248 cases.	44 deaths.
"	New Castle on Tyne.	May 3-10.	1 case.	
"	South Shields.	May 3-10.	6 cases.	
India.	Calcutta.	Apr. 18-25.	6 deaths.	
"	Madras.	Apr. 19-25.	1 death.	
Italy.	Palermo.	May 3-10.	9 cases.	2 deaths.
Japan.	Tamsui.	Jan. 1-31.	15 cases.	
"	Nagasaki.	Apr. 21-30.	1 case.	
Mexico.	Vera Cruz.	May 10-17.	6 cases.	5 deaths.
Russia.	Moscow.	Apr. 26-May 3.	8 cases.	1 death.
"	St. Petersburg.	Apr. 26-May 3.	7 cases.	1 death.
Straits Settlements.	Singapore.	Mar. 29-Apr. 5.	1 case.	
Turkey.	Smyrna.	Apr. 27-May 4.	2 cases.	

<i>Yellow Fever.</i>				
Albany, N. Y.	Albany, N. Y.	May 19-27	11 cases	9 deaths.
<i>Cholera.</i>				
India,	Calcutta,	Apr. 19-26	.....	146 deaths.
Straits Settlements, Singapore,	Mar. 29-Apr. 12	.....	.....	48 deaths.
<i>Plague (psular).</i>				
Hawaii,	Honolulu,	May 1-10	.....	5 deaths.
<i>Plague (foreign).</i>				
China,	Canton,	May 19-27	.....	Epidemic.
"	Yunnan,	May 19-27	.....	"
"	Tientsin,	May 19-27	.....	"
India,	Calcutta,	Apr. 19-26	.....	577 deaths.
Latin,	London,	Jan. 1-10	.....	141 deaths.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending May 31, 1902:

GOLTRA, JOHN N., Contract Surgeon, is granted leave of absence for one month.

COLLINS, CHRISTOPHER C., First Lieutenant and Assistant Surgeon, is relieved from duty at the United States General Hospital, Presidio of San Francisco, upon the arrival of THEODORE C. LYSTER, First Lieutenant and Assistant Surgeon, and he will then report for transportation to the Philippine Islands.

HARVEY, LUTHER S., Captain and Assistant Surgeon. The extension of leave granted him is further extended fifteen days on account of sickness.

JONES, GEORGE B., Contract Surgeon, will report to the commanding general, Department of California, for transportation to the Philippine Islands.

KENDALL, W. P., Major and Surgeon, is granted leave of absence for ten days.

MAZZURI, PAUL, Captain and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 31, 1902:

BENTON, F. L., Passed Assistant Surgeon. Detached from the *Columbia* and ordered to duty with a recruiting party leaving New York on May 31st.

DOUGLASS, S. W., Pharmacist. Detached from the Key West Naval Station, Florida, and ordered to the naval proving grounds, Indian Head, Maryland.

FIELD, J. H., Surgeon. Appointed surgeon from May 19, 1902.

ULSH, W. H., Assistant Surgeon. Granted leave of absence for three months on account of sickness.

WAGGENER, R., Pharmacist. Ordered to the Key West Naval Station.

Births, Marriages, and Deaths.

Married.

ADT—MOORE.—In New York, on Tuesday, June 3rd, Dr. Louis F. Adt, of Troy, and Miss Edith Moore.

ALLAIRE—WHITEHEAD.—In Denver, on Wednesday, May 14th, Captain William Herbert Allaire, United States Army, and Miss Florence Benton Whitehead, daughter of Dr. William R. Whitehead.

BROOKS—VAIL.—In New York, on Tuesday, May 27th, Mr. Henry Standford Brooks, Jr., and Miss Clara Warren Vail, daughter of Dr. Henry Hobart Vail.

CLEMONS—GUNTHER.—In New York, on Wednesday, June 4th, Dr. Carl Anson Clemons and Miss Constance Marie Gunther.

EDGLERTON—ARNOLD.—In Flushing, N. Y., on Wednesday, June 4th, Dr. Francis Cruger Edgerton and Miss Edith Hopkins Arnold.

GLAZEBROOK—SQUIRE.—In Elizabeth, N. J., on Tuesday, June 3rd, Dr. Francis Henry Glazebrook, of Morristown, N. J., and Miss Grace Eugenie Squire.

HAMMOND—SPRONG.—In Slingerlands, N. Y., on Wednesday, June 4th, Dr. Henry Powers Hammond and Miss Florence Lyons Sprong.

JONES—BURCH.—In Utica, N. Y., on Wednesday, June 4th, Dr. Arthur Thomas Jones, of Providence, Rhode Island, and Miss Louise Isabel Burch.

PRESTON—GARDNER.—In San Francisco, on Saturday, May 31st, Dr. Myers Albert Preston and Miss Alice Gardner.

TOOKER—FULTON.—In Chicago, on Wednesday, May 28th, Dr. Robert Newton Tooker, Jr., and Miss Gertrude Fulton.

VOISLAWSKY—VAN RENSSELAER.—In Belleville, N. J., on Wednesday, June 4th, Dr. Antoin Phineas Voislowsky and Miss Margaret Rutgers Van Rensselaer.

WILSON—STELLWAGEN.—In Philadelphia, on Monday, June 2d, Lieutenant Thomas Sheldon Wilson, United States Navy, and Miss Cathryn Cook Stellwagen, daughter of Dr. Thomas C. Stellwagen.

Died.

BATTLE.—In Columbus, Georgia, on Thursday, May 22d, Dr. G. B. Battle.

CORSON.—In Philadelphia, on Thursday, May 29th, Dr. Thomas F. Corson, in the sixty-second year of his age.

GLEASON.—In Philadelphia, on Friday, May 30th, Dr. Cloyes W. Gleason, in the eighty-first year of his age.

LESLIE.—In Denver, on Tuesday, May 27th, Dr. Merwin Leslie, formerly of New York, in the fifty-eighth year of his age.

MONTAGUE.—In Sacramento, California, on Thursday, May 22d, Dr. Alexander Montague, of Galt, California.

ROBINSON.—In Atlanta, on Monday, May 26th, Dr. Gilman Parker Robinson, in the forty-sixth year of his age.

SMITH.—In Minneapolis, Minnesota, on Sunday, May 18th, Dr. Cyrus Smith, in the seventy-first year of his age.

STONE.—In Washington, on Saturday, May 31st, Dr. T. R. Stone, in the forty-fifth year of his age.

OBITUARY NOTES.

COLONEL DALLAS BACHE.—Dr. Dallas Bache, retired colonel and surgeon of the United States Army, died recently at his home in San Diego. Colonel Bache entered the army as an assistant surgeon in 1861, and saw service throughout the entire course of the civil war. Among other posts, the colonel has been chief surgeon of the Department of La Platte, the headquarters of which are at Omaha. He has also occupied the post of assistant surgeon-general at Washington.

DR. W. H. H. WATKINS, of New Orleans, died in Milwaukee on May 23d at the age of fifty-two. He was born in New Orleans, spent his early life in Mississippi, served as a volunteer throughout the Civil War in the Confederate Army, and at the close of the war took up the study of medicine in New Orleans, graduating from Tulane University in 1868. He had been particularly prominent in all matters of sanitation, and took an active part in the sanitary work in the yellow fever epidemics of 1870 and 1878, having been the head of the Yellow Fever Board.

Pith of Current Literature.

Philadelphia Medical Journal, May 31, 1902.

Observations on Leprosy in the Holy Land. By Dr. Einsler.

Tumors of the Nose and Naso-Pharynx. A Clinical Lecture Delivered at St. Bartholomew's Hospital, February 10, 1902. By Anthony Bowlby, C. M. G., F. R. C. S.

A Case of Perforation in Typhoid Fever, with Operation. By Dr. George Erety Shoemaker.—The author gives a few points for the management of these cases. A patient can not be moved to a hospital for operation; if in a private house the operation must be done at the bedside. No time should be lost in operating. There must be no handling of distended bowel outside the abdomen. Inflamed visceral peritonæum splits and peels off with the greatest ease. A short incision of the bowel, made under constant irrigation, is by far the lesser of two evils, and may be quickly and safely repaired. An intestinal leakage has already occurred, so that the additional danger of soiling the peritonæum may be disregarded. The external incision should be located as for appendicular inflammation. The point of departure for search should be the ileocæcal junction, as the majority of perforations occur in this neighborhood. If possible, the lateral abdominal wall should be made one side of the area, packed, and drained. Infusion of salt solution is useful as a stimulant. The external wound should not be closed. Other things being equal, the patient most likely to recover will be the one to whom the least is done.

Attempted Self-Castration in an Insane Patient. By Dr. A. R. Moulton.

On Cystoscopy. Its Value and Dangers. By Dr. Frederic Bierhoff.—While the more intricate and delicate cystoscopic manipulations must remain in the hands of those of large experience, the author believes that the use of the simple examination cystoscope has not reached the general application that it deserves. When properly employed, it is of so little danger, and still is capable of being of such great aid to us in the diagnosis of obscure conditions affecting the genito-urinary tract, that its field of usefulness should, and undoubtedly will, be very greatly broadened in the near future.

Two Cases of Folie du Doute. By Dr. John H. W. Rhein.

The Boston Medical and Surgical Journal,
May 29, 1902.

An Abstract of Some of the Prevailing Opinions on the Periods of Incubation. Observation and Isolation of Some of the Infectious Diseases. By Dr. Elbridge G. Cutler.—The author believes that the period of observation in typhoid fever should, under some circumstances, extend over twenty-eight days, namely, where the water supply can not be changed. The period of isolation should extend through the period of convalescence; and proper disinfection of the stools and urine, and possibly of the sputum, should be practised for at least a month after the symptoms

have ended. The period of observation in scarlet fever should be ten days, provided there is absence of fever and sore throat and all the fomites are disinfected. The period of isolation should extend from the appearance of the eruption until desquamation has ceased and all complications are over, and thorough disinfection of house, patient, and belongings should be practised. Observation should continue for twenty-one days in whooping cough, and isolation should last till the cough has ceased. Measles: Observation, sixteen days; isolation, till desquamation and catarrhal symptoms have come to an end. Chicken-pox: Observation, twenty days; isolation, till convalescence is over and all scabs detached. Rötheln: Observation, twenty-three days; isolation, from two to three weeks. Small-pox: Observation, three weeks; isolation, until all primary crusts have fallen off and patient's hair and surface are thoroughly disinfected. Diphtheria: for a single exposure the period of observation should be twelve days. The period of isolation should last until two consecutive negative cultures from the nose and throat have been obtained.

Remarks on Intestinal Obstruction by Bands Following Operations on the Peritoneal Cavity, with Report of Cases. By Dr. F. B. Lund.—The author records a case which illustrates the fact that the most radical type of operation may be necessary in these cases, even where a comparatively short time, twenty-four to thirty hours, has elapsed since the first symptom. It also illustrates the fact that the most serious and numerous adhesions are formed in cases of pelvic disease where only one inflamed tube is removed.

Papilloma of Bladder, with Operation; Report of a Case. By Dr. G. H. Washburn.

Three Cases, Two of Papilloma of the Bladder, and One in which the Diagnosis of Papilloma was Made, but which Turned out to be Something Else. By Dr. F. B. Harrington.

Small Papilloma of Bladder Characterized by an Excessive Hæmorrhage; Removed by Suprapubic Cystotomy. By Dr. Maurice H. Richardson.

American Medicine, May 31, 1902.

Report of the Presence of *Anguillula Aceti* in the Urine of Two Patients, Mistaken for *Strongyloides Intestinalis*. By Dr. Frank Billings, and Dr. Joseph L. Miller.—The authors emphasize the facts that: (1) The *Anguillula aceti*, or vinegar eel, resembles very closely the *Anguillula stercoralis*. (2) The chief points of difference in the males of these two species is one of length, the *Anguillula aceti* being slightly longer. (3) The young forms differ in that the œsophageal enlargement does not appear so early in the *Anguillula aceti*. (4) The females of the free form of *Anguillula stercoralis* are less than half the length of the females of the *Anguillula aceti*. They possess, however, the same œsophageal enlargements. (5) The females of the parasitic generation correspond in length with the *Anguillula aceti*, but have not the œsophageal enlargements. (5) The nematode found in the urine in the author's case resembles in every particular the *Anguillula aceti*.

Pneumococcus Arthritis. By Dr. Rufus I. Cole.—The author points out that we have in pneumococcus arthritis: (1) A tendency to involvement of the larger joints. (2) A tendency to involvement of more than one joint. (3) A tendency to involvement of joints already the seat of a chronic affection. (4) An effusion usually purulent but occasionally serous. (5) A high mortality. (6) The dependence of the clinical features of the condition and of the prognosis more on the septicopyæmia than on the joint lesion itself. (7) When recovery occurs, a long course and, usually, ankylosis of the joint. (8) A need of local treatment consisting in free opening and drainage of the joint.

Some Modifications of the Author's Original V-Shaped Operation for Correction of Deflection of the Sæptum. By Dr. D. Braden Kyle.

Bubonic Plague. Remarks on Diagnosis, Dissemination of Bacillus Pestis, and Prophylaxis, with Report of a Case. By Dr. Joseph J. Curry.

Mensuration as an Aid to the Diagnosis of Pulmonary Tuberculosis. By Dr. Charles R. Upson.

A Case of Parovarian Cyst Complicated by the Presence of a Myomatous Uterus Filling the Pelvis: Operation; Extensive Adhesions; Accidental Incision of the Bladder; Phlebitis on the Twenty-first Day. By Dr. G. H. Brown.

The District of Columbia Cancer Record for Twenty Years. By Dr. Clarence A. Smith.—On the basis of comparing cancer deaths with those of thirty years and over, no increase of the disease is found in the last decade over the preceding. Classification of cases into accessible and inaccessible, reveals the fact that the increase is practically entirely in the latter, probably the result of improved diagnosis and certification of deaths. Aside from cases of the female generative organs, the sexes are equally liable to the disease. The white and colored races are alike subject to cancer, the latter showing a greater increase in case of the uterus and the liver. While cancer deaths during the last decade have increased over those of the previous decade by a larger percentage than those from any other disease, we are not justified in attributing this to an increase in the disease itself.

Medical News, May 31, 1902.

A Contribution to the Subject of Infant-Feeding. By Dr. S. Henry Dessau.—The author has found that, when all efforts to secure human milk for the infant fail, the simplest, cheapest, and best food for daily use is a fair average quality of cow's milk, diluted with water according to the age and digestive capacity of the child. The "top milk" is preferable. A pinch of table salt and a heaping teaspoonful of raw cane-sugar should be added to the quart. Placed in a double cooker with cold water in the outer compartment, the mixture should be allowed to remain for ten minutes after the water has begun to boil. In this way the casein is acted upon in such a manner that the character of the curd is modified by the milk-curdling ferment in the child's stomach.

The Bacterial Pathology, Symptomatology, Diagnosis, Treatment, and Quarantine of Ton-

sillar Inflammations. By Dr. William G. Bissell.—The author points out that there is but one means for positive diagnosis in follicular amygdalitis simplex, and that is by cultural methods, revealing the presence of *Staphylococcus pyogenes aureus* and *Staphylococcus pyogenes albus* almost to the exclusion of any other organism. Treatment consists of the internal administration of calomel, the induction of free perspiration, the use of glycerin with chloride of iron on the tonsils, or a spray of Dobell's solution. In follicular amygdalitis diphtheriticus, the finding of the Klebs-Löffler bacillus should be the keynote for activity, and at least a small dose of antitoxine should be administered, such as would represent the quantity necessary for immunization. When severe, the application of Löffler's solution, ten-per-cent. nitrate of silver, ten-per-cent. protargol, is of value. Cleansing sprays of Dobell's solution or of Seiler's tablets assist. The average length of time that the Klebs-Löffler bacillus remains in the secretions after recovery, has been found to be fourteen days. This fact influences the question of quarantine.

The Diagnostic Uses of the Gonococcus. By Dr. E. D. Bondurant.—The author demonstrates that the adequate bacteriological diagnosis of gonorrhœa consists in more than the simple microscopical examination of aniline-stained films. Although time-consuming and calling for some skill, the cultural examination for gonococci in important doubtful cases will amply repay the physician for all trouble expended, and the slide-spread staining method is not to be lightly regarded, since it frequently shows the nature of an acute urethral or other infection more quickly and accurately than any other diagnostic means at command.

Poisoning by Aconite (the Condon Case) and the Physiological Analyses of Alkaloids. By Dr. William Seagrove Magill.

Some Suggestions Relative to the Treatment of Tuberculosis. By Dr. F. M. Pottinger.—The author regrets that the value of the tuberculin test is not more generally recognized. This test meets the first indication in the treatment of tuberculosis, which is early diagnosis. Instead of making light of incipient tuberculosis and allowing the patient to fritter away his chance of recovery, we must institute curative treatment. As far as the climatic treatment goes, the author points out that care without climate is better than climate without care.

The Small-pox Problem. By Dr. Ernest Wende.

The Journal of the American Medical Association, May 31, 1902.

Need of Much More Accurate Knowledge Concerning Both the Immediate and Remote Effects of the Remedial Agents in General Use; and the Exercise of More Care to Avoid the Coincident Administration of Antagonistic Remedies in Acute Diseases. By Dr. N. S. Davis.

Transient Monocular Blindness. By Dr. William Campbell Posey.—In view of the uncertainty regarding the nature and outcome of these attacks, it is of the greatest importance to prevent a recurrence of them by combating any tendency towards

endarteritis, as it is probable that the spasm in the walls of the vessels is induced by such a process. While it is a recognized fact that iridectomy, by causing a dilatation of the blood vessels, reduces intra-ocular pressure, the author does not deem it proper to subject an eye which may remain permanently healthy to an operation which in a certain proportion of instances, no matter how skilfully performed, renders the eye useless for visual purposes. The author, however, insists upon a treatment and a regimen to combat arterial sclerosis. At the time of the attack, the value of amyl nitrite has been proved, and gentle but active massage of the eye should always be essayed.

Perforating Wounds of the Eyeball and Sympathetic Inflammation. By Dr. H. Gradle.—While iron or steel can, with rare exceptions, be extracted by means of a magnet, removal of non-magnetizable bodies is much more difficult and uncertain, and the author points out that if a foreign body is beyond reach, the chances of its quiet retention are so small, and the dangers of destructive inflammation or even sympathetic extension so great, that enucleation should always be done. For traumatic infection absolute rest of the body and of the eye should be enforced. The full effect of atropine upon the pupil should be maintained. Hot applications are often of service. Schirmer has claimed for mercury an almost specific influence upon traumatic iridocyclitis. He employs it in the form of mercurial inunctions, supplemented with intramuscular injections. Concerning sympathetic disease and preventive enucleation, the author points out that as soon as the intensity of the inflammation has led to closure of the pupil, or as soon as cyclitis has become evident by deposits on the rear of the cornea, by exudate within the pupil, or by diffuse opacity of the vitreous, the danger period has begun.

Action of Silver Nitrate and Chromic Acid on Chronic Glossitis, under the Influence of the Electric Current. By Dr. M. L. Ravitch.

Foreign Body within the Orbit. By Dr. Albert B. Hale.

Some Atypical Forms of Disease. By Dr. James L. Taylor.

A Case in which a Large Bone Cavity was Healed by Means of Thiersch Grafts. By Dr. John Prentiss Lord.

The Value of State Control and Vaccination in the Management of Small-pox. By Dr. J. N. McCormack.—Systematically enforced vaccination and prompt isolation of those affected will stamp out small-pox, and the author asserts that, in this day, small-pox is a serious reflection upon the intelligence of any individual or community having it.

Lung Development in the Child. By Dr. J. Allen Gilbert.

Rotary Lateral Curvature and Pott's Disease of the Spine. Differential Diagnosis and Rational Treatment. By Dr. Daniel W. Marston.—The author lays stress upon the following points in rotary lateral curvature: 1. Mechanical support and proper gymnastic exercises are to be combined. 2. The exercises are to be taken while the patient

wears the support. 3. The apparatus is removed while the patient sleeps. 4. Where the deviation is more than half the diameter of the vertebræ an unyielding support is imperative. 5. After absorption of bone has taken place the primary curve can not be eradicated. In tuberculosis of the spine: 1. Fixation and extension are to be employed. 2. The existence of sinuses and abscesses does not contraindicate the immediate application of proper immobilizing apparatus. 3. Forcible correction of deformity is advised only in selected cases. Finally, the success or failure in the treatment of any of these diseases is dependent largely upon the intelligence and willingness on the part of the patient, the care and help of the parents or friends, and prolonged watchfulness at regular intervals on the part of the surgeon.

Surgical Conservatism of the Ovaries and Fallopian Tubes. By Dr. Edwin Ricketts.

Solitary Abscess of the Left Lobe of the Liver Simulating Abscess in the Abdominal Wall. By Dr. Carl C. Warden.

Amputation of the Penis, Followed by Multiple Pregnancy in the Wife. By Dr. R. Harvey Reed.

Vicarious Menstruation from the Retina. By Dr. J. J. Huizinga.

Medical Record May 31, 1902.

The Treatment of Cholelithiasis. By Dr. Howard Lilienthal.—Other things being equal, the author considers cholecystectomy the most radical treatment for the cure of cholelithiasis. The post-operative course of a case of cholecystectomy is, as a rule, far less annoying to the patient, and much simpler for the physician, than the postoperative course of cholecystotomy with drainage. The trouble from adhesions is also much less after the clean removal of the gall-bladder than after cholecystotomy with fixation of the gall-bladder to the abdominal parietes. This latter condition, in the author's experience, has not infrequently been a source of considerable pain and distress from the dragging upon the liver.

Scroparæsthesia (the Paræsthetic Neurosis); the Analysis of One Hundred Cases. By Dr. Joseph Collins.

The Treatment of Chronic Non-Alcoholic Gastritis. By Dr. George Roe Lockwood.—In uncomplicated chronic gastritis not of alcoholic origin, if the muscular power of the stomach is good, the only symptom apt to be referred to the stomach is acidity. The hyperacidity cases may take a course resembling that of a neurosis, in that the symptoms are intermittent and easily influenced by nervous conditions. In gastritis, contrary to the accepted teachings, the following negative facts are to be noted: (a) The appetite is good. The few exceptions are observed in advanced atony, where the quantity of food is not well borne, and in cases of neurasthenia. (b) Pain occurs in two ways: (1) From acidity, differing in no way from similar pain in cases of nervous hyperacidity; (2) from gas. (c) Nausea does not occur in relation to meals. (d) Vomiting does not occur in the non-alcoholic

cases. (e) Unless there is diarrhoea the nutrition is good, and, as a rule, the patients are not anæmic. If the muscular power is poor, gas is present as a prominent symptom. Gastritis may give rise to severe and long-continued diarrhoea and emaciation, which may be mistaken for colitis or malignant disease of the colon. Biliousness and its allied symptom-complexes are rarely, if ever, due to a primary functional disturbance of the liver, but are almost regularly due to an intestinal toxæmia, traceable to some derangement of gastric chemistry, whereby improperly prepared chyme enters the intestine. Anæmia and constipation are the chief and only symptoms in a great many cases of even well-marked gastritis, and their continuance without apparent cause should justify an analysis of the gastric contents.

Post-Operative Obstruction in a Case of Sarcoma of the Uterus and Mesenteric Cyst, Due to Incarceration of the Small Intestine in a Hole in the Mesentery. By Dr. Charles S. Hamilton.

Report of a Case of Tubal Pregnancy Diagnosed One Week Previous to Rupture, Verified by Operation Following Rupture—Recovery—Presentation of Rare Specimen. By Dr. Edward N. Liell.

British Medical Journal, May 24, 1902.

Remarks on Myasthenia and Ophthalmoplegia. By Sir W. R. Gowers.—The author reports three cases of myasthenia gravis, in each of which there was considerable loss of power in the eye muscles and also in certain of the facial muscles. Loss of power in the eyeball muscles has been mentioned as among the symptoms of many cases of myasthenia, but it has not as yet been carefully described. In these three cases it was a conspicuous and enduring symptom and at first sight resembled the ophthalmoplegia from nuclear degeneration. The muscles moving the eyes downward are less involved, however, while those moving the eyeballs upward are implicated in various degree. The lateral muscles are constantly, yet irregularly, affected. The loss of power in the facial muscles (zygomatic and risorius) causes the patients to smile in a peculiar manner, which the author designates as the *nasal* or *levator smile*. Its feature is the absence of the normal movement at the corner of the mouth, which either carries the furrow from the nose around the corner of the mouth or produces a separate depression there. In these patients the furrow of the smile was entirely above the upper lip, ceasing outwards above the angle of the mouth.

Traumatic Epilepsy with Adhesion of Skin and Brain; Treated by Insertion of Gold Foil. By R. Parker, M. B.—The author reports the case of a man, aged thirty-eight years, who, in 1884, sustained a compound depressed fracture of the left fronto-parietal region of the skull. He was treated by trephining with removal of the fractured pieces and trephined disc. In 1887 he began to have epileptic fits, and in 1895 he was first seen by the author. The scar being translucent and cystic, it was excised and the integuments loosened from the bone and sewed to-

gether over the aperture. He remained well until 1901, when he began to have fits again. A second operation was performed at which the old scar was found directly adherent to the brain. It was dissected off and the adherent dura mater was stripped off the edges of the bony aperture, thus leaving a central portion of brain and dura mater uncovered. Pieces of stiffish gold foil were laid between the dura mater and the skull, completely covering the exposed area, and the skin flap was closed down by continuous mattress suture. The patient had a fit early the next morning after operation, but has had none since and is apparently well in every way, mentally and physically.

A Case of Complete and Temporary Paralysis of the Limbs in a Child, Probably a Case of Recovery from the Initial Stage of Acute Anterior Poliomyelitis. By Dr. J. S. Bury.—The author reports the case of a girl, aged nine years, who on January 16, 1902, had beginning paralysis of the legs, after being indisposed for three days. By January 20th the paralysis had extended to the trunk and arms, the head alone remaining unaffected. But the next day slight power of movement in the arms had returned, the child improved rapidly, and on February 9, 1902, was quite well. As to the site of the lesion, the flaccid paralysis and the loss of the deep reflexes pointed to an affection of the lower neurones of the limbs and trunk. Obviously there was a profound, if only a transitory, disturbance of the functions of the parts attacked. The action of some poison seems to be the simplest explanation, as such great rapidity in the disappearance of symptoms is very rare, both in neuritis and in anterior poliomyelitis. It is not unlikely that infantile paralysis may be set up by the action of a toxine which is produced by micro-organisms, and which circulates in the blood.

Case of Sporadic Cretinism, in Which a Relapse Occurred Owing to Omission of Thyroid Extract. By A. Hall, M. B.—The author reports the case of a boy, aged fifteen months when first seen, who suffered from typical sporadic cretinism. He was at once put upon thyroid extract and improved rapidly and markedly. About two years later the parents discontinued the use of the thyroid extract, and the child at once relapsed into its previous condition. Administration of thyroid extract again brought about marked improvement, followed in turn by relapse when it was discontinued.

The case very well illustrates the fact that if we are to succeed in this condition it is necessary that the patients should be closely watched for a very long period. Even where the relatives of the patient are intelligent people, there is the danger of valuable time being lost, and the child getting back into its former condition, without the parents who see it day by day noticing the change.

Besides myxœdema in adults and infants there are other conditions in which the administration of thyroid extract is beneficial: these are psoriasis, ichthyosis, obesity, and goitre.

Myxœdema in Mother and Child. By S. W.

MacIlwaine, M. R. C. S.—The author reports an instance of the occurrence of myxœdema in mother and daughter, and holds that it may show an inherited susceptibility of the thyroid to toxic influences. Myxœdema must be considered as an incidental symptom-group, not as a primary disease. The myxœdematous state is secondary to some pre-existing toxic condition. The author has reported two cases of myxœdema in adults, in one of which the myxœdematous state was subsequent to, and in consequence of, a severe influenza; in the other the myxœdema followed a severe anæmia due to post-partum hæmorrhage.

The Diazo-Reaction as a Method of Diagnosis in Clinical Medicine. By Dr. H. W. Syers.—The author has examined the urine in 125 cases of all kinds and descriptions for the diazo-reaction. Of these, only five gave a positive reaction; they were acute amygdalitis (1), lobular pneumonia (1), typhoid fever (2), and acute tuberculosis (1). This last patient was thought at first to have typhoid fever. In three other cases of typhoid fever no reaction was obtained, the cases being all in a more or less advanced stage of convalescence; so that the author concludes that the diazo-reaction is of little or no use in typhoid fever. It does not occur early in the disease, and is most obvious in well-marked and anxious cases, i. e., where the diagnosis is not in doubt.

In ordinary cases of phthisis the urine does not give the diazo-reaction, and when it does occur there is no reason to suppose that the case offers any special feature of gravity.

Three Cases of Cerebro-Spinal Fever Treated with Antipyrine. By E. C. Freeman, R. A. M. C.

Lancet, May 24, 1902.

Thirty Years War Against Lunacy. By Dr. T. C. Shaw.

Acute Pleurisy with Adhesion. By Dr. G. R. Murray.—Formerly, attacks of acute pleurisy with adhesion were attributed solely to the action of cold. It is now held that cold, in a great majority of the cases, can only be considered a predisposing factor. Yet there have been undoubted instances of pleurisy due to cold alone. The great majority of the cases are either tuberculous or rheumatic in origin, or are due to the pneumococcus. The most important of these is certainly acute tuberculous pleurisy. Microscopical examination of the fluid for the bacilli is of little use, the most trustworthy method being the inoculation of a guinea-pig with the fluid obtained by aspiration. If the animal develops tuberculosis it is clear that the patient suffers from pleural tuberculosis. It is necessary to take a large quantity of a serous effusion for inoculation experiments or the results are not reliable. The author holds that fully one-half of all cases of pleurisy with effusion are due to infection of the pleura by the tubercle bacillus. Infection of the pleura with the pneumococcus usually results in a purulent effusion, as in lobar pneumonia with empyema; but, in some cases, a serious effusion

may accompany or follow a croupous pneumonia. Other bacteria which have been found in serous pleural effusions are the typhoid bacillus, the *Streptococcus pyogenes*, and the *Staphylococcus pyogenes*, though when the two latter organisms are present the effusion is usually, but not always, purulent. The course of an empyema varies according to the micro-organism present, pneumococcal empyema running the most favorable course. Staphylococcal empyema begins more insidiously and runs a less acute course, while streptococcal empyema develops rapidly, runs an acute course, and is accompanied by severe toxic symptoms. The characteristic symptoms of an attack of pleurisy with effusion are the acute onset, with repeated chills rather than a rigor, and the sharp stabbing pain in the side. The relief of the pain when the serous exudate takes place and separates the two layers of the pleura is also a common feature. The author does not advocate the indiscriminate use of an exploring syringe in all, but there is no doubt that in a large number of cases valuable information is obtained by its use, and, on the whole, it is used less frequently than it ought to be. The eighth or ninth intercostal space in the line of the angle of the scapula is the best place for puncture. The needle should be just pushed through the parietal pleura at first and the handle of the syringe withdrawn one third its length. If no fluid appears, push the needle in another third, withdraw the handle another third, and if no fluid appears, push it in as far as it will go and withdraw the handle to its full limit. In many cases of pleurisy with effusion the question arises as to whether the fluid should be removed or not. In all cases of large pleural effusion at any stage in which there is dullness all over one side of the back of the chest, and dullness up to the clavicle in front, aspiration should be carried out at once. In these large effusions delay is dangerous, as sudden death sometimes occurs. Aspiration is of little use, as a rule, in empyema except to give temporary relief. After aspiration the patient should remain in bed for at least two or three days, and a prolonged convalescence is advisable. Exercises with Indian clubs and dumb-bells are useful, and the patient should be sent to as great an altitude as possible.

A Contribution to the Study of Tropical Abscess of the Liver. By R. J. Godlee, F. R. C. S.—This article is based upon a series of ten cases of tropical abscess of the liver, some complicated with secondary abscesses of the lung, brain, etc. Among the author's deductions are the following: When there is marked pleural friction, exploration of the liver should be made without delay. In cases of secondary abscess of the lung, the persistent discharge of chocolate-colored pus does not prove that the liver abscess is not healed. Pulmonary abscess consequent on hepatic abscess should be opened without delay, and a careful search made for outlying suppurating tracks; these should be drained by the insertion of full-sized tubes, and laid freely open, even if this should necessitate extensive removal of ribs. The best place to make the incision is in the lower axilla.

Is Chloroform More Dangerous than Ether? Consideration of Respiratory Troubles Following Operation During Twelve Months at a Large General Hospital. By H. C. Crouch, M. R. C. S., and E. M. Cerner, M. B.

The Feeble-Minded and Crime. By M. Dendy.

Improvements in the Operation for the Radical Cure of Inguinal Hernia by the Use of Some New Instruments and Gold-wire Sutures. By Professor I. Tausini.

A Case of Perforation of the Rectum Into the Peritoneal Cavity; Laparotomy; Suture; Recovery. By G. R. Turner, F. R. C. S.

A Short Note on the Use of Linen Sewing-Machine Thread for Ligatures and Sutures. By A. E. J. Barker, F. R. C. S.—The author recommends the use of ordinary linen sewing-machine thread for ligatures and sutures, for which purposes it has the following advantages: It can be procured almost anywhere, and it is relatively very cheap. It can be easily sterilized by boiling in plain water, and then stored in methylated spirit. It is enormously strong and ties a most uncompromising knot. It is easy to work with and runs through the eye of any suitable needle easily. It is not absorbed at all; it comes out at the end of ten days just as it went in.

Meningo-Encephalocele. By E. Du Cane, M. B.

Presse médicale, April 2, 1902.

Passage of Agglutinins from Mother to Fœtus in Typhoid Fever.—M. Rouslacroix says there is no constant factor in the premature expulsion of the fœtus by a mother ill with typhoid fever. The child may be prematurely born and be stamped with all the toxic manifestations of the disease. At the beginning of the mother's illness, the placenta arrests the toxins and antitoxines of maternal origin, but some of them pass through, as is evidenced by the presence of agglutinins in the fœtus. There seems to be some evidence that the agglutinins can collect in the liver of the fœtus, offering a second barrier to the dissemination of the disease.

Prophylaxis of Venereal Diseases.—M. G. Fischer concludes that popularization of the knowledge of the symptoms, the accidents and dangers of syphilis and gonorrhœa, should be encouraged as widely as possible. He favors the reporting and segregation of infected individuals of either sex who may act as carriers of further contagion. He recommends absolutely free treatment for the poor with severe penalties applicable to those who fail to take proper and serious care of themselves.

When to Administer Quinine.—M. Alfred Martinet sums up the conditions in which quinine should be given. In malaria, fifteen grains are given from six to eight hours anticipatory of a chill, to avoid the attack or abort it, if possible. In pernicious malaria, it is best given subcutaneously. In paludal cachexia, quinine combined with arsenic, iron, and hydrotherapy, will effect a cure. Some authors administer it in typhoid fever, and in the various forms of sepsis. It seems to act well in some forms of hæmorrhage, as epistaxis and dental

hæmorrhages. It is sometimes useful in hæmoptysis and in metorrhagia. As an oxytocic, without producing abortion, its action is well known. Good results have been noted from its use in exophthalmic goitre and in aortic affections with a capillary pulse. In the vasomotor disturbances accompanying herpes, quinine is almost a specific. In the treatment of malignant growths and their recurrences, the drug has some repute, possibly acting upon the protozoa alleged to be the active ætiologic agents.

Progrès médical, April 5, 1902.

Treatment of Glycosuria, Albuminuria and Hæmorrhages by Gelatin.—M. Marc Laffont and M. André Lombard conclude that whenever some nutritional vice modifies the cryoscopic and other properties of the blood there may be a glycosuria, an albuminuria, or a hæmorrhage. Whether this syndrome is accompanied or not by an anatomical lesion, in the great majority of instances the lesion is curable if one attacks the cause. Gelatin seems to be the only agent capable of rendering the plasticity of the blood normal, when administered in the dose of 225 grains daily. It is a harmless drug and no contraindication to its use exists, and its administration should be prolonged.

The Question of Parasyphilis.—By M. Leredde.

Berliner klinische Wochenschrift, March 21, 1902.

Streptococcus Toxines.—Dr. Marmorek says that all streptococci, of all varieties and origin, produce the same toxine which belongs to that group of diseases which is destroyed by a temperature of 70° C. The serum derived from virulent streptococcal toxines, can be employed curatively in infections due to other streptococci.

Osteo-arthropathy Hypertrophica (Marie).—By Dr. A. Schittenhelm.

Syphilis Bacilli.—Dr. Max Joseph and Dr. Piorkowski record some experiments. A young man with a florid syphilis gave the authors fresh semen, which was permitted to come into contact with the maternal side of a carefully preserved and supposedly sterile placenta. In a few days, plump bacilli could be demonstrated, about the shape of diphtheria bacilli, and of the size of the *Bacillus subtilis*. They stained well with carbol-fuchsin and gentian violet. (*To be continued.*)

Mechanical Collateral Work of the Respiration and Circulation.—By Dr. Buttersack.

Serum Diagnosis of Pulmonary Phthisis. (Conclusion.)—Dr. Francesco de Grazia concludes that cultures of tubercle bacilli can be agglutinated, not only by the serum of tuberculous subjects, but also by that of perfectly healthy individuals or of those who are suffering from some other infection. The serum of tuberculous persons is also capable of agglutinating energetically cultures of *Staphylococcus pyogenes aureus*, typhoid, diphtheria and cholera bacilli, and *Bacterium coli*. There is, therefore, no specific tuberculous agglutinating action. The agglutination does not correspond in any way with the stage or the severity of the disease. An emulsion of dead bacilli acts precisely as the living bacteria of the same family, but the reaction is somewhat slower.

Idiopathic Dilatation of the Œsophagus.—By Professor T. Rosenheim (*continued article*).

April 7, 1902.

Multiplicity of Complements of the Serum.—By Dr. P. Ehrlich and Dr. H. Sachs. (*To be concluded.*)

Identity of Streptococci Pathogenic to Man.—Dr. A. Marmorek has examined forty-two cultures of streptococci derived from various sources, and concludes that no scientific proof has yet been adduced to show a difference between the streptococci found in man. The cultures were identical in producing hæmolysis in rabbit's blood, and in their ability to grow in their own culture filtrates. Three biochemical tests with antitoxic serum, with the same result on all the streptococci, also speak for their identity.

Mechanical Disposition to Tuberculosis.—By Dr. E. Holländer.

Menière's Disease.—Dr. G. Gescheit reports the case of a man, forty-eight years of age, who suffered from Menière's disease without any previous aural trouble. It was characterized by difficulty in hearing, permanent tinnitus, dizziness, more or less severe nausea, and occasional unconsciousness. While quinine was useless, galvanic treatment seemed to be beneficial from the beginning. The patient improved and finally recovered. The author assumes a stasis originating in the labyrinth.

Syphilitic Stenosis of the Small Intestine.—By Dr. F. Rosenfeld.

Pure Cylindruria in Experimental Biliary Stasis.—Dr. P. S. Walberstein has produced stasis of the bile by ligating the ductus choledochus in dogs. Constantly increasing quantities of bile were found in the urine, and, from the third day on, granular and epithelial casts, renal epithelium and leucocytes. On the fourth day, perfectly formed hyaline casts were seen.

Treatment of Chronic Gonorrhœa.—Dr. E. Saalfeld has devised an instrument which serves simultaneously to dilate a stricture and to instil fluids into the urethra.

April 14, 1902.

Diagnosis of Renal Function.—Dr. G. von Illyes and Dr. G. Kovesi have experimented upon the functional activity of a single kidney by determining the secretion of water by the kidney in patients to whom large quantities of fluids were given, together with ureteral catheterization. They conclude that the ureteral catheter must be allowed to remain in its position for some time. A diminution in renal function is evidenced by a delay, under the above conditions, of a dilution of the urine in a given length of time, by a relative constancy of molecular concentration, which is not influenced by the ingestion of a considerable amount of fluids, and by a slight change in the freezing-point of the urine.

Treatment of Weaklings.—By Dr. J. Ritter.

Is Gonorrhœa in the Prostitute Curable?—Dr. T. von Marschalko believes in personal cleanli-

ness as a prophylactic, and recommends the instillation of a twenty-per-cent. solution of protargol in glycerin immediately *post coitum*. He regards the supervision of prostitutes as entirely useless, but says gonorrhœa in women can be cured in from six to ten weeks. Protargol and argentamine, in from five- to ten-per-cent. solutions are used by him.

Temperature Crisis in Tabes Dorsalis.—By Dr. B. Oppler.

Multiplicity of Complements of the Serum.—By Dr. P. Ehrlich and Dr. H. Sachs (*Concluded.*)

Riforma medica. April 12, 1902.

On Artificial Rectal Feeding in Certain Cases of Typhoid Fever. By Dr. A. Claps.—A man who was in the third week of typhoid fever, and convalescing, was already able to take solid food, when he suffered a relapse. Gastric intolerance was a very prominent feature in this case, and the patient was unable to bear even the smallest quantities of liquid nourishment. In addition, there developed severe cerebral symptoms, which became worse at all attempts to feed by mouth. Rectal feeding was therefore resorted to, three nutritive enemata being given daily containing, besides broth, eggs, etc., Marsala with pepsin. These injections, given after an evacuating enema, were always well borne and quickly absorbed. Rectal feeding was thus kept up for from ten to twelve days, until the stomach had become more tolerant and all the symptoms had improved. Then, small quantities of Marsala were given by mouth, but the rectal alimentation was continued for twenty-five days longer, until the patient was fully convalescent. In another case of analogous nature, a boy, aged five years, suffering from typhoid fever, was fed by the rectum for a similar interval with success. These cases are presented because there are many physicians who are sceptical as to the possibility of supporting nutrition by the rectum for prolonged intervals of time. Queirolo showed that a person could be supported in this manner for forty, or even sixty, days.

Roussky Fratch. April 13, 1902.

On the Treatment of Locomotor Ataxia. By Dr. L. O. Darkschevitch. (*Continued*).—In treating cases of locomotor ataxia, the antisiphilitic treatment should be begun as early as possible, at the onset of the first symptoms of the disease. The earlier this treatment is begun, the more chances of improvement will there be. It is impossible to expect good results when the disease is so far advanced that the typical picture of locomotor ataxia in all its features is developed. Mercury is the chief remedy, for iodine plays but a subordinate rôle in the treatment of locomotor ataxia. The best method of administration, according to the author, is by injections of the mercuric salicylate in the form of a one-per-cent. neutral solution. One can begin with doses of from 0.8 to 1.0 (12 to 15 drops) of the solution, and increase the dose gradually to from 1.5 to 2.0 c.c. (from 22 to 30 drops). A course of treatment consists of from fifty to sixty injections. A certain amount of mercury must be introduced into the system before any effects on the morbid process take place, and therefore it is better to continue the administration

of the drug, unless complications arise, until the end of the "course." It is not advisable to interrupt the administration just when the drug begins to produce its effect. The course is repeated within six months, and again at the end of a year. Then four full courses of injections or inunctions should be given with intervals of six months between each. As soon as tabetic symptoms recur after that, the patient must again be placed under mercurial treatment. The internal administration of mercury is not advisable in tabes. Iodides should be given only as adjuncts to mercury, not alone, and the largest possible doses should be given. In cases in which there are signs of optic-nerve atrophy in the fundus of the eye, the patient should be examined with the ophthalmoscope every week, so as to see whether the mercury does not increase the atrophy, as it sometimes does, and, if so, the mercurial treatment should be discontinued. If there is no progress in the atrophy within the first three weeks of the mercurial treatment, the patient is not in danger of having his optic nerve injured by mercury, and the administration may be safely continued. In the third stage of the disease, also, where atrophic changes in the nervous system have far advanced, the use of mercury is contraindicated, as it directly harms the patient and produces no improvement. Fraenkel's systematic exercises are also to be employed in the treatment of locomotor ataxia.

On Penetrating Incised and Punctured Wounds of the Abdominal Cavity. By Dr. B. K. Finkelstein.—(*Continued.*) *Wounds of the Liver.* Of the thirteen cases of wounds of the liver reported, the right lobe was wounded in ten instances, the left in three. In one case, the wound passed through the left lobe and included the inferior vena cava—an occurrence which is considered very rare indeed, on account of the protected situation of this vein. In another case the common bile duct was wounded. As regards symptoms, the author notes that these may be anything but characteristic. There is not always internal hæmorrhage, especially not if the wound is superficial. Only in one case of the thirteen was shock a prominent feature. The radiation of pain into the right shoulder has some differential value. As a rule the pain is only moderate, in one case it was violent and extended over the whole abdomen. Vomiting occurred in four cases, and is to be regarded as a symptom of peritoneal wounds, not of hepatic wounds as such. Jaundice does not as a rule occur until the second or fourth day. If jaundice is immediate and there is bile in the secretion, the probability of a wound of the biliary ducts is great. No hiccup was noted in the author's cases. The diagnosis of wounds of the liver is, therefore, sometimes extremely difficult. The most important complication is peritonitis, which may be local or general, and sometimes begins in an abscess in the liver itself. Of the thirteen cases, eight patients recovered, in which there were no wounds complicating the hepatic wound. The remaining five patients died. The cause of death in all cases was peritonitis, and even in the case in which there was a wound of the inferior cava, hæmorrhage was not the cause of death.

In the treatment of liver wounds, the author found sutures to be the most useful measure, as compared to tampons, the Paquelin cautery, etc. If

bile flows from the wound, however, tampons must be used to drain it. The tampons should be gradually removed from the second to the fourth day.

Affections of the Skin Caused by Certain Varieties of Primula. By Dr. A. I. Liantz.—This article treats of dermatitis caused by *Primula obconica* (Hance). This plant is indigenous in China, and was first described by Hance, in 1880. Its injurious effects upon the skin were first noted and described by J. C. White, in 1889. Since then a number of cases have been recorded. The author reports four cases in which the dermatosis produced by contact with this plant bore the character of an acute eczema. On the other hand, cases have been reported in which the lesions resembled those of erysipelas, and others in which they were those of dermatitis bullosa. The sites of the lesions are characteristic, as they usually occur first upon the hands, the forearms, the cheeks, and the ears, and sometimes the neck and the genitals. Contact with the plant is necessary for the development of the lesion, and then it may be transferred to other places with the hands. Thus, one case has been reported where a woman had been wearing a louquet of *Primula* at the bodice of her ball dress, and developed an eczema on the chest. The local symptoms are burning and itching, and there are usually malaise, a feeling of chilliness, and insomnia, but there is no rise in temperature, except in rare instances. As a rule, the skin is affected a few hours after contact, and it requires a certain susceptibility to be affected, for attempts to produce the eczematous lesions by contact were often unsuccessful. The treatment should consist, in the first place, of a very thorough removal of the last traces of the plant poison from the skin. The hands may be bathed in hot solutions of boric acid or of aluminum acetate, and then bland salves of bismuth, zinc, etc., should be applied.

Concerning a so-called Oxygenated Water. by Dr. S. K. Dzerjgowsky.—Nencki, who introduced into medical practice a number of substances that act to a certain extent as intestinal antiseptics, had some time ago conceived the idea that the introduction of oxygen, or of substances carrying and liberating oxygen, into the intestine, would prevent the development therein of anaerobic germs. With this end in view he advised the internal administration of benzoyl peroxide and calcium peroxide. Of late there has appeared on the market a certain oxygenated water, and the author investigated its composition and effects, in order to satisfy himself whether it was not possible by means of this water to secure the end desired by Nencki. He found to his disappointment that this water contained a variable amount of oxygen, namely from 1 to 6.5 c.c. to the litre, and that the water from the Neva river, for instance, contained nine times as much oxygen in solution as this water advertised as "oxygen-water." The author advocates the use of water saturated with oxygen, which may be sold in siphons, as the alkaline waters saturated with carbon dioxide are at present. The pressure of the oxygen will cause the water to flow out of the siphon on pressing the valve. Such water should prove useful, as it would compensate for the fact that we take in so little oxygen in our food, which is for the most part boiled or roasted.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Eleventh Annual Meeting, held in Chicago on December 18 and 19, 1901.

The President, Dr. A. F. JONAS, of Omaha, in the Chair.

(Concluded from page 509.)

The Indications and Limitations for the Bottini Operation.—Dr. LOUIS E. SCHMIDT, of Chicago, read a paper with this title. After discussing at length the indications and limitations of this operation, he concluded that good results of the Bottini operation would depend on the correct selection of cases, on the proper technics of the operation and proper after-care, and on the immediate correction of errors or mishaps.

How Shall We Treat Sepsis following Labor and Abortion?—Dr. W. O. HENRY, of Omaha, in a paper on this subject, took the ground, first, that it was important to remember that sometimes malarial and other fevers followed closely upon abortion and labor, and all such cases should be carefully distinguished from true puerperal sepsis; but, when it had once been fully determined that infection had really occurred along the genital tract, only one line of treatment was justifiable in the present state of our knowledge. Although he admitted the different varieties of infection, yet since it was both unsafe and impracticable at the present time to wait for a bacteriological examination, and since, further, the treatment he recommended was safe, practical, curative, and within the reach of every physician, he insisted upon its universal adoption. After giving somewhat elaborately the reasons for his belief, he summarized as follows: 1. Remove early with the finger, sharp curette, and flushing, all débris, decidua, blood clots, and sloughing tissue which may be infected, from the uterus and from all raw surfaces in the cervix, vagina, and vulva. 2. Dry all of these raw surfaces and freely apply to them 95-per-cent. carbolic acid, washing away the surplus acid with sterile water. 3. Unless hæmorrhage requires it, leave no tubes or packing of any kind in either the vagina or uterus. 4. Have a simply carbolyzed two-per-cent. vaginal douche used twice a day thereafter. 5. Open the bowels freely with calomel, half a grain every hour for four hours, then follow with Rochelle salts until sufficient action has occurred. 6. Give quinine, three grains every four hours, followed by tincture of chloride of iron, fifteen drops, in water. 7. Give good nourishment with milk, eggs, and stimulants every four hours. 8. Let this be the routine early treatment, and hysterectomy will be rarely required. 9. When fixation of the uterus occurs, and infiltration takes place in Douglas's cul-de-sac or the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina. 10. If multiple abscesses occur in the uterine wall, or the walls become badly infected, or, if necessary to get perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vagi-

nal route. The abdominal route is dangerous in all acute cases, and is seldom if ever justifiable.

A New Method of Anchoring the Kidney.—Dr. BYRON B. DAVIS, of Omaha, described a method which, he said, could best be explained by giving a report of the only operation yet done by it. An unmarried woman, aged twenty-one years, had frequent gastric crises and a good deal of constant lumbar pain, on right side especially. She had lost twenty-five pounds in weight during the year before she applied to him, and was very anxious for relief. On examination, the right kidney was found freely movable, falling so low that the upper pole could be felt on bimanual examination. The left kidney was also somewhat movable. The patient entered the hospital on November 9, 1901, for an operation on the right side, which was done on November 11th. The incision extended from the lower rib to near the crest of the ilium, a hand's breadth to the right of the spinous processes of the vertebræ. The fatty capsule was reached just anterior to the outer border of the quadratus lumborum, and was opened and a large part of it trimmed away. The kidney was pushed into place by a cylindrical pad placed under the abdomen. When the kidney was well exposed, an incision was made through the proper capsule from a point below the upper pole to a point two centimetres above the lower pole. This incision was made vertically on the posterior surface near the convex border. The capsule was stripped loose from the kidney substance for a distance of three fourths of an inch anteriorly and posteriorly to the incision of the capsule. From the upper and lower extremities of the vertical incision a perpendicular incision three fourths of an inch long was made through the capsule, this giving two flaps of capsule three fourths of an inch wide by about two inches and a half long. Next a strip of the thickness of one's little finger of the other border of the quadratus lumborum muscle was split off from the remainder of the muscle, the fibres being separated by the handle of the scalpel. This separation extended from the muscular attachment to the twelfth rib downward for two inches and a half, or the slit in the muscle was made as long as the length of the capsular flaps before described. Next, an artery forceps was passed through the slit in the muscle, made to grasp the free border of the posterior flap of the kidney capsule, and then withdrawn, bringing the flap of the kidney capsule through the slit in the muscle. The two capsular flaps were next brought together over the bundle of muscular fibres, thus isolated from the border of the quadratus lumborum, and stitched together with a running suture of fine chromic catgut, the needle being allowed to penetrate the muscular bundle at two or three places. The lumbar wound was next closed by tier sutures of catgut, the skin wound being closed with horsehair. Aside from a slight infection, the wound did well. The patient was allowed up on the twenty-second day. The kidney thus far was in place, and the patient relieved of her former symptoms, although it was too early to predict anything of the final result. This method was reported because it represented a new principle in treatment.

Intestinal Obstruction from Meckel's Diverticulum.—Dr. A. E. HALSTEAD, of Chicago, reported a case, with recovery. He presented the fol-

lowing summary of all cases in the literature that were accessible to him: Total number of cases reviewed, 72; males, 45; females, 17; sex noted in only 62; result noted in 65; deaths, 44; recoveries, 21; percentage of mortality, 67.6; percentage of recovery, 32.4; cases operated upon, 55; death in cases operated upon, 27; no operation in 17; percentages of death in cases operated on, 49.0; attachment or non-attachment of diverticulum or diverticular ligament, mentioned in 66; point of attachment noted in 44; to mesentery in 21; to umbilicus in 14; not determined in 3; diverticulum attached, 47; and diverticulum free, 19.

Grave Abdominal Injuries without External Evidences of Traumatism.—Dr. R. HARVEY REED, of Rock Springs, Wyoming, read a paper in which he discussed this subject. From reading the literature, together with his own experience, he had been led to the conclusion that it was the surgeon's duty to make an exploratory incision in all cases where there was grave doubt as to the real nature of an injury, and particularly when the constitutional symptoms pointed to a condition more serious than was indicated by either the subjective or objective symptoms, provided the physical condition of the patient was such as to warrant such an operative procedure.

Dr. A. W. ABBOTT, of Minneapolis, detailed a great many experiments on animals with a view to determining the immediate effects of intestinal exposure. From his experimental work, he concluded that in operations where the intestines were exposed, the loss of water was unimportant, except in so far as it influenced the loss of heat and the drying of the surface; that the loss of heat was very important, as it temporarily placed the temperature of the intestines below the safety line of vital action and secondarily the heat of the whole body below that which should be continuously maintained; that the drying of the peritonæum was so decided that it must disturb to some extent the anatomical relations and the resisting and recuperating power of that membrane; that the loss of heat and the drying process must suspend for an undetermined period some of the physiological functions of the peritonæum and influence, to a degree as yet unknown, pathological conditions.

These conclusions the modern surgeon had reached clinically, in a general way, as shown by a short incision, protection pads, a minimum exposure of the peritonæum, and short-time operations. The writer believed that the exposure of the peritonæum should be the subject of a more critical study, and that this should be supplemented by extended experiments on the later effects, especially in their relation to peritonitis and adhesions.

Our Hospitals.—Dr. H. D. NILES, of Salt Lake City, spoke on this subject. He said that it was very evident to the minds of physicians familiar with the situation that the methods and management that had served hospitals so well when their purpose was limited to the care of the sick within their walls would not suffice if the hospitals were to meet present needs and fulfill their possibilities as a great system of scientific institutions distributed throughout the country, where not only the favored few, but the whole profession, with all the sick entrusted to

their care, might feel the results and participate in the benefits. So long as a hospital measured its own usefulness by the number of patients treated, the standing of each member of the staff would be estimated largely by the size of his personal following; and the commercial spirit would rule both the institution and the individual to the exclusion or great detriment of scientific work. If the profession was ever to secure a voice, it should formulate and adopt a business code that should not only meet the highest requirements of the ethics of the profession, but at the same time command the respect and win the confidence and support of the twentieth century public. The object of the paper was to arouse, if possible, a more active interest in an institution that promised with the aid of medical men to become one of the most influential elements in the medical world—its labors, its literature, its thought, its discoveries, and its advances.

The Surgery of Spina Bifida.—In a paper with this title, Dr. VAN BUREN KNOTT, of Sioux City, Iowa, discussed the varieties of spina bifida, the clinical features, diagnosis, prognosis, and treatment. After reporting four cases, he drew the following conclusions: 1. Owing to the distressing nature of the affection, the high mortality should not prevent attempts at surgical relief. 2. Meningoceles, meningo-myloceles, and syringomyeloceles may be considerably benefited by an operation. 3. The improvement in function cannot with certainty be estimated before an operation, and pronounced evidences of nervous disturbance are not a contraindication to excision. 4. Asepsis is absolutely essential and, although difficult to secure, may be maintained by exercising extreme care. 5. The plan of having the suture lines of the meninges and the overlying tissues on different planes will in the majority of instances prevent leakage of cerebrospinal fluid. 6. The suggestion of Pearson to prevent the escape of this fluid during a prolonged operation by stuffing the canal with gauze is valuable. 7. Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods. 8. It is not necessary to keep the child off its back during the healing of the wound, as is frequently advised. 9. Children with hydrocephalus accompanying spina bifida should not be subjected to an operation.

Other papers were read as follows: Two Cases of Cysts of the Broad Ligament Complicated with Myxoma, by Dr. EDWARD HORNIBROOK, of Cherokee, Iowa; Diffuse Sarcoma of the Uterus, by Dr. D. S. FAIRCHILD, of Clinton, Iowa; A New Operation for Wandering Kidney, by Dr. E. WYLLYS ANDREWS, of Chicago; The Operative Relief of Impaired Function of the Elbow Joint Due to Faulty Reattachment of a Separated Internal Humeral Epicondyle, by Dr. G. G. COTTAM, of Rock Rapids, Iowa.

The following officers were elected for the ensuing year: President, Dr. James E. Moore, of Minneapolis; vice-presidents, Dr. J. R. Hollowbush, of Rock Island, Ill., and Dr. W. W. Grant, of Denver; secretary and treasurer, Dr. George H. Simmons, of Chicago.

St. Joseph, Mo., was selected as the place for holding the next annual meeting, on December 29 and 30, 1902.

Book Notices.

The Four Epochs of Woman's Life. A Study in Hygiene. By ANNA M. GALBRAITH, M. D., Fellow of the New York Academy of Medicine, etc. With an Introductory Note by JOHN H. MUSSER, M. D., Professor of Clinical Medicine, University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 200. (Price, \$1.25.)

Dr. Galbraith has written a book for women which is free from morbid sentiment, from verbiage, and from useless moralizing. It is a book for married women and for mothers, who would all be gainers by reading and studying its pages. The keynote of her book is the dispensing of knowledge where now almost total ignorance exists. She would have women know and understand themselves, instead of being fed on ancient superstitions and instead of clinging to old women's tales.

The author has divided her subject into the four phases which characterize the life of the human female: maidenhood, puberty, marriage, the menopause. Under each heading, the hygienic laws underlying and fostering normal conditions are simply stated and consistently emphasized. Especially good are the chapter on marriage and the menopause. We suppose the question of woman's infidelity, so vigorously condemned in a quotation from Balzac, could not escape the author's mind, although it has no real place in the book. Dr. Galbraith's insistence upon the physiological character of the menopause, yet stating that it is a period of life when pathological changes are apt to take place in the organism, will meet the views of all physicians. And if this truth alone could become widespread through the reading of her book, it would have a good excuse for its existence. But all of the work is good and wholesome, and we trust it may have the wide circulation it deserves.

Outlines of Gynecological Pathology and Morbid Anatomy. By C. HUBERT ROBERTS, M. D., Lond., F. R. C. S., Eng., M. R. C. P., Physician to the Samaritan Free Hospital for Women, etc. With 151 Illustrations, mostly Original. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xxii-332. (Price, \$6.)

The author of this large work has performed a difficult service well in keeping rather strictly within pathological lines and avoiding the temptation to encroach further than he has upon clinical grounds. He has covered the entire field of the pathology of the genital organs in women, but has included some forms of clinical disturbances, such as the disorders of menstruation and uterine displacements, which, while they are in a sense pathological, do not strictly come under the heading of "pathology." They represent bedside rather than anatomical lesions.

Dr. Roberts has had many advantages in the writing of his book. He has had access to the museums of several hospitals which have furnished him an abundance of material, and his many years of didactic work have given him an insight into the needs of student and practitioner. It is small wonder, then, that we find the work scientific, modern,

and, to give it greater practical value, devoting most space to the commoner lesions.

Among the omissions we note a failure to mention the occasional transition of kraurosis into carcinoma, of which several instances are now recorded, and the so-called polypoid mucous cysts of the labia minora. The author does not accept the inflammatory theory of the origin of fibroids lately advanced, nor does he mention anything but the literature of the ætiology of dermoid cysts. He is inclined to favor the secondary nature of tuberculous salpingitis. The chapters on endometritis (in which the author follows Herman) and on sterility are especially lucid and well written.

In his somewhat involved discussion of decidua malignum, Dr. Roberts takes Kanthack's view that neither pregnancy, ablation, nor the retention of decidua or chronic villi has caused or can cause the neoplasm. He prefers to call it a chronic carcinoma or epithelioma. The author briefly reviews the parasitic theory of cancer, but wisely withholds endorsement of it at the present time.

The illustrations are excellent, most of them original, and many in colors. The book-making, too, is above reproach.

We have a book like which many more are needed in the English language to encourage the scientific aspect of the specialties, to encourage, particularly, the study of pathology. A scientific, honest work, it should meet with a hearty reception at the hands of pathologists and of gynecologists.

Guide de l'examen gynécologique. Par le Docteur L. LEON ARCHAMBAULT. Paris: A. Maloine, 1902. Pp. 116.

In this little work M. Archambault has collected the essential data which the beginner in gynecology must master. The diagnostic points in the majority of the grosser lesions are described and illustrated, and the methods of reaching a conclusion are defined. As is usual in works of this character, the uterus and its appendages are given the greatest consideration, but this is no fault, since the novice has ordinarily the greatest difficulty in distinguishing these organs. As a small manual of pelvic examination for students, this little book will serve a useful purpose.

Leçons sur les maladies du système nerveux (année 1897-1898. Par F. RAYMOND, Professeur de clinique des maladies nerveuses à la Faculté de médecine de Paris, etc. Recueillies et publiées par le Dr. E. RICKLIN. Quatrième série. Avec 59 figures dans le texte et 2 planches en couleurs hors texte. Pp. 606. Cinquième série. Avec 77 figures dans le texte et 5 planches en couleurs hors texte. Paris: Octave Doin, 1901.

These volumes continue the publication of cases from the Salpêtrière. This method of clinical publications, so popular in France, must sooner or later disappear, in view of the constantly increasing need of condensation in medical literature. The present volumes contain essays, or lessons, on epilepsy, on the topography of the cortical centres of general sensibility, on tumors of the brain, on the relations of multiple sclerosis and hysteria, on a case of poly-

neuritis with facial diplegia, and many other similar reports of cases with or without autopsy. Chapter xix is devoted to an exhaustive consideration of the causes of lead poisoning, and chapters xx and xxi deal with the affections of the conus terminalis, a subject with which Professor Raymond's name was already well identified.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. TH. PUSCHMANN, Weiland Professor an der Universität in Wien. Zweite Lieferung. Jena: Gustav Fischer, 1901. Pp. 117 to 352.

The second instalment of this great work is taken up entirely with the practice of medicine among the Greeks and brings us down to the time of Pliny. The treatment and diagnosis of all forms of disease among the early Greeks are discussed in detail, as well as the extent of their knowledge in pathology, anatomy, and pharmacology.

It is impossible in a short space to review this work adequately. Up to the present time, it is the most voluminous work of its kind which has appeared in any language. As a repository of knowledge, as well as an absorbing contribution to medical literature, it is unequalled.

BOOKS, ETC., RECEIVED.

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors. Assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromolithographs, Engravings, and Maps. Volume VI. Philadelphia, New York and Chicago: The F. A. Davis Company, 1902. Pp. viii-1043.

Water Supply. Considered principally from a Sanitary Standpoint. By William P. Mason, Professor of Chemistry, Rensselaer Polytechnic Institute, etc. Third Edition, Rewritten. New York: John Wiley & Sons, 1902. Pp. vii-448. (Price, \$4.)

Principles of Sanitary Science and the Public Health, with Special Reference to the Causation and Prevention of Infectious Diseases. By William T. Sedgwick, Ph. D., Professor of Biology and Lecturer on Sanitary Science and Public Health in the Massachusetts Institute of Technology, Boston, etc. New York: The Macmillan Company, 1902. Pp. xix-3 to 368. (Price, \$3.)

The Principles of Bacteriology. A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Sixth Edition, Enlarged and thoroughly Revised. With 111 Illustrations, of which 26 are Colored. Philadelphia: Lea Brothers & Company, 1902. Pp. xi-17 to 641.

A Text-Book of Insanity. By Charles Mercier, M. B., M. R. C. P., F. R. C. S., Lecturer on Insanity at the Westminster Hospital Medical School, London, etc. New York: The Macmillan Company, 1902. Pp. xiv-222. (Price, \$1.75.)

Maladies Nerveuses. Diagnostic—traitement. Par J. Vires, Professeur agrégé à la Faculté de Médecine de Montpellier, etc. Préface par F. Raymond, Professeur de clinique des maladies nerveuses à la Faculté de Médecine de Paris, etc. Avec 11 figures dans le texte. Montpellier: Coulet et fils, 1902. Pp. xxxii-613.

Grundriss der pathologischen Anatomie für Studierende und Ärzte. Von Professor Dr. Langerhans, Prosector am Städtischen Krankenhaus Moabit in Berlin. Dritte Vermehrte und Verbesserte Auflage. Mit 231 Abbildungen. Berlin: S. Karger, 1902. Pp. xi-743.

Operations-Vademecum für den praktischen Arzt. Von Dr. Edmund Leser, Professor an der Universität Halle A. S., etc. Mit 84 zum Theil Farbigen Abbildungen. Zweite Vermehrte und Verbesserte Auflage. Berlin: S. Karger, 1902. Pp. viii-186.

Zum Studium der Merkfähigkeit. Experimental-psychologische Untersuchung. Von Dr. Aug. Diehl, Nervenarzt in Lübeck. Mit einem Vorwort von Professor Dr. Aug. Forel. Berlin: S. Karger, 1902. Pp. 39.

Neurasthenie und Hysterie bei Kindern. Von Dr. Alfred Saenger Nervenarzt in Hamburg. Mit 2 Abbildungen in Text. Berlin: S. Karger, 1902. Pp. 32.

Alkoholismus im Kindesalter. Von Professor Dr. Max Kassowitz, Direktor des I. öffentlichen Kinder-Krankenhospitals in Wien. Berlin: S. Karger, 1902. Pp. 32.

Handbuch der pathogenen Mikroorganismen. Herausgegeben von Professor Dr. W. Kolle und Professor Dr. A. Wassermann, in Berlin. Mit einem Atlas Photographischer Tafeln nach Originalaufnahmen zusammengestellt von Professor Dr. E. Zettnow, in Berlin. Erste Lieferung. Tafel I—II. Jena: Gustav Fischer, 1902. Pp. 176.

Recherches bactériologiques sur les gangrènes gazeuses aiguës. Par le Dr. G. Legros. Paris: C. Naud, 1902. Pp. 74.

Bericht über die vom Komitee für Krebsforschung am 15 Oktober, 1900, erhobene Sammelforschung.

Transactions of the Chicago Pathological Society. From October, 1899, to June, 1901. Volume IV.

Proceedings of the Academy of Natural Sciences of Philadelphia. Volume LIII.

Report on Leprosy and the Homeless Leper Asylum, Matunga, Bombay. 1890-1897. By N. H. Choksy, Graduate in Medicine and Surgery, University of Bombay, etc.

Proceedings of the Orleans Parish Medical Society. May, 1902. New Series, Volume I.

Charaka-Samhita. Translated into English. Published by Avinash Chandra Kaviratna. Calcutta. Part XXVII.

New Inventions.

DIRECT MEDICATION OF THE EUSTACHIAN TUBES.

By WILLIAM F. CLEVINGER, M. D.,

INDIANAPOLIS, IND.

Treatment of the various pathological conditions of the Eustachian tubes by the simple means of inflation, or inflation with air charged with stimulating vapors, through the catheter or with the Politzer bag, is very often unsatisfactory, and certainly in many instances unscientific. I believe this assertion will not be disputed by many who are experienced in the treatment of diseases of the middle ear, yet broadly speaking it is the method most used by the mass of physicians who treat this particular organ. I trust that this assertion will not be taken as meaning that I discountenance the treatment of the middle ear by inflation, but rather that I mean that the method is abused; in other words, that it is used indiscriminately.

For some time past I have been using an instrument, made for me by the Bresette Dugan Co., of Indianapolis, of which a cut is appended, for the direct instillation of medicinal solutions in the middle ear; and in the management of subacute and chronic inflammatory cases, or specifically speaking, of those in which there is congestion and narrowing of the lumen of the tube without organic stricture, I have obtained most excellent results.

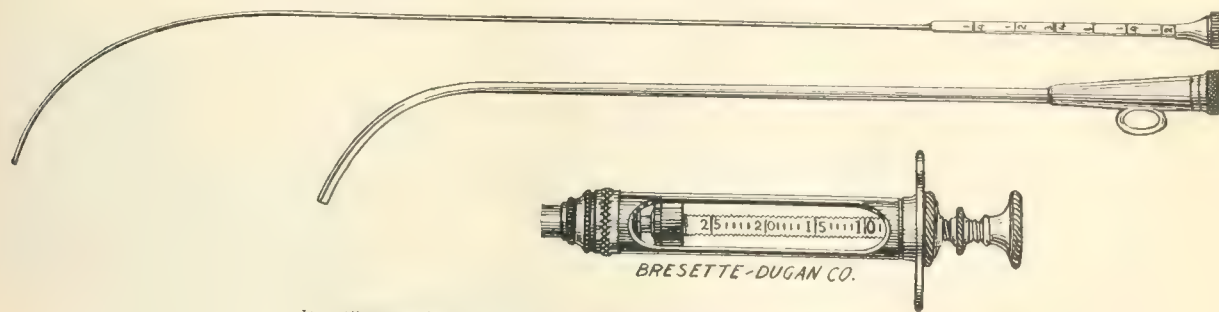
The instrument is made with a graduated scale on the upper end, and is to be used through the Eustachian catheter. It is extremely flexible and is about one millimetre in diameter; hence it is easily introduced into the adult-tube. I have had the instrument made of silver, so that it may be sterilized, and a point of no little importance is the fact that it

can be attached to any ordinary hypodermic syringe. The lumen of the instrument is of sufficient size to admit an oil solution.

I could not venture to outline any definite plan of treatment for the various inflammatory conditions of the tubes, but, generally speaking, I have obtained excellent results, in selected cases, from the instillation of sterilized suprarenal solution, and again from the alboline, menthol, and eucalyptol combination.

There are certain subacute and chronic tubal af-

ever, exceptions, as, for instance when the father has developed tuberculosis late, a long time after the birth of the child. In such a case, heredity may be ignored, and only the chances of contagion considered. Inversely, both father and mother may be still alive and apparently in good health, but one or both of them may have shown, before the birth of the child certain tuberculous manifestations. This condition suffices to proclaim the hereditary predisposition. Such a subject is considered by the author ill-adapted to



Dr. Cleverger's instrument for medication of the Eustachian tubes.

factions which may be benefited by the instillation of weak nitrate of silver or other astringent solutions, but it will be generally recognized that its use beyond a certain point in the tube must be accompanied with a certain definite understanding of the case in hand, and not resorted to indiscriminately or by those who are not fully familiar with the treatment of the middle ear.

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Miscellany.

Acquired Syphilis at Eight Years of Age.—At a recent meeting of the Section of Pædiatrics of the New York Academy of Medicine, Dr. Sara Welt-Kakels (*Pædiatrics*, April 15th) presented a girl eight years of age, who had been in good health up to about seven weeks previously. At that time, while bathing, the mother noticed a sore on the child's external genitalia, and the little one complained of frequent and painful urination. Examination showed an enormously enlarged clitoris, and in the deeper part of this swelling the initial lesion of syphilis. The manner in which it had been acquired could not be learned. At the present time there was decided enlargement of the post-auricular, epitrochlear and inguinal lymph-nodes, in fact of the lymph-nodes generally, and the body was the seat of a macular syphilitic eruption.

Tuberculosis and Marriage.—Lemoine (*Nord médical*, February 15th) after discussing the relative values of contagion and heredity (a) direct by transmission of the bacillus, and (b) indirect by transmission of a tuberculizable constitution, instances some of the many phases of the problem of tuberculosis and marriage, and concludes as follows: 1. Marriage cannot rightly be counselled with a subject one or other of whose parents has died tuberculous. There are, how-

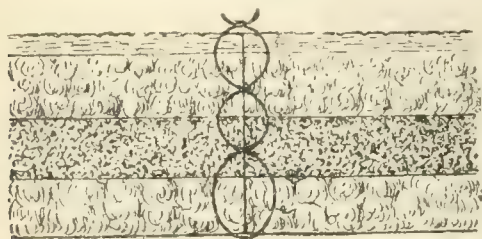
marriage, for he may more easily than others become contaminated later. 2. The subject is the offspring of parents in good health, but around him, in the person of his brothers or sisters, tuberculosis has been prevalent. In this case, there is no question of heredity to consider; all that is needed is to ascertain if the subject has been affected or not by contagion.

In practice, the author says, these rules admit of some modification. For instance a tuberculous heredity is said to be frequently found in the offspring of parents with grave pathological taints as cancer (Burdell), alcoholism, certain arthritic conditions, obesity, syphilis, etc. Heredity, moreover, manifests itself more or less according to the particular cases. For instance, a young girl, whose mother dies of tuberculosis in giving her birth, who is brought up in a healthy environment, subject to a satisfactory physical régime, and whose bodily resistance develops well, may be less likely to develop tuberculosis than another young girl, the issue of healthy parents, it is true, but whose youth was passed in a severe surrounding without any opportunity to develop the physique. Crossed heredity must also be reckoned with. In many cases it seems as though the father transmits his moral and physical qualities to the daughters, the mother hers to the sons. This same cross transmission seems also to operate in the case of hereditary predisposition. Direct heredity, in truth, cannot come into question with adults; predisposition alone can exist, and that not in the case of all the issue of tuberculous subjects; whence the author advises the young man about to marry to select a healthy-looking girl and not bother himself too much about the health of her connections, for in such cases appearances are rarely deceitful.

A New Deep Suture.—Mr. S. L. Woolmer (*Lancet*, March 29th) proposes a new suture which, he considers, overcomes all objections that

can be laid to the account of permanent buried sutures, inasmuch as it is only a *temporary* buried suture. It also saves time in its application, as there is only one knot to be tied and one pair of suture ends to be cut off, instead of three, when the suture is applied separately to each plane.

A piece of silkworm gut of sufficient length is threaded with a double needle and the first insertion is made at the bottom of the wound, including subperitoneal fat and peritonæum. The needle is then carried across the peritoneal section and made to emerge in the subperitoneal fat of the other side at a point opposite that of its first entrance. Thence it is carried across the wound and made to penetrate the two layers of the aponeurosis within the rectus muscle. The other needle is now made to embrace the opposite side and is then crossed to penetrate the tegument, the suture being completed by the first needle, which issues from the skin on the oppo-



Section of tissues showing suture in position.

site side. The suture is tightened with a slight rocking movement and tied in the ordinary manner. In order to effect its removal the silkworm gut is pulled upon on one side of the knot and then cut close, whereupon it recedes within the skin. Slight traction upon the knot is sufficient to withdraw it. It will thus be seen that one can secure perfect apposition of a deep wound without any of the disadvantages which accompany a permanent buried suture. Mr. Woolmer has only applied it in a laparotomy, a deep incised wound of the muscles of the forearm, and an amputation of the thigh, but its applications are obvious and extensive. For example, it should be the ideal suture in a case of ventrofixation of the womb.

Greek in Medicine.—Dr. Achilles Rose (*Johns Hopkins Hospital Bulletin*, May, 1902) in a paper read before the Book and Journal Club, of Baltimore, said that the significance of Greek in medicine could only be appreciated when we knew the complete history, or at least certain facts of the complete history, of the Greek language. In the middle of the fifteenth century, after the fall of Constantinople, Greek fugitives came to all parts of Europe, and it was they who introduced the study of Greek and laid the foundation of the "Western" school. The first act of this school, still in its infancy, was to do away with the traditional pronunciation and declare Greek a dead language. All direct connection between the verbal and the written tradition of Greek was cut off. At this time the study of philology in regard to Greek became unscientific and had remained so ever since, for the study of a language

must not confine itself to written tradition. Only the study of the two forms of tradition in connection with each other, the verbal and the written, rendered possible a scientific understanding of the old phase as well as of the new; the two forms of tradition influenced each other. One of the influences was that of the older monuments of literature upon the later phases of the language, and this influence was greater the more manifold the old literature and the more diligently it was studied by the descendants. The conquests of Alexander the Great threw the East open to the Greek population. Multitudes of Greeks came to Asia, Egypt, North Africa, and Southern Europe. The Greek language, then already at its highest, was triumphant everywhere and became an international language. The great mass of Hellenes, who had come with Alexander the Great, were forced more and more, in order to understand each other, to give up their provincial idioms, and to adopt the Attic dialect. This generalization of the Attic was called the *κοινή*, that is, the general language. Attic thus became *κοινή* and this was identical with new Greek. New Greek originated from the *κοινή*, not from the dialects. But, in speaking of Attic, we must not infer that all of the Athenians and Atticized Greeks wrote and spoke the classical Attic portrayed in the classical literature. In no language was the same diction used both in writing and in every day speaking. The colloquial speech in Greece, therefore, as elsewhere was hardly presented in literature. It never attained recognition or favor among the educated writers; on the contrary there had been at all times a general prejudice against it. The author tracing the history of the Greek language from the *κοινή*, then referred to the attempt on the part of writers of the first and second Christian centuries, from archaic reasons, to restore the old dialects; to the Alexandrian school; the Levantine period; the Greco-Roman age; and the Byzantine era, which, the author said, had never had justice done to it. A great number of forms, words, and constructions which, from a survey of the literature of several ages, one would believe to be lost, could be found today in the different dialects spoken in different parts of Greece. The Greek of today as taught in the schools throughout Greece, the official language of the government of Greece, was pure Attic Greek, as pure as ever it was. The author then made a strong plea for the object with which his name has been strongly associated, namely, the restoration of Greek, but Greek viewed in the light of the continuity of the purer literary Greek of today with that of classical times, as the basis of all correct medical onomatology. He referred to the seven years labor of the German Anatomical Society and its expenditure of \$3,000 to produce a new anatomical onomatology in pure Latin, with only moderate success, and said that, had the society taken the living Greek for a basis instead of the dead Latin, had they consulted the professors of anatomy of the University of Athens, they could satisfactorily have executed all their purposes, and that in much less time than seven years. The doctors of medicine, the philologists, and the faculty of the University of Athens would be only too ready to aid in a thorough revision of medical onomatology in accord with the historical continuity of the Attic language.

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WHOLE No. 1228.

THE AMERICAN MEDICAL ASSOCIATION

FIFTY-THIRD ANNUAL MEETING, SARATOGA SPRINGS, N. Y., JUNE 10, 11, 12 and 13, 1902.

Addresses and Orations.

THE PRESIDENT'S ADDRESS.

DELIVERED AT THE FIFTY-THIRD ANNUAL SESSION OF
THE AMERICAN MEDICAL ASSOCIATION, HELD
AT SARATOGA SPRINGS, JUNE 10, 11,
12, AND 13, 1902.

By JOHN ALLAN WYETH, M. D., LL.D.,
NEW YORK.

Since the session held at St. Paul a year ago, a former president of this association, paying the last great debt to nature, has passed

"To where beyond these
voices there is peace."

Full of years and beyond the limit allotted by the Psalmist, Professor Edward Mott Moore, born in Rahway, N. J., July 15, 1814, died in Rochester, N. Y., March 3, 1902. He was one of the founders of the New York State Medical Association, a consistent and loyal friend of our national body and of an organized medical profession. Although his achievements in science were of a high order, his life was not circumscribed within the narrow limits of professional work. He was not only a skilful surgeon, bold and original, but more than this he was a citizen of the highest type. The welfare of his neighbors, of his adopted city, State, and the nation were his. May his noble example be emulated, for it is just as much our duty to be true to the obligations of citizenship as to our profession.

Before dealing with the more urgent matters of this meeting, your attention is called to the Fourteenth International Congress of Medicine, which is to be held at Madrid from April 23 to 30, 1903.

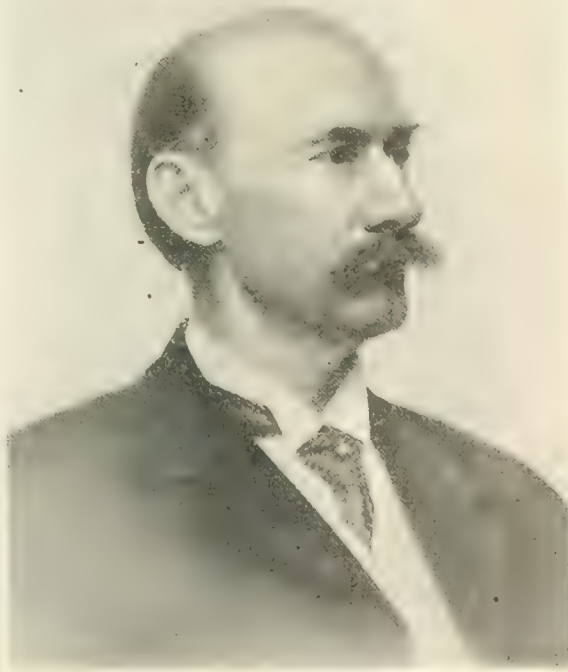
As your presiding officer I had the honor to receive an appointment from the Secretary of State as a delegate to represent this association at the congress, and was requested by him to appoint five additional delegates from this body. In conforming to this request the following gentlemen have accepted commissions, and have received certificates from the State

Department to the Congress: Dr. Nicholas Senn, of Illinois; Dr. Maurice H. Richardson, of Massachusetts; Dr. George Crile, of Ohio; Dr. Richard Douglas, of Tennessee, and Dr. Edward B. Dench, of New York.

It should be the duty and pride of the separate State associations to send at least one delegate to this important meeting, and in doing this to correspond with Dr. Angel Fernandez-Caro, secretary-general, Fourteenth International Congress of Medicine, Madrid, Spain.

This session marks an era in the history of the American Medical Association, for we meet under changed conditions, and in this our trial year, while we

are adjusting ourselves to the new order, we confidently ask and expect to receive not only the consideration and forbearance, but the generous help which should be accorded to this experiment in government by which we earnestly hope to avoid the



JOHN A. WYETH, M. D., LL. D.,
OF NEW YORK,
President of the American Medical Association

embarrassments and failures that under the old régime characterized the meetings of a body so large and unwieldy as the general session.

These changes involve not only the government of the association proper, but also a changed relationship of the State association to the national body, as well as the relationship of the county to the State organization. Under the old organization our business was transacted by delegates from State, district, and local affiliated societies in the proportion of one delegate for each ten members, while now only affiliated State organizations have the right to send delegates, and these are only entitled to one delegate for each five hundred active members or fraction of this number. These form the House of Delegates, which is further reenforced by two members from each of the scientific sections of the association, and one each from the army, the navy and the Marine-Hospital Service. Under the old régime the State association bore the same relationship to the national body as did the city, county, and district organizations. Now only the State association is represented, and they create the legislative body of the American Medical Association. In other words, the House of Delegates is a federation of all the State associations.

The reorganization at St. Paul, having taken away from the county organization its right to send delegates, also deprived the city, district branches, and other minor associations of the same privilege, requiring membership in the county society when such exists as a prerequisite to membership in the State and the American Medical Association. This ruling dropped, at least temporarily, from the rolls of the association a considerable number of physicians who had long been on the roster from State or local bodies which, by the laws then existing, were in affiliation with the national association. While this action may have seemed unnecessary and unjust to these members (among whom were many of the most loyal and faithful supporters of the national body) for the common good, they should yield to the opinion of the majority, since calm reflection must convince any reasonable mind that one of the wisest steps the association ever took was when it made the county medical organizations the basis of membership in the national body. There will hereafter be excluded from membership that fortunately small, but none the less existing group of unworthy members of our profession who, on account of the clumsy rules which formerly prevailed, obtained a place on the roster of the American Medical Association.

To the date of the reorganization in June, 1901, the roster of this association was so inaccurate and unsatisfactory that the secretary and president-elect undertook the difficult task of obtaining a correct list of members. While one might infer that each

organized State and territorial association could from its records, furnish at short notice the names of all eligible to membership in the American Medical Association, in only a very small proportion of these subordinate bodies was a reliable list available. It then became necessary to direct a circular letter, State by State, to every name on the roster then existing, asking for the necessary information. Since, for final confirmation, these names must be referred back to the subordinate organizations in which membership is claimed, it will be seen that some time must elapse before the completion of a perfectly reliable list. The lack of business-like methods with which our profession is charged is in a manner sustained by this admission, and it emphasizes the necessity of a thorough reorganization of all the societies in affiliation with the national body, upon practically a uniform plan.

Scarcely second in importance to a uniform scheme of reorganization is that of a uniform standard of requirements for the practice of medicine in the various States. It is of vital interest to the welfare of the profession that the question of reciprocity, or inter-State comity, should be settled so that, without any sacrifice of the very highest requirements, a physician in practice in one State, having gone before a competent board, upon change of residence might be permitted to practise without being subjected to a second State examination in the place of his adoption. The House of Delegates will, without doubt, act upon this matter at this session.

Referring to the subdivisions of the scientific work of the association, Article V of the constitution empowers the House of Delegates "to authorize new sections which may from time to time be organized, as the necessity for their existence arises." With increasing membership and the consequent larger attendance, it may be imperative in the future to create new sections, but this should be done only after careful consideration, and not until it is demonstrated that the material of high scientific value offered to the twelve sections now existing is more than can be utilized in the time allotted for the meetings.

The by-laws require every member to register in one of the sections, and it would be well to limit each reader to a single paper before the section chosen. The association should insist that the officers of sections exercise a most rigid scrutiny of the papers referred to them. If we are to achieve our high purpose, if we wish to attract to our organization the great bulk of the better element of the medical profession, we must present through our sections papers which demonstrate not only the high scientific attainment of the author, but the undoubted value of the material presented. We are judged by our works, and if, at our meetings, and

in the publication of our papers in *The Journal* which carries them to all parts of the earth, any unworthy material finds a place, it can but reflect discredit upon the association.

Article VI of the new constitution says: "The House of Delegates shall have authority to provide for and to create such branch organizations as may be deemed essential to the promotion of the welfare of the medical profession."

For the present I would not advise the establishment of these subdivisions, but ultimately it may be found necessary to divide the States and territories according to population and geographical position into district branches where meetings may be held at the convenience of the States represented, and without interference with the annual session of the national association.

Let us hope that the various tri-State societies and the sectional organizations, such as the Southern Surgical and Gynecological Association, and the equally successful Mississippi Valley Medical Association, and others of like character, attracted by the high and unselfish aims of this organization, may appreciate the vital necessity of a united profession and vote themselves into district branches of the American Medical Association. Truly, in such a union there would be strength so potent and influence so far reaching that we could safeguard, without doubt, the material interests of the profession, elevate still higher the standard of medical education, secure the enactment and enforcement of just and rigid medical laws, enlighten and direct public opinion in regard to the broad problems of state medicine, and demonstrate to the world the practical accomplishment of our science.

Article VII of the new constitution, which deals with "sessions and meetings," refers the place and time for holding each annual session to the House of Delegates. They are also, under Article IX, empowered to appropriate funds for defraying the expenses of the annual meeting, as well as for enabling the standing committees to fulfill their respective duties.

I would recommend to the consideration of the association the propriety of selecting in each of the geographical subdivisions of the United States, in which the sessions are successively held, some suitable location which has been found to be well adapted to the work of the organization, and to which we could return when the meeting is again to be held in that section of the country. As a scientific body intent upon fostering the growth and diffusion of medical knowledge, it is of vital importance to avoid in the selection of our place of meeting everything that could detract from the closest attention to the scientific programme. The smaller cities with ample hotel accommodations and halls

conveniently located have always yielded a larger attendance before the sections, and consequently a greater benefit to our members, than the cities of larger size with their multitude of distractions. Moreover, it seems scarcely in accord with the dignity of this great body to require through its committee of arrangements that the physicians of the State and place selected for the convention should be held responsible for the expenses of that meeting. Every suggestion of commercialism should be avoided, and this prosperous organization should assume the entire responsibility and management of these annual sessions.

One of the most important duties imposed upon the House of Delegates is the selection of those who conduct its business affairs. In the past, the association has shown a keen discernment in securing for its trustees and standing committees men, not only of executive ability, but held in high esteem as representatives of a profession, which, according to the Code of Ethics, "should be temperate in all things, and which requires greater purity of character and a higher standard of moral excellence than any other calling."

You will in the regular order of business hear the reports of your five standing committees, and I am called upon to speak of but one, viz.: the committee on medical legislation, which the by-laws adopted in June of 1901 direct to be appointed by the president, and to consist of one delegate from each State. In accordance with this requirement I mailed to the president of each State and territorial organization in affiliation with the American Medical Association a letter asking him to nominate one member for this committee. To all replies to this letter the name of the delegate was sent to the chairman of the National Committee on Medical Legislation, Dr. H. L. E. Johnson, Washington, D. C. It will be remembered that at the session in St. Paul, in 1901, the association ruled that the National Committee on Medical Legislation, consisting of Dr. H. L. E. Johnson, Washington City; Dr. William H. Welch, Baltimore, and Dr. W. L. Rodman, Philadelphia, should be continued until the meeting in June, 1903, and should have the same power to act in the interest of the association that they had previously enjoyed. All the legislative affairs of the association I have referred to this committee at Washington, and have authorized them to call the full committee on medical legislation for consultation, advice, or aid whenever their services might be required.

In his message to Congress, December, 1901, the President recommended the establishment of a Department of Commerce and Industries. In its passage through the Senate the name was changed to that of Commerce and Labor. Before the national legislature at the same time was a bill known as the

Perkins-Hepburn Bill to increase the efficiency and to change the name of the United States Marine-Hospital Service to that of the United States Health Service, transferring this from the Treasury to the new department.

The American Medical Association has on several occasions expressed its desire for the establishment of a Department of Public Health, either as a separate department of the government or as one of the important bureaus of a department. Probably on account of a lack of thorough organization and co-operation, it has not been able to obtain this important recognition for the medical profession. In view of these repeated failures, it would seem advantageous to the scheme of establishing ultimately a Department of Public Health that the Perkins bill should become a law, because the United States Marine-Hospital Service could then with more propriety be removed from the new Department of Commerce and Labor into a separate and independent department. This department should be in charge of a medical officer, to direct our foreign and insular quarantine, inter-State quarantine, the medical supervision of epidemics, and, in fact, all matters pertaining to the general health of any group of States or of the entire country.

The work of this officer and bureau can only be carried out with success by the earnest cooperation of the health officers of the various localities and States and of the advisory board for the hygienic laboratory provided for in the Perkins-Hepburn bill, for the national and local authorities acting in harmony would be better able to prevent the importation of disease, and to stamp out epidemics which may occur despite the greatest vigilance, and this with the minimum disturbance of the resident public and of the commercial interests of more remote sections.

As the representative organization of the medical profession of the United States, it is our duty to co-operate with the medical corps of the army in the effort to procure legislation which will not only uphold the rights and dignity of the medical officers in the public service, but will give better protection to the health and lives of our troops.

The status of the Medical Department of the United States Army is fairly stated in a circular issued by the medical officers stationed in the Philippines, in which they claim that the present condition of affairs "is regarded as a menace to the efficiency of the medical department, as it is felt to be unfair and unjust." In no other staff department is promotion so slow as in the medical department. It is graded for rank promotion, and pay below every other staff department of the army, and, with the exception of second lieutenant, is graded below the line. A medical officer, under the provisions of the present law, to obtain a colonelcy, must pass through

three times as many files as an officer of the Quartermaster's, Subsistence, or Pay departments; through more than twice as many files as an officer of the Engineers' or Ordnance departments, and more than one and one half times as many as an officer of the signal corps. Officers of the line, having attained the rank of major, have to pass through but four files to obtain the rank of colonel, while the medical officers have to pass through nine files. All these facts are fully appreciated by the younger physicians of our country and by the volunteer and contract medical officers, hundreds of whom are now serving with troops and are declining to become candidates for a position offering such an unpromising career and so little in the line of promotion and emolument.

The Secretary of War has been officially informed by the surgeon-general that the number of available medical officers is being rapidly diminished, and he anticipates he will soon be unable to supply the demand for medical officers to replace those constantly returning from the Philippines, unless the prohibition placed by the Secretary of War upon the appointment of additional contract surgeons is removed. He says: "The service would no doubt be more attractive to well-educated physicians if the prospects for promotion were better, and I respectfully commend that Congress be asked at the present session to add to the medical corps of the army two colonels, six lieutenant-colonels, and twenty-five majors. This would give thirty-three additional vacancies and would furnish an incentive to volunteer medical officers and contract surgeons now in service to seek admission to the regular army. I would also recommend that the age limit for volunteer surgeons and contract surgeons who have rendered satisfactory service for two years or more be raised to thirty-six years."

No one who has carefully studied the subject can but conclude that under the statutes now in force many lives have been sacrificed and much suffering has resulted from lack of thorough cooperation between the officer in command and his chief surgeon, and without doubt it would be to the interest of the service if medical officers were always consulted with regard to the location of camps and military posts for the purpose of getting expert opinion upon sanitary questions.

In order to impress upon commanding officers the importance of military hygiene and the greater necessity for this cooperation with the medical corps of the Army, the surgeon-general has insisted that there should be established at the Military Academy at West Point a course of instruction on military hygiene.

It is the duty of this association to lend its best efforts to the surgeon-general, a former president

of the American Medical Association, and one not only in a position to suggest the legislation which would best serve the interests of the army, but one whom we know to be zealous of the interests, rights, and dignity of the medical officers of the War Department.

The committee to whom was entrusted the question of vivisection has been diligent, and it would seem successful, in its efforts to prevent unwise and injurious restrictions upon this important method of research.

The wide dissemination of the contagion of small-pox in the United States within the last few years demands the most earnest attention of the medical profession. Such ignorance or indifference to the immunizing power of vaccination is a matter of surprise in an advanced stage of civilization, and, while laws for compulsory vaccination would without doubt be to the best interests of the whole people, it seems so contrary to the spirit of our institutions as to be impolitic as well as impracticable. It falls upon us as physicians to labor unceasingly to impress upon the communities in which we reside the necessity and safety of this immunizing process.

We shall be wise if, from time to time, we make a critical analysis of our past, realize exactly what we are doing, and upon this base such conduct as will assure to our successors a more satisfactory condition of our profession and a higher achievement of this association. Being human, we are too apt to shut our eyes to unpleasant truths, to exaggerate the value and the importance of our own performances, and to think that what we have been taught to believe or what we wish to believe is right and unchangeable. Let us ask ourselves plainly: Is the medical profession of the United States what it should be? Has it won the influential position to which it should aspire? Has it gained the power to secure just and proper legislation? Has it lived up to its obligations and has the American Medical Association, which claims to represent one hundred and twenty thousand regular practitioners of medicine in the United States, fulfilled its mission? How many of us after due reflection can consistently answer these questions other than by saying plainly and regretfully—No. And wherein lies our weakness? To say we are part of a young and scarcely organized country, that our profession is widely dispersed over vast regions so remote from each other that contact and cooperation are difficult, will not entirely satisfy the fairly critical mind. Such excuses might have been sufficient at an earlier date, but not now. To say that, despite these and other embarrassments, we of the United States have given to mankind the unequalled boon of ether anæsthesia; that, through the achievements of members of our profession and of this association medical and sur-

gical science has been greatly enriched; that great specialties recognized the world over have been developed; that operations bold and original have been established beyond controversy; and that by reason of these various contributions to the science and art of surgery and of medicine millions of lives have already been saved, together with the merciful mitigation of suffering which all this implies—while a repetition of this may flatter our vanity, it will not wholly satisfy us when in honest purpose we realize how great are our shortcomings.

It is a fact painful to acknowledge that of the three so-called learned professions, the ministry, law, and medicine, ours is accorded the inferior position, and that we who day in and out, in every home of the land, are close in the personal friendship of our patients, respected and loved as individuals, are incapable of wielding by organization and discipline the powerful influence of a united profession aiming at a high and honorable purpose. And what have been the results of this house divided against itself? Witness the snail-like progress which marked the various steps in securing our laws for elevating the standard of requirements in medical education and for medical practice: Witness the opposition to our efforts in securing better sanitary regulations, and in the struggle to protect the public from the horde of uneducated or misguided persons who, under the guise of Christian Science, Osteopathy, and other schisms, insist upon being permitted to take charge of and treat human beings suffering from disease without submitting themselves to the State examination legally required of us.

There are, in my opinion, two principal causes of this evident weakness of the profession: First. The insufficient methods of medical education which have prevailed for the greater part of the first century of our national existence. Second. The lack of organization.

The code of this association says: "Those admitted into our ranks should found their expectations of practice upon the extent of their qualifications." We stand committed as the champion of higher medical education and the elevation of the standard of requirements applicable not only to the entrance examination, but to a rigid examination before the degree is received, as well as by the State before permission to practise is granted. To this rigid examination this association, by its rules of conduct, demands another important essential. The highest order of learning, the greatest amount of skill may not make one an honor to our calling, for "there is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical, and

to attain such eminence is a duty every physician owes alike to his patients and his profession."

The American Medical Association is the sponsor for organized medicine in the United States, and failure to accomplish this end implies the failure of this association. We must not fail, nor shall we, unless we falter in carrying out the plan of reorganization in the liberal and progressive spirit which characterized the session of 1901. It is our plain duty to endeavor to bring about the adoption by the various constituent bodies of a practically uniform constitution and by-laws for each county and for each State, modified only as the local conditions may require, and all governed by the same rules of conduct. These rules, as at present given in the code of ethics adopted many years ago by this association, should be also a subject of serious consideration at this time, for we cannot claim consistency or be logical in argument until there is but one code for the national association and for all of the State organizations represented in the national body. This, as you well know, does not now prevail. Some years ago there lived and labored among us for the good of mankind and the honor of the profession a man whose genius was of the highest order, and whose fame carried the name of American surgery throughout the civilized world. He was one of those fearless pioneers in science who found his place ever on the frontier clearing the way for those who were to follow. In 1876, at the meeting of the American Medical Association, in Philadelphia, Dr. J. Marion Sims, in his presidential address, referring to the code of ethics, says: "The time will come when your organic laws, like the Constitution of our country, will require modifications and amendments to suit a higher intelligence, a broader education, and a greater destiny." In my opinion, the time has come when we cannot absolve ourselves from the responsibility of doing away with the inconsistencies for which we may now be properly criticised.

Such have been the changes in the statutes of a majority of the States since the code was adopted by the respected founders of this association that we find it insisting upon conduct on the part of our members which is contrary to the laws of the States in which they reside. For instance, one section forbids a member of the regular profession to act upon a board of examiners which has to pass upon the legal qualifications of persons not graduates of regular medical colleges, while in thirty-eight of the States represented here, the civil statutes require these boards, which are composed in great part of members of the association, to examine, pass upon and sign certificates or licenses to practise of Homœopaths, Eclectics, and other subdivisions of medical practice. In six of the States, including

the District of Columbia, the law requires three separate examining boards. In Mississippi, North Carolina, and South Carolina the examining boards are entirely composed of regular physicians, and in one of these States (Mississippi), while none but regulars are allowed on the board, the law explicitly says: "Distinction shall not be made between applicants because of the different systems or schools of practice that may be chosen." In almost all the States and territories regular physicians are compelled by the laws of the State in which they reside to disobey the injunctions of this section of the code of ethics.

A modification of this and other sections of the code must be a part of the liberal plan of reorganization which we have essayed.

In conclusion, I ask this association to stand for more than the healing art. To labor for the alleviation of suffering and for the restoration of health is a noble vocation, but to teach our fellows how to avoid disaster is a prouder privilege and a higher duty. We should be teachers of men. How better can we protect the public from disease in all its various forms and insidious processes than by perfecting in every county and in every community an organization which shall be ever watchful and insistent upon obedience to the laws relating to the public health?

THE RELATION OF MEDICAL SCIENCE TO COMMERCE.

THE ADDRESS IN MEDICINE, DELIVERED AT THE FIFTY-THIRD ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT SARATOGA SPRINGS, N. Y., JUNE 10, 11, 12, AND 13, 1902.

By FRANK BILLINGS, M. S., M. D.,

CHICAGO.

I have been informed that there is no rule of the association which fixes the subject of this address. I hope I may be pardoned when I depart from the custom which my predecessors have usually followed when they confined the subject of the address to the progress of medicine during the year just past.

We live in a period of the greatest activity of the history of the world. Modern inventions annihilate time and distance. Electricity and steam approximate the most distant parts of the civilized globe. Vast amounts of capital are invested in electrical, steam, and other related interests.

Large commercial enterprises are carried on or launched into new fields, which require money, the employment of the brightest intellects, and skilled and common labor.

Competition is great in all the affairs of men. The struggle for supremacy between nations and between men was never so fiercely contended as now. The world is richer than ever before. Great individual fortunes, the result of the efforts of the few years of a single span of life, are seen everywhere. The wage of the laborer in our country is larger than ever before and he may command the necessities as well as many of the comforts of life.

This modern restless activity, with its nerve-racking, the evil results of a luxurious life, the moral obliquity which it may breed, as well as many other conditions which affect the health of individuals, while of interest to medicine, do not concern us in the consideration of the broader subject of this paper.

THE BROADER APPLICATION OF MEDICAL SCIENCE.

Medical science is more interested in and is of greater importance to the world than ever before, in protecting individuals, states and nations from infectious diseases, which are rendered more dangerous than formerly because of a denser population, increased facilities of communication between the peoples of the earth, by travel and by national and international interchange of food and other commercial products.

Medical science, too, is closely identified with the vast monied interests of the merchant marine and of national and international commerce. Quarantine against the spread of infectious disease is applied wisely or foolishly in direct ratio to our knowledge or ignorance of the cause, the means of transmission, and the evolution of disease. So, too, medicine has to do with the knowledge which will enable man to escape from and finally remove the conditions which cause infection and which render a country uninhabitable to civilized man.

Medical science must safeguard man against infection and intoxication from parasitic diseases of animals used for food and from contaminated and adulterated food and drink. Not only from a hu-

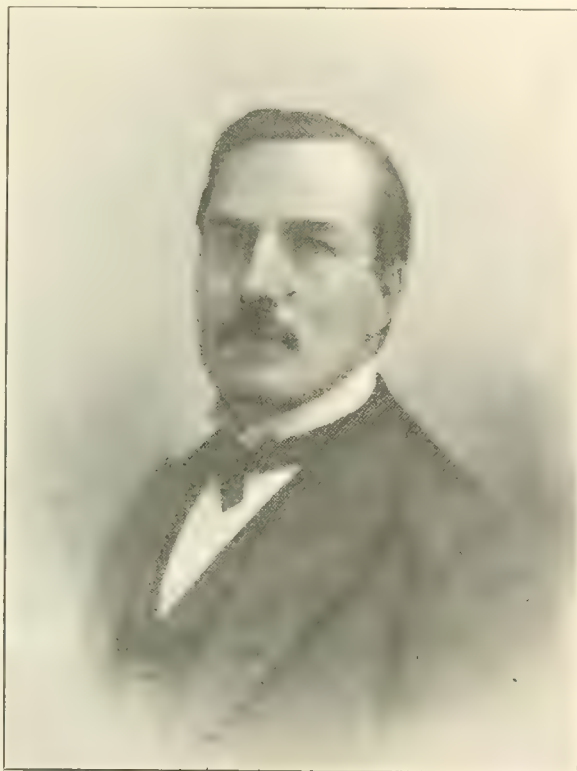
manitarian standpoint is medical science related to commercial pursuits, but the sciences related to medicine have done much to preserve animals used for food and to protect agricultural interests of many kinds from disease and destruction.

One may say, I think, that in no other pursuit which engages the serious attention of men are there so many earnest, unselfish, and philanthropic workers as there are to-day in the broad field of medicine.

In the various departments of science related to medicine one finds educated, skilled, energetic, earnest workers after truth, willing to sacrifice home, friends, health, and life for the advancement of the science which has for its primary object the conservation and prolongation of human life. Pecuniary reward for them is never large and never commensurate with the character of the work.

Furthermore, great and astounding as are the modern commercial inventions, the progress made in medical science during the last twenty years is equally great.

Is modern medicine prepared to meet the demands of modern progress concerning the questions which interest humanity and commerce? Let us answer the question by a brief retrospect of the progress of medicine and by a statement of the present status of medical science.



FRANK BILLINGS, M. S., M. D.,
OF CHICAGO,
Orator in Surgery.

FIRST APPLICATION OF PHYSICAL SCIENCES TO MEDICINE.

From the latter part of the eighteenth to the beginning of the last quarter of the nineteenth century the science of medicine developed steadily upon a rational physical basis. Jenner's discovery of the protection of the human race against variola by vaccination with cow-pox illuminates with noon-day splendor an era otherwise gloomy with its hypotheses, theories and superstitions concerning disease.

This single brilliant achievement of the end of

the eighteenth century was the beginning of the evolution in medical science which made the nineteenth century notable. The application early in the nineteenth century of physics, of physiology, of pathological anatomy, and of chemistry to the study of disease developed a more exact knowledge than before existed. To Avenbrugger that early period owes much through the discovery of methods of physical examination which were slowly developed and perfected by Corvisart, Laennec, Piorry, Skoda, Wintrich, Traube, Louis, Cheyne, Stokes, Graves, Corrigan, Flint, Scudamore, and others. Pathological anatomy made wonderful strides under the labors of Virchow, Rokitansky, Arnold, Stilling, and their students. Physiology was developed by the labors of Johannes Müller, Brücke, Helmholtz, Trousseau, Vierordt, Foster, Carpenter, Magendie, and their disciples; and the fuller knowledge embraced in physiological chemistry was added to the rapidly broadening field of medicine by Hoppe-Seyler, Schwann, Stricker, Prout, Liebig, and others.

BACTERIOLOGY.

The development of the microscope during the second and third quarters of the past century added a mighty weapon to the armamentarium of the physicist. The microscope was an aid to the investigators of pathological anatomy, of physiology, of chemical physiology, and of other subjects, and it was the one necessary means by which the teeming world of bacteria was made visible. This discovery and the knowledge which have come from a study of these infinite and yet often mighty beings has revolutionized medicine.

It was Pasteur's brilliant studies of the infective microbes of air which led to the discovery of the source of contamination of wounds and which made it possible for Lister to evolve a method of protection of wounds from air infection. The aseptic surgery of to-day is but the evolution of Listerism, which had its basis of existence in the discoveries of Pasteur. With the microscope Pasteur rid the world of the superstition of spontaneous generation. He proved the infectiousness of dust-borne air through the microbes it carried. He blazed the way for others in the study of bacteria as agents of putrefaction, of fermentation, and of pathological infection in animals.

Bacteriology became an exact science with the discovery of Robert Koch of cultural methods which made differentiation of bacteria possible. The causative relation of bacteria to all infective processes was practically proved by the laws promulgated by Koch. In twenty years the bacterial cause of tuberculosis, typhoid fever, cholera, diphtheria, pneumonia, pyogenic processes, erysipelas,

gonorrhœa, epidemic meningitis, epidemic dysentery, the plague, charbon, glanders, tetanus, influenza, and lepra has been proved.

PARASITES.

The discovery of the hematozoon of malaria by Laveran; the recognition of the amœba of dysentery by Loesch; of the ray fungi and especially the actinomyces as infective agents in the lower animals and in man, and the more exact knowledge of other animal parasites infecting man and animals, which the microscope has made clear, have been as epoch-making in parasitology as the discoveries of Pasteur and Koch in bacteriology.

The recognition of the relation of bacteria, protozoa, and animal parasites to infective disease has been the means of a more exact knowledge of the clinical phenomena of disease, or morbid anatomy, of physiology, and of physiological chemistry than would have been possible without it.

TRANSMISSION OF INFECTION.

The knowledge of the cause has led to a study of the life-history of infective organisms outside of as well as in the animal body. The mode of propagation, the means of transmission of infective micro-organism, by fomites and other agents, has become known. The rôle which insects which infest animals play as definitive or intermediate hosts has been studied and proved. The discovery of Manson of the transmission of *Filaria sanguinis hominis* by the mosquito was of vast importance as a suggestion of the mosquito as a definitive host in malaria. The investigations of Manson, Ross, Celli, Grassi, Dionise, Marchiafava, Bignami, Koch, and others have made our knowledge of malaria exact. With the microscope we may now not only recognize malaria and differentiate it from the other infective fevers, but we may also at the same time recognize by an examination of the blood the type of malarial infection and foretell its course. Not only may we recognize the disease definitely and apply the drug treatment more rationally, but the knowledge of the means of its transmission from man to man enables us to apply preventive measures which, as we shall see later, are of the greatest importance from a commercial as well as from a humanitarian point of view. The recognition of the rôle of the mosquito in malaria has been, furthermore, a stimulus to the study of the same insect in relation to other infections.

The brilliant research work of our own Reed and Carroll in 1900 in Cuba, by which they proved that the mosquito of the genus *Stegomyia* was the sole means of the transmission of yellow fever from man to man, is of great importance as a scientific fact. The influence of this discovery upon mankind

as a prophylactic against a disease which has killed multitudes and also from a monetary point of view, in reference to commercial pursuits, is not appreciated at this time as it should be.

Hardly less important is the fact that the *Bacillus pestis* may infect fleas and these in turn infect rats, mice, and man. It is important, too, to know that pests like the house fly may be carriers of infective bacteria from refuse filth to our kitchens and tables and contaminate food and thus infect us with typhoid fever, cholera, and perhaps other diseases which are propagated by filth.

The study of bacteria in the laboratory and in the blood tissues of infected animals has led to the discovery of the means by which bacteria disturb the animal economy and produce phenomena expressive of disease. The fact that the blood and tissues of infected animals contained a toxine which could also be isolated from pure bacterial cultures in the laboratory, and that this toxine, when introduced into an animal, was capable of exciting the same phenomena of disease as the bacteria themselves, was positive proof that bacteria excited disease phenomena by means of a toxine which they formed. The elaboration of antitoxines in the body of the infected animal was also promptly recognized and not only served to explain the self-limitation of many of the infective diseases, but also helped us to understand the immunity which one attack of some of the bacterial diseases affords.

PROTECTIVE INOCULATION.

Long before bacterial toxines were recognized as the cause of disease phenomena, Pasteur established the principle of protective inoculation with bacteria of lessened virulence, which was brought about by attenuation of the bacteria by a modification of cultural methods and also by serial inoculation of certain lower animals. This he successfully applied to charbon in sheep and cattle and to chicken cholera. In both of these diseases the bacteria were known and the problems of attenuation could be carried on in the laboratory by direct study of the bacteria before inoculation and afterward when they were recovered from the bodies of the animals experimented on.

His final life's work was no less important, in firmly fixing the immunizing influence of attenuated bacterial inoculation in rabies. Here the discovery of the infecting bacterium escaped every known means of recognition by examination of the tissues and blood of the infected animals microscopically and culturally. Apparently there are pathogenic bacteria which we do not know because we have not yet recognized the proper culture material for the successful artificial cultivation of

them, nor have we discovered the tinctorial reaction which they may possess, and, finally, it is not improbable that they may be infinitely smaller than other bacteria and, therefore, more difficult to recognize.

Pasteur recognized the fact that in hydrophobia the brain and other nervous tissue of an infected animal are capable, when inoculated into another animal's brain, of producing the disease. That the infected brain, used for inoculating animals, contained the bacteria which caused the disease was proved by the fact that a stage of incubation occurred in the inoculated animal and that a series of animals were successfully inoculated consecutively from the first. Pasteur then successfully attenuated the unknown bacterium of hydrophobia present in the nervous tissues of an inoculated animal by desiccation of the nervous tissue in a sterile apparatus by methods too well known to repeat. Nor is it necessary to occupy time in repeating the well-known methods pursued by Pasteur and his pupils in the use of the graduated doses of attenuated bacteria contained in the nerve tissues in the prophylactic treatment of rabies. To Pasteur, therefore, do we owe the scientific recognition of the principle of protective inoculation.

It is now a well-known fact, however, that inoculation against disease was practised by the Chinese 1,000 years ago. They inoculated the healthy with small-pox as a protection against the disease. Variolization was also practised in Europe in the seventeenth and eighteenth centuries. We read that in 1718 Lady Mary Montagu caused a son to be inoculated with variola in Italy and that two years later her daughter was inoculated in England. The practice was followed in Ireland long after the successful establishment of vaccine as a protection against variola. Inoculation against syphilis, or syphilization, was also practised in Europe during the nineteenth century.

To Jenner, however, do we owe the first example of the protective inoculation by means of an attenuated virus. This attenuation we now know was established by the accidental inoculation of milch cows with small-pox, producing a modified disease, vaccinia. That vaccinia, produced in man by inoculation direct from the cow, would protect against small-pox was proved when in 1798 Jenner successfully vaccinated, direct from the cow, the five-year-old lad William Summers.

The thousands of successful vaccinations which have since been performed and the thousands of lives which have been saved by vaccination are proof of its validity and utility. The immunity established by protective inoculation is apparently the same as that induced by an unmodified attack of variola.

SERUM THERAPY.

When chemistry had revealed the nature of bacterial poisons and experiments established their relation to the phenomena of disease, it was proved that substances were formed in artificial culture media and in the blood and tissues of infected animals which had the power to neutralize the effect of the bacterial poison in other animals infected with the same organism. Further investigation showed that an animal inoculated with the laboratory preparation of antitoxine was protected against the disease.

Furthermore, it was found that the blood serum of an animal inoculated with bacteria in a non-fatal and repeated dose contained an antitoxine. When the blood serum of the infected animal was injected into a healthy animal, the latter was protected against the original disease.

Antitoxine was, therefore, proved to be formed in artificial media of bacterial cultures and in the bodies of infected animals. When the antitoxine thus formed was injected into an animal, it had the power to protect it against the particular bacterial infection or, if given subsequently to the infection of the animal, to mitigate the severity of the disease or to entirely check it.

Thus, by Koch and his students, was serum therapy established as a principle. Upon this principle there has been established and given to the world the antidiphtheritic serum of Behring and of Roux.

A curative or immunizing serum has been developed for Asiatic cholera, tetanus, erysipelas, plague, epidemic dysentery, streptococcus infection, and other diseases. While the serum treatment has not proved successful in all the diseases in which it has been used, it has been so successful in some—diphtheria, for instance—as to firmly establish the principle of serum therapy.

INFLUENCE OF BACTERIOLOGY UPON PRACTICAL MEDICINE AND SURGERY.

These practical results in specific prophylactic and curative therapy are but a part, however, of the influence which bacteriology has had upon medicine. The stimulus given by bacteriology to the study of pathological anatomy, physiological chemistry, clinical phenomena, and physical and chemical changes of the fluids and tissues of the body has resulted in a knowledge so comprehensive that medical science has been revolutionized within the last twenty years. Speculative theories and hypotheses have given place to facts based upon sound principles proved by experiment and clinical observation.

Bacteriology made possible the comprehension of perfect cleanliness and enables the surgeon to in-

vade every part of the body without fear of infection and has saved thousands of lives which twenty-five years ago perished miserably as the result of disease at that time "inoperable," or the result of infection from contact with the surgeon. By means of cleanliness and skill, induced by a broader experience, the surgeon has been able to add to our knowledge information of great value which could have been obtained probably in no other way. He has been able to study disease in the living body and show the relation of a disease process to infection. He has thus been able to clear away many of the misconceptions of symptomatology and diagnosis, especially in disease of the abdominal organs.

Bacteriology has stimulated laboratory clinical diagnosis. Bacterial reaction to sera and blood cultural tests are of the greatest aid to diagnosis. Clinical research work has command of an armamentarium consisting of a knowledge of pathological anatomy, of physiology, of bacteriology, of chemical physiology, and of physics which allows of a precision in diagnosis never before at the command of the physician.

From the foregoing it seems sufficiently demonstrated that to-day medical science possesses a knowledge so exact that we may answer definitely the question of our relation to the commercial affairs of the world. Infectious diseases which affect agricultural interests, like swine plague, rinderpest, fowl cholera, glanders, tuberculosis, actinomycosis, trichinosis, and many of the parasitic diseases of plants and of animals have been studied by scientists with most definite results.

PREVENTION OF INFECTION.

To-day no sane man believes in spontaneous generation. The presence of an infective disease, either bacterial, protozoic, parasitic, or fungous, means the recognition of progenitors in the near environment of the infected organism. In practically every one of the diseases of animals above named the scientific investigator has already discovered the nature of the infecting agent, knows its life-history, what conditions are most necessary for its propagation and multiplication and what will remove and annihilate so dangerous an enemy.

Our Department of Agriculture, and especially the Bureau of Animal Industry, has done much to place comparative medicine on a scientific basis. Briefly stated, there is not a fungous-parasitic, animal-parasitic, protozoic, or bacterial disease of the lower animals which cannot, with our present knowledge, be stamped out for all time.

Why do the acute epidemic infections attack the swine, fowl, and cattle of the agriculturist? Because the causative germ is allowed to live and multiply after a former epidemic or it is transplanted

from place to place by infected animals or by fomites. All of these acute diseases of the lower animals are preventable. One has but to read of the labors and investigations of Pasteur in relation to charbon, to the silkworm disease, and to fowl cholera to know what indifferent, careless methods may do to prolong and propagate an infection. On the other hand, proper precautions as to the destruction by fire of the infected bodies of animals and plants, the application of cleanliness through the use of abundant pure water, pure food, air, and sunlight would extinguish an epidemic.

This may imply the loss of infected property by the individual, the municipality, the State, or the national government, but fall the loss where it may, it is often necessary to destroy absolutely the infected organism that the greater commercial interests as well as the health of the people may be preserved. For example, actinomycosis of cattle, trichinosis of swine, tuberculosis of cattle may be absolutely controlled and finally obliterated by proper sanitary measures. The expense of such an undertaking would be relatively great, but under the direction of scientists it can be done. Pasteur, with the aid of the government of France, abolished swine plague, charbon, silkworm disease, and other conditions harmful to the agricultural interests, with the result that millions of francs were saved to individuals, to corporations, and to the government.

The same happy result would occur here, and in addition the health of our people would be protected against the possible infection with tuberculosis, actinomycosis, trichinosis, and intoxication from other infected animal foods.

SMALL-POX.

But what of the epidemic scourges of the earth, small-pox, yellow fever, cholera, and the plague? No rational individual can for a moment doubt the protective influence of bovine vaccination against small-pox. Let one but look up the statistics of the mortality of this disease in the antivaccination period, and he will become convinced of the utility of protective vaccination. In London the annual mortality from small-pox from 1660 to 1810, per million of the population, was 2,040 to 5,020, while with vaccination, not adequate, however, the death rate per million was from

1831 to 1835.....	830
1838 to 1853.....	513
1854 to 1871.....	388
1872 to 1882.....	262
1883 to 1892, only.....	73

In Germany, where variola had decimated the population in the prevaccination period, thorough vaccination has practically stamped out the disease.

Compulsory vaccination properly enforced would effectually eradicate the disease and would free commerce of the losses due to quarantine regulations. The question of individual rights, especially under a republican form of government, is debatable when one considers that science has proved the efficacy and utility of protective vaccination against variola, that with modern methods the process is free from the danger of inoculation with any other disease, that vaccinia is practically a harmless disease, and, finally, that an individual right may become an evil when the practice of it subjects others to unnecessary risk of health, life, and property.

Medical science, therefore, possesses the knowledge to rid the earth of variola. From a humanitarian point of view, this knowledge is priceless. Still, let one but compute the sum saved to the nations of the earth by vaccination, estimating each life saved at \$5,000, the usual valuation placed upon human life by statute. Great as would be this sum, it is many times less than that saved to the commercial interests of the world by the control of the disease, which even inadequate vaccination has afforded. Think for a moment of the loss to commercial interests by quarantine and other restrictive measures in the event of an epidemic of variola without protection from vaccination.

THE PLAGUE.

The plague, the Black Death, which was first recognized in Europe in the year 543 as the *peste Justinienne*,¹ became pandemic in the fourteenth century and 24,000,000 people are said to have died of it. In 1655 London alone lost 70,000 people from the plague. It disappeared from Europe about 1720. It continued, however, in Egypt, Asia, and other Eastern countries in small foci, occasionally occurring as severe local epidemics. In 1830, 60,000 people died of the pest in Bagdad. During the remainder of the nineteenth century it appeared sporadically in Asia, Turkey, Tripoli, Persia, and other Asiatic countries. In 1891 it reappeared in epidemic form in middle China. From that date to the present time it spread over China, reaching Canton in 1894, Hong Kong in epidemic form in 1896, and Bombay in the same year. It appeared in Oporto in 1899, in Glasgow in 1900, and in San Francisco in 1901, not to mention sporadic cases elsewhere in seaports of Europe and Central and South America.

In 1894 Dr. Yersin, director of the Pasteur Institute at Hong Kong, discovered the *Bacillus pestis*. He elaborated a serum which has since been used with success as a prophylactic and curative agent. Haffkine prepared a protective vaccine

¹ Ph. Hauser, *La Peste dans les temps anciens*, etc., Paris, 1900.

which has also proved successful as a protective inoculation. It has been used in hundreds of thousands of cases in India with no harmful results, and is said to reduce the susceptibility at least 75 per cent. and the mortality about 90 per cent.²

The plague, the Black Death of the fourteenth century, still exists and rages with fearful mortality in communities which have no regard for hygienic surroundings. It is communicated to people through the abraded skin, or by flea bites, through the respiratory tract apparently by bacteria in dust-laden air, and also through the alimentary tract by contaminated ingesta. Modern hygienic measures, which consist of perfect cleanliness, isolation, the destruction of vermin, and the use of Haffkine's vaccine as a prophylactic and Yersin's curative serum, serve to control the disease. There can be no doubt that if sanitary authorities will take proper precautions to recognize the disease, proclaim its presence, and then control it by the means which science has discovered, the terrible scourge may be safely held in check and finally abolished from every civilized community.

The value to commerce of the discoveries of science in relation to the plague cannot be computed. While the knowledge of its cause and prevention is exact, the impossibility of controlling the unsanitary conditions of the countries of the East and even of our own western world makes it necessary to continue the quarantine regulations which so often restrict commercial ends.

YELLOW FEVER.

The mortality from yellow fever in the United States during the last one hundred years, 1798-1897, has been about 80,665.³ This gives an average annual mortality of 807. Several severe epidemics have occurred, and it has prevailed extensively in smaller towns where the mortality records have not been kept. Hence the foregoing figures do not represent the full annual death rate from the disease. Yellow fever has been the scourge of the West Indies, Central and South America, Mexico, and our Gulf States.

Recognized as an infective disease, indefatigable search has been made for the bacterial cause by many earnest workers. Apparently up to the present time the specific infective germ has not been found. Indeed, from a recent paper⁴ by Reed and Carroll, it would seem that the bacterium must be infinitesimally small.

Although we do not know the specific bacterium of yellow fever, a most brilliant discovery has been made of the means of transmission of yellow fever

by means of the mosquito (*Stegomyia fasciata*) by two of our countrymen:⁵ Walter Reed, surgeon U. S. A., and James Carroll, contract surgeon U. S. A. Twenty years ago Finley associated the transmission of yellow fever with the mosquito, but no proof of this was given until the epoch-making and decisive experiments of Reed and Carroll. Furthermore, these experiments proved that fomites contaminated with the vomitus and discharges of yellow fever patients did not transmit the disease to man.

In Havana, Cuba, the sanitary authorities of the United States have attempted during the last year or more to test the fact of yellow fever transmission by the mosquito. To this end the city was made clean; the breeding places of mosquitoes in and about Havana were destroyed as far as possible, and persons suffering from yellow fever were isolated and protected from the mosquito. Thus the number of mosquitoes was much diminished and care was taken that remaining mosquitoes did not become infected by biting yellow fever patients. As a result yellow fever disappeared from Havana and for the first time in years no case had occurred up to May 1st of this year. The usual marine quarantine regulations of the United States restricting the non-immune travel from Cuba were postponed. Furthermore, the Congress of the United States will probably modify the quarantine regulations in reference to yellow fever to meet the more hopeful conditions which the researches of Reed and Carroll have established in relation to the definite transmission and control of the disease.

There can be no doubt of the practical value of this important discovery to mankind. Proper sanitary measures in reference to cleanliness, the destruction of mosquitoes and their breeding-places, and proper precautions against the infection of the few undestroyed mosquitoes by isolation of every imported case of yellow fever will eradicate the disease from every civilized country.

MALARIA.

Malaria has not borne so important a relation to commercial communications between peoples as yellow fever and the plague. Nevertheless, it has had an enormous influence upon the health and prosperity of the inhabitants of certain regions where it is endemic and at times epidemic in its prevalence. The principle which prevails to induce malaria in a certain region is the existence of human malaria and of the mosquito of the genus *Anopheles*.

The mosquito is annoying but harmless until she

² *Chin. Med. Jour.*, January, 1900.

³ Obtained from the records through the kindness of Surgeon General Walter Wyman, U. S. M.-H. S.

⁴ *The Etiology of Yellow Fever*, *ibid.*, Feb. 22, 1902.

⁵ *Experimental Yellow Fever*, *Trans. of the Assoc. of Am. Phys.*, vol. xvi, 1901.

becomes infected with malaria by biting a human being infected with the disease. Such an infected mosquito may inoculate all the people she subsequently stings. In this manner a region ordinarily free from malaria may become infected by the importation of a case of malaria from a distant point. It is also possible that a mosquito infected with malaria could be transported by railroad or ship in the luggage or clothing a considerable distance and then sting and infect individuals in its new environment.

We have many examples of infection of people in localities usually free from malaria through its introduction by means of imported laborers employed in the construction of railroads, canals, etc. Malaria was rarely found in Chicago until 1891, when the construction of the World's Fair buildings was commenced. Then it was attributed to the excavations and the turning of virgin soil. The construction of the Chicago Drainage Canal began at the same time and continued until 1900. During that period malaria was constantly present in Chicago, and in 1898-9 was augmented by importation of infected soldiers from Cuba and other malarious regions. No one can doubt that malaria was imported in the persons of some of the foreign laborers employed in the above-named enterprises, and that the previously innocent anopheles became infected and afterward inoculated many people who suffered from malaria at the period named.

The mortality of malaria in malarious districts with a considerable population is large. Thus, Professor Celli⁶ says that the mean mortality from malaria in Italy is about 15,000 victims annually, and that about 2,000,000 cases occur in Italy each year. As the mean duration of malaria is generally long, sometimes infecting the individual for years, the loss of labor and of production and the expense entailed in dealing with the disease amount to several millions of francs. Furthermore, Celli says that owing to malaria about 5,000,000 acres of land remain uncultivated, with a resulting large economic loss. According to the very accurate calculations of Ricchi, the Adriatic Railway Company, with 1,400 kilometres of road and employing 6,416 men, spends on account of malaria alone 1,050,000 francs a year. In the Italian army in the twenty years from 1877 to 1897 there occurred more than 300,000 cases of malaria. Finally, Celli says malaria annually costs Italy incalculable treasure.

Malaria is so widely disseminated over the world and the opportunity for continued infection of the mosquito so great that it seems almost hopeless to try to eradicate the disease. The principle upon which malaria may be fought has been suggested

by science and has proved of value. This consists in the destruction of the mosquito and its breeding places, the prevention of the infection of the remaining mosquitoes by isolation of the malarious individual from the mosquito, and the diminution of malarial material in man by an attempt to cure him with quinine and other antimalarial remedies.

Experiment has already demonstrated that non-immune individuals may live safely in the most malarious districts, with adequate yet simple protection from the sting of the mosquito infected with malaria. Man thus protected against malaria may now explore, settle in, and develop regions of the earth hitherto inaccessible because of the danger from the deadly tropical malaria.

This address would become too long were one to take up other infectious diseases, although in some of them the science of medicine has made such successful investigations that the knowledge of the cause, means of propagation, and dissemination is exact.

TYPHOID FEVER.

I cannot close without saying that if in typhoid fever we could employ, unembarrassed by the great cost of the necessary measures, the precautions which science affords to prevent water and food contamination, the disease would be effectually abolished. The great cost of the measures necessary to stamp out typhoid fever would, however, be an economic measure, inasmuch as the immense value to the state of the conservation of the labor of the thousands sick and the lives saved each year would more than compensate for the treasure spent.

VALUE OF MEDICAL SCIENCE NOT RECOGNIZED.

However much medical science has done for humanity and great as the value of the knowledge of infectious disease is to the commercial interests of the world, scientists have not, especially in our own country, received the recognition and financial aid from the State, from corporations, or from wealthy individuals which they deserved.

MEDICAL SCIENCE SHOULD RECEIVE FINANCIAL SUPPORT.

Medical science should receive the moral and financial support of States and municipalities in the employment of the measures which science has proved to be efficacious in modifying, restricting and abolishing infectious disease. Wealthy corporations and individuals should establish institutes of original research in properly constructed and equipped hospitals and laboratories. There the many earnest, indefatigable, and conscientious medical investigators could make more perfect the knowledge we already possess of many of the infectious diseases and, unembarrassed by financial

⁶ Malaria According to New Researches, 1900.

needs, could search for the cause, the means of transmission, and the prevention and cure of the diseases of which we know but little.

Funds, too, should be created to support the cost of committees of scientific investigators in regions now dangerous to the white man. By such means the many plagues of the tropics would be investigated and conquered. Regions uninhabitable or dangerous to the Caucasian would become accessible to settlement and commercial intercourse. Civilization, humanity, and commerce would be advanced and multiplied.

It is right, therefore, that medical science should demand of the moneyed interests of the world the recognition which, though long withheld, is her just due. This she asks, not that individuals may profit in either fame or fortune, but that she may the more readily rid the world of infectious diseases for the sake of humanity.

SUTURE OF HEART WOUNDS.

THE ORATION IN SURGERY DELIVERED BEFORE THE
FIFTY-THIRD ANNUAL MEETING OF THE AMERICAN
MEDICAL ASSOCIATION AT SARATOGA
SPRINGS, N. Y., JUNE 10, 11, 12
AND 13, 1902.

By HARRY M. SHERMAN, A. M., M. D.,
SAN FRANCISCO.

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THE RECORDED SUTURES OF THE HEART.

In 1896 three operations for the suture of wounds of the heart muscle were done. Two are recorded as having been done in 1897. Four are credited to 1898. In 1899 the heart was sutured eleven times, in 1900 three times, and in 1901 nine times, three of this last set being done in this country. This year two operations have thus far been reported. This makes a total of thirty-four operations in the six years following the first attempt to treat, by a simple surgical procedure, an organ usually supposed to be particularly vulnerable, in fact so vulnerable that any interference, even for surgical purposes, might be followed by immediate fatal results.

There is more than enough material here for our consideration at this time, and I beg you to follow me in the necessarily brief discussion which I offer you.

In order to start with some knowledge of the results of these operations before any discussion, in

general or in detail, is attempted, a short review of them will be necessary.

REVIEW OF THESE CASES.

As regards the manner of wounding, all these cases, except two, were due to punctured or incised wounds, the two exceptions being bullet wounds. The particular injury to the heart was inflicted on the ventricles thirty-two times, the left ventricle being implicated seventeen times and the right thirteen times. In two cases only were auricles opened, once the right and once the left, and there are three cases in which my information is incomplete. In most of the cases where details are given the pleura is reported wounded, and usually there was a hæmothorax, the collection representing, in large part, the overflow from the pericardium.

The practical questions which usually come to the mind of a surgeon in planning an operation to meet these conditions relate to the method of exposure of the heart, the detail of the treatment of its particular condition, and the method of closing and dressing the wound of the operation.

In the cases reported the heart was reached variously, depending on the location of the original wound in the skin and the choice of the operator, but either a flap of all the tissues of the thoracic wall was turned up or a resection of two or more ribs was practised. The particular detail is of no great moment, provided the heart is properly exposed. The special method of treating the heart wound is of interest, for it involves the choice of suture material for a novel situation, the time at which the suture is introduced and tied with reference to the heart beat, and the depth of the stitch in the heart muscle. In our cases three operators are recorded as having used catgut—Fontan, of Paris, Marion, and Launay; in all other instances where the suture material was specified silk was used, and in most cases the sutures were interrupted, though in a small number a continuous suture was practised. It is of interest to note that these operators particularly avoided including the endocardium in the suture. One of them definitely reports introducing and tying the suture during diastole.

As regards the closure of the wounds—the tissues involved in the flaps or incisions were, of course, replaced: in seven instances drainage of the pericardium and pleura was practised, and in four the pleura alone was drained. The other cases are said plainly to have been closed without drainage, or nothing is said of the matter at all.

RESULTS OF THESE CASES.

Now, of the total number, five died on the operating table, of hæmorrhage, and ten died very soon afterward, of the effects of hæmorrhage or the

shock of the operation; so that nearly half of those that survived the injury long enough to be subjected to operation died during or very shortly after that operation. The other group, nineteen in number, had various fortunes, but thirteen of them recovered and only six died. I think it is fair to stop a moment and consider these facts. Surely the fifteen who died of hæmorrhage or shock with operation would probably have died of hæmorrhage exactly the same without operation. No fatal traumatism is inflicted by exposing the heart, and stopping the hæmorrhage from an incised or punctured wound in the ventricles is a simple matter when the heart is once exposed; indeed, pressure with the finger or a tampon will stop it temporarily. At all events, the operation and suture did not add materially to the amount of blood lost, and so cannot be counted as having hastened the death from hæmorrhage, and the average amount of shock I cannot estimate. But I believe that it is fair to say that these patients had, from the first, practically no chance to recover, and that, if this had been known, the operations need not have been done—but I say this with full appreciation of the fact that the inevitable fatality could not have been definitely predicted in any case. Of the other nineteen, the comment is, plainly, that they had a chance to recover. In each of them the suture of the heart was a successful procedure; in not one instance was the fatal outcome due to a secondary hæmorrhage. The six who died succumbed to the common matter of an infection, sequent to wound and operation. Of the thirteen who recovered, four did so in spite of a concurrent infection. But the point is that, of these thirty-four patients, fifteen had really but very slight expectation of benefit from the operation and died probably neither in spite of it nor because of

it—nineteen had expectation of recovery from operation, and in thirteen that expectation was realized.

I do not wish you to think that I am trying to make these cases give a better percentage of recoveries than they really do. That percentage, as the whole list stands now, is about one third. But if we wish to consider only the final success or failure of the suture of the heart muscle, we must limit our inquiry to the cases in which this procedure was really tested, and then we see that the percentage of recoveries may be considered a little more than two thirds.

SLOW ADVANCE IN HEART SURGERY.

The road to the heart is only two or three centimetres in a direct line, but it has taken surgery nearly 2,400 years to travel it, for I take it that the operation of opening the chest for empyema, which was known to Hippocrates, was a direct predecessor of the attempt to treat other thoracic viscera. It does not need to be said that during most of this time surgery stood still and that the advances were little by little. We all know that before the antiseptic and aseptic eras pleurotomy for empyema gave very terrible results, and there could be but scant encouragement to draw surgeons to fresh fields. However, more than a century ago (1798) Desault, with the logic and precision which still characterize the French school, laid down the rules for opening the pericardium for an empyema situated in that sac, and anticipated much of the technics of today, and it took surgery ninety-eight years to pass from the pericardium to the epicardium, across a space that is such only potentially.

It is a little odd that surgeons have hesitated so long to go to the aid of the wounded heart in man. Physiologists for years have experimented on the hearts of animals selected from nearly all the spe



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cies of the animal kingdom. The special references to this matter are not needed here, but it is germane to the subject to note that the tolerance of the mammalian heart for manipulation, and its persistence of action in spite of wounds and obstacles, have long been known.

The experience of the various operators has been, as might therefore have been expected, that the heart of man was no more resentful of intervention than were the hearts of other mammals, and not only that it could be handled, and even partially lifted from the pericardium, but that its muscle could be sutured so as to close a wound, just as can be done with the skeletal muscles. However, in the case of the systemic muscles rest can usually be enforced, either completely or partially, during the process of healing, but this cannot be done with the heart. Here comes the great difference between the heart muscle and the skeletal muscles, as regards both suture and the reparative process, the heart must continue to act for the whole of the time.

The question now centres, first, on the possibility of properly suturing, that is, placing a practical suture in the moving heart, and, second, on the result of the healing process. The first question is one of only technical moment, for the work on animals has shown that it can be done, and the experience of those who have sutured the human heart has not disclosed any special difficulty in the procedure, but the matter and manner of the sutures are debatable. The general advice is that the sutures of muscle should be of silk, and it has been most frequently used in the heart muscle, but three of the successful cases, the two of Fontan's and the one of Launay's, were sutured with catgut. Elsberg has advised, as the result of his experiments on rabbits and dogs, that the suture material be silk, and that the suture be an interrupted one, and very superficially placed, believing that deep sutures will tear out, while superficial ones will hold. He also advises that the suture be placed and tied during the diastole of the heart.

EXPERIMENTAL RESEARCH.

To discover, if I might, the exact value of these somewhat confused matters, I have exposed the heart in eleven dogs, and made wounds of various sizes and in different directions in the left ventricle, limiting myself to that particular cavity, as it was the one most frequently wounded. In each instance, except perhaps one, I verified the opening of the cavity of the ventricle by passing an instrument into it so as to get a free spurt of blood during one or two systoles. It was found that this verification was a practical necessity, for the non-penetrating wound of the myocardium will give forth, during systole, a spurt so large that it could easily

be confounded with one from the cavity of the ventricle. These wounds were then sewed with ordinary commercial cumolized catgut; in some, deep and superficial stitches were combined; in some, very deep, so as to surely penetrate the endocardium, were used, and in others very superficial stitches; and the variations of interrupted, continuous, and recurrent continuous were practised.

In the earliest operations toothed thumb-forceps were used to pick up a few muscular fibres to steady the organ for the making of the incision and placing the sutures. At the first pinch the heart, of course, delayed a systole and then began to beat rapidly and violently, and continued this as long as the forceps was in place. It was exactly as if the heart were surprised and at first checked by the intrusion of the forceps teeth, and then recovered to make violent and strenuous efforts to escape from the grip, and if the forceps's hold was continued, it usually succeeded in this by the tearing of the fibres. One of my dogs died on the table from hæmorrhage due to the tearing of the muscle in the bite of the forceps and my inability to at first catch the edge of the open wound in the bottom of a pericardium overflowing with blood, and although I did finally succeed in getting in two sutures, they were placed too late.

A METHOD TO HOLD THE HEART DURING SUTURE.

To overcome this difficulty with the forceps, I put into the heart, before incising it, two long suspension loops of silk, dipping the needle carrying them deep into the ventricular wall. These gave complete control of the organ, for they did not tear out, and even though the heart was hanging from them, its function continued, and much less tumultuously than it did in the bite of the forceps; and with them the heart could be lifted quite half-way out of the pericardial incision, or it could be swung to one side or the other, or rolled over in either direction, its range of motion being limited only by the great vessels at the base.

I placed these loops side by side and about a centimetre apart, and could then incise between them, hold the wound open by traction of the loops to verify penetration, and then, crossing the loops, absolutely stop bleeding and steady the heart, for under this control the point of the incision seemed to be the starting point of the systolic waves.

DIASTOLIC SUTURE UNNECESSARY.

Now, even with the incision coaptated and held relatively motionless by the crossed and taut suspension loops—so that the placing of a suture was no more difficult than in an indifferent tissue—I found it impracticable, yes, impossible, to make a diastolic thrust of the needle, to pull the suture into place in the succeeding diastole, and to tie the knots

in the ones following. To do this would require a man to work with accuracy, and yet with perfectly timed breaks in his work, in various fractions of successive seconds—for these hearts are always beating more than one hundred times to the minute. And the impossibility which I encountered has made it very difficult for me to believe that anyone, even if he has attempted it, has every really done it. Nor can I see what is gained by it.

The heart does not bleed in diastole, it bleeds in systole, and the suture must be tied, to be efficient at that time, and the way to do it is to tie quietly and firmly, during the rapid beating of the heart, and to take no account of split second diastoles, but watch the knots as one should watch the knots of the ligature in a major vessel. And the same judgment which controls the tension of the suture should control the depth to which it reaches. I cannot agree, from what I have seen of the actual working of the matter, that a superficial suture will hold where a deep one will tear out. One is suturing the myocardium, not the epicardium. Of course, it is inadvisable to penetrate the endocardium, but it is, at the same time, and fortunately, a difficult thing to do. I did it once because I intended to do it, and I had to take a larger needle than I had ordinarily worked with, and definitely carry it through the heart wall and return; and from this I learned that, with the medium-sized, full-curved needle which one would commonly use, the penetration of the left ventricle was not to be feared.

On this point it only remains to be said that, in the case in which the endocardium was included in the stitch, the strand of suture stretched across the cavity of the ventricle was the occasion of the formation of a little globular clot, which was found at the autopsy to be firm and white and surrounded by a large post-mortem clot.

Elsberg's very complete studies of the healing process showed that the muscular fibres in the bight of the suture atrophied and were replaced by fibrous tissue, and he points out that, very evidently, there would be less of this lower grade tissue in the case of an interrupted suture; but, so far as I have been able to judge, the difference amounts to very little practically, and the saving of time in the continuous over the interrupted suture is manifest, and it is the method finally advised by Terrier and Raymond a year ago. I had thought that the lessening of the number of knots on the epicardial surface by the use of the continuous suture might be a special point in its favor, but the matter seems to be unimportant, for all knots quickly sink into the tissues, leaving a flush surface which is covered with fibrin.

CAUSES OF DEATH.

For my experiments I have used dogs—primarily because of the size of the heart in the larger dog—

and I had the same difficulty that other experimenters have had with the animal, for there is no mediastinum, the whole thorax being lined by one continuous membrane, and as soon as this is opened both lungs collapse, so that artificial respiration by bellows is needed. There are two important points in connection with this fact: a very large serous surface is exposed to the air and to infection, and it is practically impossible to avoid leaving a certain degree of pneumothorax when the chest is closed. Collateral traumatism and infection, then, led to the early death of most of the dogs; indeed, only two lived ten days, and then both died of empyema and pyopericardium. This makes it impossible for me to speak as confidently regarding the catgut suture as I should like, for *a priori* I should prefer in this place the absorbable suture, because a stitch once in is there to stay, and the opportunity of going back and removing it, if its presence is resented by the tissues, cannot be looked for. Still, it is to be noted that one operator, Fontan, of Paris, has the distinction of having twice sutured the heart, with the recovery of both patients, and Launay has successfully closed two wounds in one heart, the suture material in all three cases having been catgut, and, on the other hand, Nietert, of St. Louis, has also two successful heart sutures to his credit, his suture material being silk. Still, if it can be shown that the healing process takes place to a practical extent during the persistence of the catgut, it will be reasonable to argue that no great objection can lie against the absorbable suture. In Elsberg's paper he asserts that reparative processes are in train in twenty-four hours, in forty-eight hours there is a dense round-cell infiltration, by the fourth day spindle cells appear, by the seventh day they replace the degenerated muscle fibre, and by the tenth day the granulation tissue is becoming fibrous tissue. He reports several rabbits killed on the fourteenth day with the wound in the heart firmly healed, and in one instance a rabbit dead of sepsis had a firmly closed heart wound on the eighth day. In two of my dogs, both dead of sepsis on the tenth day, the heart wounds were firmly closed, with no evidence of leakage or hæmorrhage, although in one the infective process had attacked the epicardium and penetrated the myocardium. It does not need to be said that these dogs count for very little; but the inference is simple, from the whole evidence, that wounds of the heart muscle heal very rapidly and that the process may be practically completed quite within the life of a catgut suture. And the evidence of Fontan's two patients, one of whom was infected, and Launay's case of two wounds in one heart, is on the same side, and I shall therefore assume that catgut is, at least, a permissible suture material.

SUCCESS OF THE CLOSURE OF HEART WOUND.

Finally, it has to be said that in my dogs these sutures, however placed or tied, always controlled the hæmorrhage and closed the opening, and that the healing processes, as they were studied, followed a course practically similar to that in Elsberg's experiments on rabbits, up to the death of my animals. They show that the repair in heart muscle is in no way different from the repair in skeletal muscles, and that it is no more interfered with by the action of the heart than are the nutritive processes of the organ.

I do not know of any of the successful cases of heart suture in man having proved fatal later, but there is reference to a case of Izzi's in which the heart was wounded but not sutured, and the man recovered, but on the twenty-eighth day, having left the hospital, made considerable effort to lift a weight and had rupture of the cicatrix in the heart wall and sudden death. Of course, the wound in this heart had been filled by a coagulum, and in the process of healing this was organized or replaced by cicatricial tissue, and there never had been the proper coaptation of the heart muscle in the edges of the cut.

So far as the heart itself is concerned, the proposition for its suture, in case of wound, is properly established; and if it were a superficial organ and easy of access, and if the path by which it is reached could easily be closed again, the whole matter would be eminently simple. The operation would be more frequently done, for the occasions demanding it would more frequently arise, and the whole technique would be quickly worked out in detail. But the heart, while it is close to the surface of the body at one point, is not a superficial organ, and to reach it the bony and muscular chest wall has to be traversed—a matter of no special import—and two serous sacs have to be invaded. Herein lies the great difficulty.

INTERFERENCE OF THE PLEURA.

It is true that in a dissection the pericardium can usually be reached without a wound of the left pleura, but it can only be done by taking the pleura definitely into account. The anterior limits of the sac are very various and in the dissecting room it has been found to extend across behind the sternum almost to the right border of the bone. Commonly it overlaps and lies just internal to the left border of the sternum as far down as the fourth cartilage, and from this point gradually passes downward and outward, crossing the sternal end of the fifth cartilage and just internal to the middle at the sixth. A wound, therefore, to reach the pericardium and heart without injuring the pleura would have to be placed in the sixth interspace and

close to the sternal edge, and be directed almost exactly backward. This place is so small that practically it is never found, and it is necessary to consider that all wounds which penetrate the pericardium have traversed the pleura, and it is across the same tissue and sac that the surgeon must pass who attempts to repair the wound. There is another point to be considered here. The opening of a serous sac, either accidentally or surgically, exposes it to infection, and the serous membrane, by a power inherent in it, deals with such infection as occurs unless the latter overwhelms it. The question has been thoroughly studied by all, in its relation to the peritonæum, but I wish merely to refer to the fact that the peritonæum offers opportunities for the localization of an infection which cannot otherwise be disposed of, and that intestinal rest may contribute greatly to this localization. Both the pleura and the pericardium differ from the peritonæum in this respect—the surfaces of neither offer pockets or recesses in which an infection may be confined, and constant motion incident to breathing and the heart beat tends to disseminate pathogens and to quickly distribute them over the whole surface of the sac.

So far as the arrangement of the lymphatics of the pleura is concerned, its power of absorption should be greater than that of the peritonæum, and in certain cases of infection, as in the empyema of pneumonia, it does show considerable ability to deal with the condition; but in view of the great frequency of infection of the left pleura in connection with heart wounds, I am obliged to believe that the inability to obtain surgical rest for the tissue is a prominent factor in producing and perpetuating the condition.

In writing on wounds of the pleura and lung, Terrier and Reymond maintain that infection of the pleura is not likely to occur unless there is a coincident wound of the lung. They argue that the infection probably comes from a bronchus, and base the treatment necessary for a traumatic hæmothorax on the presence or absence of hæmoptysis. In no one of the clinical histories of these heart wounds which I have seen is there mention of hæmoptysis, but they nearly all had hæmothorax, large quantities of blood being in the pleura.

SEPSIS AND DRAINAGE.

Of the thirty-four cases, nineteen lived long enough for the development of an infection, and in ten it developed, and of these six died, showing that infection so affects prognosis in these cases that a man infected has not so much as half a chance to recover; or, to put it differently, more than half were infected, and of these more than half died. It is of particular interest to know the time of the

implantation of the infection, and I have found records of nine other cases of wounds of the pericardium and heart which were not submitted to any primary operation, and these three patients had local infection, and one had primary local healing but died of a peritonitis. The number of cases is very small, but so far as they go they show that about one third of them are infected by the wounding instrument and that primary operation increases the chance of an infection to more than half; this, however, must not be taken as counting against the doing of the operation, for its object is to control conditions which lead to certain death, and even with an infection recovery is not impossible. The knowledge of the great likelihood of an infection at the time of the receipt of the wound must be made use of, and one must consider if such a wound is not to be treated as one already infected. If this is done, some method of drainage will be employed, and the detail of its arrangement is complicated by this fact, that one serous sac, the pericardium, must be drained across or through another, the pleura. The advice is given, probably in view of this difficulty, that both pericardium and pleura be closed without drainage, but some operators have drained, and their results merit consideration. So far as I can learn, eleven of the thirty-four cases had primary drainage arranged, four for the pleura alone, and seven for the pleura and pericardium. Of the eleven patients, seven recovered, though two had infection. Of the four who died, two died of sepsis, and two of collapse before the possibility of knowing if sepsis was to develop or not, and if we exclude these last two, we have nine cases drained and seven of recovery.

Now, on the other side, there were nine that had no primary drain, and did have infection, and of these five recovered. The number of cases is small, seven out of nine and five out of nine, but in these cases, as in many, many others, a hair, perhaps, divides the chances of success from those of failure, and where we have only small statistics at hand, it is with those that we must work, and on them base our future actions.

In the drainage of the pericardium there is a point worth mentioning. The material should, of course, be gauze, it may be put in a small space, left unclosed at the lowest point of the wound (Mignon et Sieur) and it does not need to go deep into the sac, for with the patient supine or reclining the heart will sink in any effused fluid toward the dorsal side of the sac, displacing the fluid toward the ventral side, where a drain may easily reach it; but the fluid must pass upward from the pericardium toward the skin opening, and this is, of course, a disadvantage. For the pleura a drain may be arranged to make its exit by the same opening as that

for the pericardium or, and this seems the wiser plan, it may have an independent opening near the posterior axillary line, where it will be of most service if empyema does develop, and may, in such a case, obviate the need of a secondary thoracotomy. Of course, if no sepsis supervenes all drains should be very shortly removed.

OTHER POINTS TO CONSIDER.

In the time allotted this paper on the programme of the association it has only been possible to discuss the two technical points of suture and drainage, and the matter of the symptoms and the anatomical details of the wounds which have been put on record have, in spite of their importance, been passed by. Very briefly, the symptoms may be listed as consisting of the external wound in the precordial region, the general evidences of hæmorrhage, the disturbance of the heart function sequent to the trauma and the acute anæmia, and the local signs of the filling of the pericardium and, secondarily and in most cases, the pleura. As regards the wound itself, I believe, from examining the hearts which I have punctured and incised, that the endocardial wound is always smaller than the epicardial wound, except, I should imagine, in the bullet wound cases. This difference in the size of the wound at its two limits will explain the living of some with apparently large wounds, but from which the amount of bleeding has not been commensurate with the size of the visible wound. It is necessary only to revert to the fact that the different parts of the heart behave somewhat differently when wounded. The thicker wall of the left ventricle offers a greater obstacle to hæmorrhage and a better opportunity for suture than any other part; wounds of the right ventricle bleed more and are more difficult to suture, and the thin-walled auricles are saved from a lethal hæmorrhage, when they are wounded, by the comparatively low pressure of the blood in them, while in their loose structure a practical suture is a difficult thing.

CONCLUSIONS.

The operations which have been recorded mark only the beginning; the heart is now destined to be submitted to many manipulations, provided they may be done without stopping its action at once. It is a very unsafe thing to prophesy, but that more will be attempted can easily be inferred, for interference with the mitral orifice has already been suggested, and the immediate neighborhood of the heart has been invaded and a sacculated aneurysm of the aorta has been tied off, the success of this well-executed manœuvre being prevented only by the failure of the atheromatous vessel walls to heal. Possibly the next step may be delayed as long as the application to the heart of common surgical meth-

ods was delayed after Desault had taught us to open the pericardium. Perhaps it may come soon. It is not impossible that a new surgical technics may have to be created, but it is most probable that the next step will be based on the new application of the very old matters of the suture and drainage.

The author then narrated his experiments and showed a tabular statement of the operations on man. He closed as follows:

CLOSING REMARKS.

The early death of these dogs was a disappointment, for I had especially desired to see if the cicatrix in the heart muscle would stretch with the lapse of time, or would yield under the strain of rapid and forcible action. As it was, in no instance was death due to the rupture of the wound or to hæmorrhage from the failure of a stitch, and in the two dogs which lived long enough to permit a satisfactory observation the wound in the heart was rapidly healing. The supervention of sepsis and its usually rapidly fatal effect was apparently unavoidable, for all the technics of the operating-room, even to having the preparation of the dog and the instruments and the operating-table in the charge of a male trained nurse, was practised. As I have said in the body of the paper, the pleura lacks the mechanical arrangements which favor the localization of infection in the peritonæum, and an originally minor infection has opportunity to become a general and extensive one. Drainage of the pericardium and pleura in the dog is not to be thought of, because the pericardium is in the middle of the one pleural sac, and could only be drained through it; and drainage of the pleura would inevitably result in the collapse of both lungs. Therefore the dogs were permitted to die, and no effort was made to help them out of their septic state.

The Relation of Chlorosis to the Eye.—Dr. George F. Suker (*Medicine*, May), at the close of an interesting paper on this subject, says that a summing up of the subject matter will give us the following data: 1. Optic atrophy, papilloretinitis, and pseudoalbuminuric spots can and do have a chlorosis as their causative factor. 2. Double optic atrophy associated with chlorosis may simulate brain tumor to a marked degree. 3. Headaches due to a refractive error and asthenopia are of a severer type and are often aggravated by the chlorosis. 4. Arterial pulsation in the retina is indicative of the severity of the disease, as is also the venous pulse. 5. The fundus lesions in chlorosis are the result of an autotoxæmia. 6. The prognosis in nearly every case is favorable, considering the severity of the hæmic lesion, excepting in optic atrophy. 7. The foci of fatty degeneration in the retina deserve special attention, so as not to be mistaken for albuminuric spots.

STATE MEDICINE, PAST, PRESENT, AND FUTURE.

EXTRACTS FROM THE ORATION IN STATE MEDICINE
DELIVERED BEFORE THE FIFTY-THIRD ANNUAL
MEETING OF THE AMERICAN MEDICAL ASSO-
CIATION, HELD AT SARATOGA SPRINGS,
N. Y., JUNE 10, 11, 12, AND
13, 1902.

BY J. M. EMMERT, M. D.

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INTERNATIONAL SANITARY CONFERENCES.

The severe measures designed for plague in the seventeenth and eighteenth centuries were adopted for cholera and yellow fever in the nineteenth century, and they were embodied, with modifications, in a lengthy convention, accompanied by an elaborate international sanitary code, at the International Sanitary Conference held in Paris in 1851, representing twelve European powers. This convention did much to spread ideas of municipal hygiene in place of useless quarantines. Inspection of dwellings and destruction of sources of infection were strongly advocated. In the United States various yellow fever and other epidemics called attention to the subject. In the city of New York, in 1866, the Metropolitan Board of Health was established. Later, in 1869, Massachusetts established a State board, and other States and cities rapidly followed. Ten years later, in 1879, Congress created a National Board of Health, and to-day municipal hygiene is receiving a great deal of attention.

Municipal hygiene in Europe has been carried to a much further degree than in the United States. At the International Sanitary Conference held in Vienna in 1874, much modification with regard to quarantine was commenced. Inland quarantine was rejected as inadmissible. The Conference of Constantinople recommended the establishment of a strict quarantine in the Red Sea, for the purpose of preventing importation of cholera into Europe, and this met with approval. This was regarded as the strategic point in the line of defense, and therefore tended to weaken reliance upon quarantine in western ports, and medical inspection was considered as a possible substitute in conjunction with local sanitary measures. Sir John Simon, Medical Officer of the Privy Council, in his memorandum, expressed the views of the Local Government Board upon the prevention of cholera, which greatly influenced the opinions of the delegates. The precautions recommended in detail the various means applicable for the removal of filth and the protection of water supplies, combined with careful disinfection of the discharges of any person who might be attacked.

In 1881 an International Sanitary Conference was

held in Washington, and was attended by the representatives of twenty-seven States, together with all the governments of Europe, except Switzerland. They discussed measures desirable to prevent the spread of yellow fever and cholera. No uniform agreement was arrived at on all points, but some of the recommendations were adopted by many of the foreign governments. After the invasion of Egypt by cholera in 1883, and of Europe in 1884, an International Sanitary Conference was held in Rome, in 1885. The interested powers were represented by their ambassadors or other diplomats, assisted by technical medical delegates. They traced the course of shipping from its point of departure from ports and cities where cholera is endemic, for instance, Bombay, Calcutta, etc., followed it through the Red Sea, the Suez Canal, the Mediterranean, to the open ocean. Later they considered the indications for inland precautions, and recommended the security of correct statements of sanitary conditions by the presence on big vessels of government medical officers independent of shipping companies, the disinfection on board, by means of steam chambers, of all soiled or dirty articles, the enforcement of strict precautions against the spread of cholera by the pilgrims to and from Mecca. Respecting the detention of ships, the powers represented expressed opinions that were arranged in the three following groups: Turkey, Spain, Mexico, Brazil, etc., favored the continuance of long quarantines. France, Germany, Austria, Hungary, Switzerland, Russia, Sweden, Norway, Italy, and Portugal yielded to the data of modern science—while desiring short periods of quarantine they favored such detention as was deemed necessary upon travelers and commerce; England and India advocated free passage without detention. Regarding quarantine, however, the opinions of Continental nations have been undergoing modification. - At the International Congress of Hygiene at Paris, during the exhibition of 1889, Dr. Proust, inspector-general of the sanitary service of France,

concluded a report on sanitation in seaport towns with the following propositions: "That it is the duty of governments and municipalities to render ports healthy; that sanitary works for seaport towns are more necessary than for other towns; that it is only after such works that any notable reduction in zymotic diseases and general death rates takes place, and that it is only when ports present a refractory soil for the penetration upon shipping can be suppressed." In spite of the dubious significance of the last resolution, there was ample indication that quarantine was slowly but surely being whittled down to small proportions.

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GROWTH OF THE HOSPITAL.

The first hospital, or rather pest-house, was established in 1403 by the proveditors of Venice, on an island near that city, but only those actually attacked by the plague were at first admitted. Later several other maritime cities in the Mediterranean founded similar institutions. Hospitals especially for the insane were established first at Feltre, in Italy, then at Seville, in 1409, then at Padua, 1410, Saragossa, 1425, Toledo, 1483, and Fez, 1492. These hospitals may be regarded, however, rather as houses of correction or penitentiaries—in Lubeck these houses of detention were called "Tollikisten" (insane boxes) and were under the charge of the

jailer—than as institutions for the care and treatment of the inmates.

In 1460, in Frankfort-on-the-Main, there existed nine so-called insane asylums, each nine feet long, broad, and high, one of which contained a crazy woman, another a priest, a third a crazy apothecary. Of medical treatment there was not the least thought. The insane wallowed about in chains and without clothing in these horrible dens, covered with filth and their own excrement, as long as they were able to endure. Toward the close of the Middle Ages the treatment of the insane became a little better, especially in free cities, where compassion-



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ate citizens assumed their care instead of police jailers. This practice first started in Lubeck in 1478. Proper houses for the guardianship of the insane were also called into existence gradually by the example, donations, etc., of others.

THE FOUNDERS OF MEDICAL JURISPRUDENCE.

State medicine in the seventeenth century occupied considerable attention of the physicians at that time. Many contributed works on this subject; others devoted special time and study to anatomy. In the early part of the century the Pope's physician, Paolo Zacchias, wrote an independent work, renowned not only for its medical information, but especially for the legal knowledge it contained. Zacchias, I believe, is looked upon as the founder of legal medicine. Later N. Blegny, Gendrie d'Angers, and others, in France, wrote on state medicine.

But to the Germans, during the seventeenth century, are we indebted for active cultivation of this department. Ludwig von Hoernigk, in 1638, published a work on the duties of the medical profession as a whole; Paul Ammann and Hieronymus Welsch wrote works on the mortality of wounds; Melchior Sebiz, in 1641, likewise wrote on this subject and on the signs of virginity: John Friedrich Zittmann, Bernard Suerus, and John Bohn, the latter the scientific founder of state medicine in Germany, wrote on these subjects. Conrad Berth Behrens, ordinary physician to the court of Brunswick, and J. W. Pfeizer wrote on the duties of the forensic physician. The Hollander, Feltmann, expatiated on the examination of corpses, and John Brown on the mortality of wounds.

ACTUAL GROWTH OF LEGAL MEDICINE.

During the seventeenth century numerous ordinances of medical police, or hygienic ordinances, were enacted. This period may be styled the natal era of state police, and the law included ordinances relative to plague, clothing, food, the inspection of provisions, etc.

In the eighteenth century, state medicine was in a high state of cultivation, especially in Germany. Those who are acquainted with the works of Fabricius, Buttner, Ploucquet, Valentin, Ludwig, Tropanneger, Buchholz, Schlegel, Daniel, Platner, Teichmeyer, Alberti, Eschenbach, Metzger, Pyl, Uden, Delius, Baumer, Frank, and others, know to what extent forensic medicine had advanced in that country.

In France, the learned Bellocque, Prevost, Verdier, and others; in Spain, Del Valle, and in England, Farr—all are standard authors on state medicine.

In the beginning of the nineteenth century Pater

Frank introduced the official distinction of medical police and forensic medicine. He became the champion of hygiene and was followed by Hebenstreit, von Huszty, von Nassynya, Scherf, and others.

The part of state medicine which deals with practical instruction in sanitary science has, in Europe, been prosecuted in varying degrees in different countries. To such work as that carried on by Parkes, Klein, Creighton, Sanderson, Baxter, Smith, and others, in England; to the investigations of Pasteur, Chauveau, Duclaux, Chamberland, and others, in France; and to the bacteriological investigations of Koch and the chemical studies of Pettenkofer, in Germany, are we to attribute the present position of practical knowledge of hygiene.

In some countries the instruction of public hygiene is limited, being usually confined to a course of hygiene in some medical school. In others there are institutes of hygiene on the most extended scale, as, for instance, those at Munich, Leipsic, and Copenhagen. In Hungary the instruction in state medicine is of an extended character.

OPPOSITION TO VIVISECTION.

The progress of medical science, especially of physiology, biology, hygiene, etc., has called increasing attention to a higher degree of research in anatomy and physiology; to that end, vivisection of the lower animals is necessary.

At every session of legislative bodies of the various States in the Union and of every country in Europe an attempt is made by a set of so-called "antivivisectionists" to influence legislators to enact laws against vivisection. The fact of the matter is that vivisection is, unfortunately, a most misleading term to the laity. They seem to have the idea that animals are cut up alive by medical men, and compelled to suffer great pain for unjustifiable objects. A small proportion of the public know that anæsthetics are administered beforehand, that the animal is killed before sensation returns, and that such experiments must be carefully made and free from pain, otherwise they would be useless.

VALUE OF VIVISECTION.

No physiology can advance without vivisection; experiments on living animals are as essential to its progress as is dissection for the study of anatomy. The law of sacrifice is the law of life; therefore, the law of Nature, that one thing should be sacrificed for another. It is a common thing for a man to endanger his own life to save that of another. How many physicians, nurses, and others have lost their lives while attending to the sick and wounded!

I maintain that any person who would deny the saving of a human life at the cost of a mere dog,

cat, or rabbit is a pretended humanitarian. For instance, a professor showed his students how he had saved the lives of several men by a certain operation on the brain. In order to demonstrate the operation, he performed a *fac simile* operation on a monkey, which also recovered. The professor, in his lecture, informed his pupils that before he ventured upon the first operation he performed it on a living monkey. Now, according to the opponents of vivisection, it would have been a lesser crime to let several men die than to risk the life of a monkey.

VIVISECTION DEVELOPS SYMPATHY.

Regarding the false idea that a physiologist takes pleasure in making animals suffer, I will say that, instead of developing cruelty, the practice of physiology tends to increase in us the feeling of humanity and pity. The physician who has closely observed human suffering, instead of being hardened by it, becomes more compassionate. So the physiologists, who are acquainted with pain, are full of pity for suffering beings, and I do not hesitate to state that not one of them would be guilty of brutality toward an animal.

OUR DEBT TO VIVISECTION.

Take away from the science of medicine and the art of surgery all that with which physiology has enriched it, and the physician and surgeon of to-day would be no better than a mystery man or a quack vendor of chance-gotten drugs. Discard the present system of physiology and all that has been gained by experiments on living animals, and the whole structure would collapse, leaving nothing but a few isolated facts of human experience.

The physiological knowledge that we have and that we shall gain in the future, if there is proper legislation in its favor, will benefit suffering humanity. The opponents do not stop to think that vivisection is as justifiable as the killing of animals for food. Physiology demands it for the good of all living creatures, and medical men should carry it out.

Moreover, I doubt if there is a single "antivivisectionist" who would miss a beefsteak for the sake of saving the life of a magnificent steer, or who would deny himself of either a veal or lamb chop in order to spare the life of a calf or that of an innocent lamb. Hundreds of millions of living creatures have already been sacrificed by epidemics, contagious and occult diseases, largely through the want of knowledge. It is unnecessary, therefore, to prove the utility and morality of vivisection. Nearly all physicians and all physiologists approve of it.

BOVINE TUBERCULOSIS TRANSMISSIBLE.

Dr. Charles Creighton emphatically says: "I cannot escape from the conviction that the peculiar er-

rors of nutrition in the domesticated bovine species all over the world are the real fountain and source of human tubercle." A strong confirmation of the view that bovine tuberculosis is transmissible, at least to young children, is contained in the fact that the mortality of children under five years of age from primary tuberculous ulceration of the intestines and from tuberculosis of the peritonæum and mesenteric glands (*tabes mesenterica*) is very high.

According to bacteriological investigation, the bacilli of bovine tuberculosis have been found to be identical with those found in tuberculous formations in the human organs, although the disease is anatomically different in man. These differences are considered due to differences of soil in the human and bovine tissues, the bacilli engrafting themselves in those tissues which present conditions most favorable to their growth and development. It has been found that the milk of tuberculous cows containing tubercle bacilli, when administered as food, produces tuberculosis in dogs, guinea-pigs, and rabbits.

WHAT STATISTICS PROVE.

Woodhead states that in 127 cases of tuberculosis in children examined by him he found tuberculous ulceration of the intestine in 43; while in 100 cases, or nearly 79 per cent. of the whole, the glands connected with the intestinal tract were in some stage or other of tuberculous degeneration. Woodhead contends that tuberculosis connected with the intestine is of frequent occurrence in children, infection frequently taking place by the alimentary canal.

It is a curious fact that wise men occasionally fall into errors strange and unaccountable. I trust that the error recently made by Dr. Koch, at the British Congress of Tuberculosis, that bovine tuberculosis is not infectious to man, will not retard the action and movements of scientists against the danger of infection from bovine tuberculosis. If Koch does not believe in the identity of human and bovine tuberculosis, we may simply refer him to the observations of Tscherming of Copenhagen, Pfeiffer, of Weimar, Low, of Cornell University, Williams, of the Brompton Hospital, Cozette, of Noyon, France, and many others who report infectious cases of bovine tuberculous infection.

IMPORTATION OF DISEASED ANIMALS.

Almost all civilized countries have and should have some laws for the prevention of importation of epizootics by foreign live animals. Limited space and other considerations naturally prevent long periods of quarantine or observation and detention of those animals intended for exhibition or reshipment, or for other special purposes. Many infected

animals are slaughtered at the port of arrival, and suspected live animals are frequently excluded.

In 1848 the English legislature employed numerous means to prevent the importation of sheep, cattle, and other animals suffering from contagious or infectious disorders, and gradually further powers were granted until their consolidation and perpetuation in the Contagious Diseases (animals) Act of 1869. Great devastations continued as the result of epizootics, and serious legislative efforts were made, until again codified in the existing act of 1876, to which amendments were added in 1884, 1886, and 1890, so that, as in certain human communicable diseases, the contagious diseases of animals are also subject to compulsory declaration, isolation, and disinfection, with the additional powers of prohibiting importation, quarantine, and slaughter.

GOVERNMENTAL CONTROL.

In July, 1891, a congress for the study of tuberculosis in man and animals was held in Paris, and the following resolutions were passed:

"It is necessary that all governments should decree the most efficacious prophylactic measures for preventing the extension of bovine tuberculosis. It is urgently necessary to establish a special inspection of meat in all towns, without exception, provided with a public abattoir. It is equally necessary to suppress all private slaughter-houses in towns containing more than 5,000 inhabitants, and to replace them, as soon as possible, by public abattoirs; effectual inspection is impossible without this measure."

Tuberculous subjects, man and beast alike, should be subject to quarantine restrictions; and its control should be part of the duties of either a national, State, or municipal board of health.

The expectoration of sputum of tuberculous patients should be prohibited in public places, in public vehicles, in and even on the highways. If the oral secretion is infected with tuberculous deposits and dries on the floor, it is likely to be pulverized and float about as dust; inhaled, it is a means of spreading tuberculosis. It may be difficult at first to enforce such an ordinance, but a law of this sort will certainly have a moral effect, and eventually an educative action on the public, who will consider it indecent and disreputable to spit in public places. It will likewise educate the public to look upon public spitters with contempt.

TUBERCULOSIS SANATORIA.

S. A. Knopf, of New York, before the Conference of State and Provincial Boards of Health of the United States, delivered an address upon the State and municipal care of consumptives. He believes that a commission should be provided for the

examination and care of tuberculous subjects, to determine their physical condition, to investigate their surroundings and the dangers to their families, to render their homes sanitary, if possible, and, if necessary, to endeavor to remove the patients to an institution. Anyone should have the privilege of being examined, and all physicians should have the privilege of recommending patients for examination. The institutions for the care of these individuals should comprise a reception hospital and dispensary, located in the city; a suburban sanatorium, in an elevated region, if possible, this to be used as a temporary hospital for patients subsequently to be sent to a mountain sanatorium, which should, if possible, be elevated from one to two thousand feet above sea level. There should also be seaside sanatoria for the treatment of children with tuberculous disease of the joints and glands and a maternity sanatorium.

Special Articles.

BASEDOW'S DISEASE: REPORT OF AN ACUTE FATAL CASE AND OF A CHRONIC FATAL CASE WITH BULBAR LESIONS.

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Theory of the Disease.—The two dominating theories of exophthalmic goitre are the neuropathic and the glandular. Many still believe that Basedow's disease is essentially and primarily a neurosis, but there is, on the other hand, a strong tendency at the present day to regard it as a glandular disorder dependent upon the hypersecretion of the thyroid gland. My own view is this: that the primary disturbance of the disease is in the cerebral centres, and particularly those which control the nutrition of the thyroid and regulate the action of the circulation. These centres are constitutionally weak, as shown by the almost uniform neuropathic personal and family history of the cases. They are weakened further through emotional strain and infections and by the combination of both.

The factor of infection has been brought up with increasing prominence of late; though over ten years ago Dr. Fiske Bryson laid stress on the latter point. Thus, a study of reported cases will show striking instances of the malady following upon fevers, sepsis, infectious fever, operative procedures, and pregnancies. Dr. Gregory Carter (*Edinburgh*

Medical Journal, Vol. VI, No. 4) reports cases illustrative of the infectious origin of Basedow's disease. Cases occurring after typhoid, wound, sepsis, and in tuberculosis are reported by Gilbert and Castaign (*Société de biologie*, May, 1899), one occurring after grippe (Coolidge, *Philadelphia Medical Journal*, III, No. 12), and one after cerebrospinal fever (Wetzel, *Wiener klinische Wochenschrift*), No. 39, 1899). In my own experience I have seen three cases in which exophthalmic goitre developed after typhoid fever.

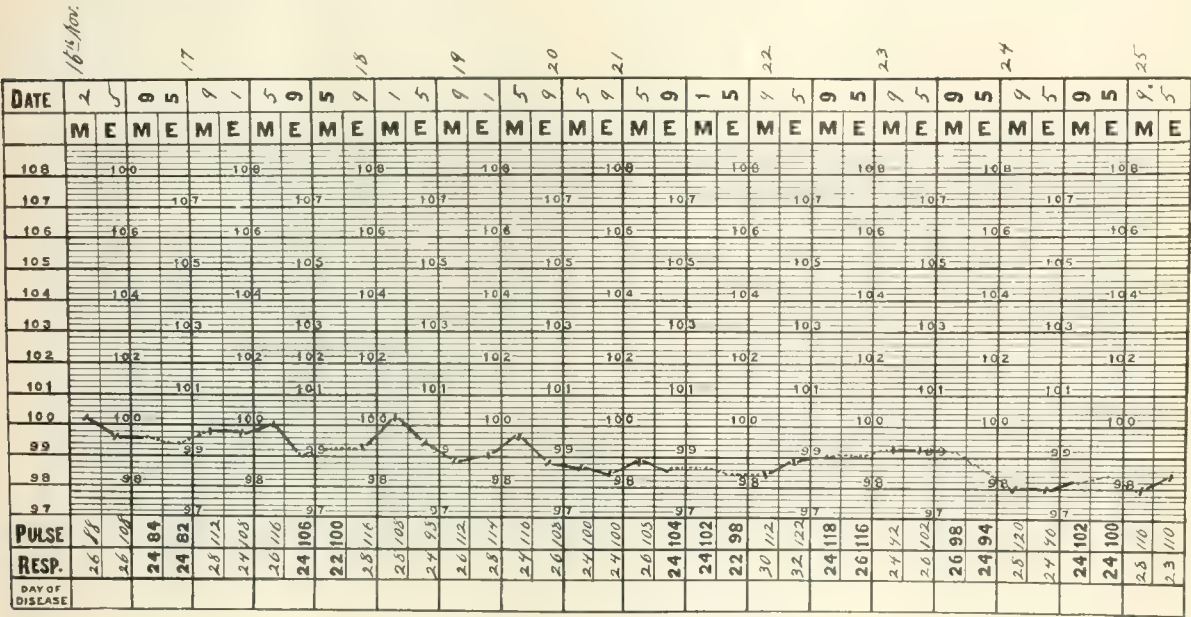
The nervous factor is well known and accepted. The victims of the disease are of nervous stock, and the trouble is so often brought on by strong emotion that it has been called "fright-neurosis."

The neuro-infective theory of the origin of Base-

overpowered, exhausted, and even paralyzed. This is shown in my first case.

Another fact of interest is the changes found in the nerve cells of the bulbar nuclei in old cases of the disease. This is shown in my second case, which also illustrates the very rare incident of embolism in Basedow's disease.

CASE I.—*Acute Basedow's Disease; Bulbar palsy; Death; Softening of the Pons.* Maggie T., aged twenty-three, single, native born, hat trimmer, was admitted to Bellevue Hospital, November 16, 1900, complaining of severe headache and nausea. Inquiry showed nothing of importance regarding her family history. When young she had had measles. She had had an attack of scabies three years before, and for six years had had fainting spells, but no convulsions. She was of nervous temperament, but had



Case I.—Temperature chart.

dow's disease by no means does away with the importance of the thyroid gland in producing symptoms. It is conceded that a large number of these common symptoms in this malady are due to the toxic effect of the thyroid juice, but the gland is doing its evil with a *deus ex machina* to push it on. Its metabolic activity is first set into morbid and perverse activity by the action of the nerve centres, and, furthermore, there is a continued stimulus of the thyroid gland by these centres; otherwise the symptoms would gradually abate and a cure would be effected. This, in fact, is shown by the way in which the disease is cured when cure occurs; for by resting the nerve centres and building them up, they recover their balance, the gland ceases to be over-stimulated, and the system ceases to be poisoned by the now stable neuroglandular machinery. One of the curious and instructive facts connected with the pathology of this disease is that in its acute, fatal forms the bulbar centres seem to be

generally been well. Her menstrual function had been somewhat irregular. The month previous to admission she had flowed for only three hours. It is not known how long her present disease had really lasted, but the severe symptoms which led her to complain and kept her from work began only a month before admission. She was then taken with severe headache accompanied by nausea and vomiting which lasted for a week. The headache then became somewhat less, but was very bad at night. The symptoms then became so severe that she was obliged to give up her work and come to the hospital. Upon examination, she was found to show a certain amount of blepharospasm and some twitching of the facial muscles, this being a trouble from which she had suffered a long time. She admitted also being very nervous. She was quite anæmic, there was a very distinct exophthalmia of both eyes, and the thyroid gland was much enlarged, especially the right lobe. Pulsation of the carotids was visible on each side, and there was a thrill over the gland. The pulse, on admission, was 88 in the morning and 108 in the evening; respiration was 26; temperature 99.5° F. The patient was poorly nourished. The

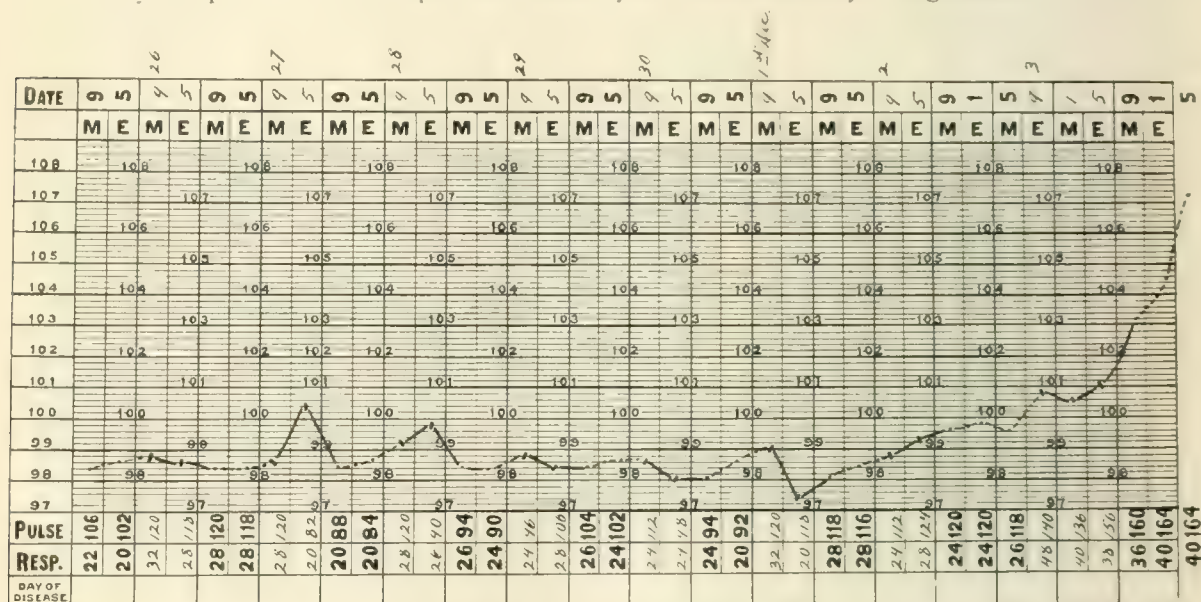
lungs were normal; the heart showed an intense anæmic murmur at the apex and some enlargement of the left ventricle. The liver, spleen, and kidneys were normal. The urine was yellow, clear, with no deposit, acid, specific gravity, 1.015; no albumin or sugar.

The patient continued for the next two weeks suffering a great deal from headache, rapid pulse, tremor, sweats, exophthalmia, nervousness with occasional attacks of vomiting, and insomnia. She presented the characteristics of a case of Basedow's disease with the special complication of severe and persistent headache and a good deal of vomiting. The headache was diffuse and constant and of the kind characteristic of the malady. It was most marked in the occipital region, more upon the right side and the left temporal region.

The severity and persistence of the pain and vom-

neys were normal, as were the other viscera with the exception of the brain. The thyroid gland was enlarged and showed, on examination, some hyperplasia. The thymus gland was also enlarged and showed hyperplasia.

On examining the brain, the membranes were found congested and there was some excess of fluid, but there were no evidences of meningitis. Upon careful examination of the base of the brain, a definite area of softening was found involving the outer side of the left crus cerebri and part of the adjacent pons. This softening was white and showed no central hæmorrhage. Its extent was enlarged during the removal of the brain, so that its definite limitations could not be made out, but it evidently originally involved about one-third of the crus and the adjoining part in an area one inch in diameter. It was the cause of the crossed paralysis and the difficulty in deglutition.



Case 1. Continuation of temperature chart.

iting suggested an intracranial lesion, but there were no localizing symptoms and no optic neuritis.

The nervousness and excitability increased, her hands were more tremulous, and the rapidity of the pulse gradually increased from an average of 100 to 118 and 120, the respiration and temperature remaining practically normal until the last day or two of her life.

On December 2d, seventeen days after her admission, the patient passed into a stuporous condition. She was roused with difficulty and it was found she could not swallow. Next day she was still more apathetic and unable to swallow or talk distinctly. There was then noticed some paresis of the right side of the body with ptosis of the left lid. This, with the dysphagia and stupor, led to the belief that there was some lesion of the pons near the left crus. Her temperature gradually rose till on December 4th it reached 107.25°, on which day she died. The pulse at the same time increased from 120 to 150 and finally 160, and the respirations from 36 to 40.

Autopsy. The post mortem examination showed no gross cause of death. The heart, lungs, and kid-

Sections were made through the adjacent parts after hardening, but no evidences of tumor or vascular lesion could be found. There was no hæmorrhage, and the sections showed that the lesion must have been due to thrombotic or embolic destruction. The blood vessels showed no evidences of atheroma or specific infection, nor was there any history of syphilis.

Pieces of the pons and medulla were placed in ninety-per-cent., and then in absolute, alcohol, mounted and stained by Nissl's method the next day. A careful examination showed no lesion of the cells of the cranial nuclei, nor any lesion of the brain. The cord was not examined.

The Mode of Death in Acute Fatal Cases.—Cases of Basedow's disease running a very acute course are not unknown, but are relatively rare. Naturally, it is not easy always to set definite limits to the beginning of the trouble, but allowing for this there are a number of instances in which the disease seems to run its entire course and end fatally within a few months.

Hector MacKenzie¹, for example, reports the case of a sixteen-year-old boy who, after a railroad journey, suddenly was seized with the typical symptoms and died in a few days.

E. Reymond² reports the case of a woman, forty-five years old, who had suffered from a shock which was followed for a year and a half by a tremor. Then after another shock she suddenly had the further symptoms of Basedow's disease, including exophthalmia, goitre, tachycardia, fever, uncontrollable vomiting and delirium. With all this there came on a paraplegia and she died in fourteen days.

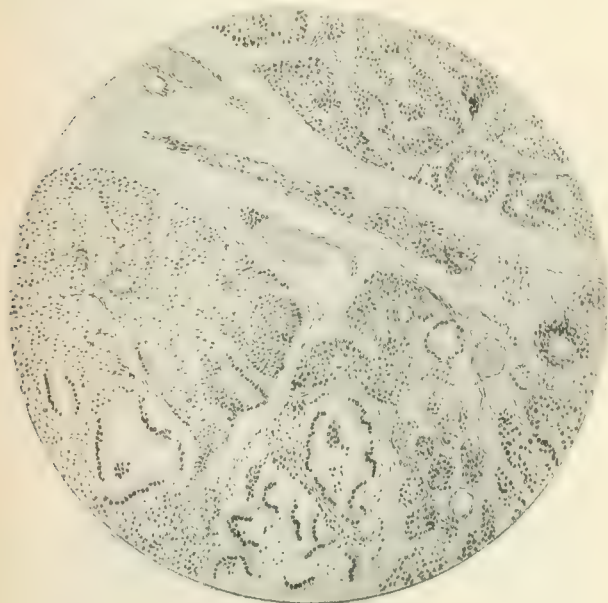


FIG. 1. Case 2. Thyroid gland $\frac{3}{4}$ in.

The case resembled somewhat in its terminal details my own.

F. Müller³ reports the case of a woman, forty-eight years old, who showed symptoms of Basedow's disease after a fright. She suffered from palpitations, loss of appetite and vomiting, and three weeks later was found to have exophthalmia, goitre, enlargement of the heart, palpitations, and some fever; later, diarrhoea, tremor, delirium, and paralysis of the lip muscles developed. She rapidly lost in weight and died in two months and a half from the time of the attack. Müller also records a case of subacute Basedow's disease developing in a young woman of twenty-five. In the spring of the year she presented typical symptoms of exophthalmia, tachycardia, tremor, etc. Later she had double vision, profuse perspiration, heat hunger, pigmentations, and finally *bulbar paralysis*. She died in the following February, living, therefore, about nine months.

Eger⁴ reports the case of a patient who after great excitement showed the phenomena of Basedow's dis-

ease accompanied by vomiting, and died in six weeks.

Von Ziemssen⁵ observed a young woman who was suddenly attacked with Basedow's disease after dancing violently all night. She died of the disease in eight months.

Dr. J. H. Lloyd, in the *Polyclinic*, April, 1888, reports a case of Basedow's disease in which the patient died in three days after the serious symptoms began.

Sutclif, in the *Lancet* for March 12, 1898, reports the case of a woman, aged thirty-five, who died in three months and who suffered from persistent vomiting.

Dinkler (*Neurol. Centralbl.*, No. 13, 1898, p. 617) reports a case of Basedow's disease in a woman, aged forty-one, following severe sepsis. After the symptoms had been well developed, the patient suffered from a slight left-sided hemiplegia with choreiform contractions. These symptoms resembled those of *asthenic bulbar palsy*. Death finally occurred; post mortem there were found hypertrophy of the heart and focal degeneration in the brain and spinal cord, traced by the method of Marchi.

Béclère (*Semaine med.*, No. 45, 1898, p. 360) reports a case with transient attack of hemiplegia and

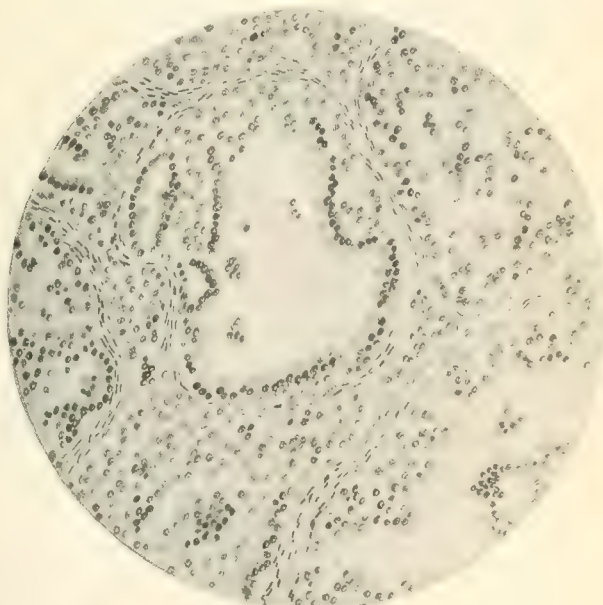


FIG. 2. Case 3. Thyroid gland $\frac{1}{3}$ in.

an attack of monoplegia involving the arm. The patient died of the disease in eight months.

Ditisheim, in his graduating inaugural thesis for 1895, reports a case in a teacher, twenty-eight years old, who had Basedow's disease after climbing a mountain, and died from it within four months.

The characteristics, as shown by the foregoing fatal cases, are the presence in the terminal stages of headache, vomiting, some fever, insomnia, delirium

¹*Lancet*, 1890, Vol. II.

²*Bull. de la Soc. anat. de Paris*, 5 S., Vol. 7-18, p. 476, 1893.

³*Archives of Clinical Medicine*, Vol. lvii, parts 4-5, p. 333, 1893.

⁴*Deutsch. med. Woch.*, Vol. vi, No. 13, 1880.

⁵*Aerztl. Intelligenzbl.*, Vol. xxvi, p. 302.

and evidences of paralysis of the cranial nerves, as shown by double vision, paralysis of the lips, face, tongue, or throat.

CASE II.—*Exophthalmic Gôitre of Thirteen Months' Duration, Embolism, Hemiplegia, Death; Cerebral Softening; Changes in the Nuclei of the Bulbar Nerves.*—Mrs. Rachel M., Russian, aged forty-five, housewife, was admitted to the Montefiore Home, June 16, 1896. She had had nine children, five living, two of whom suffered from night-blindness. She had had no miscarriages. Up to nine months before admission she had been perfectly

the same condition, with no rise of temperature, until October, 24, 1896, when she died from exhaustion.

The autopsy was made by Dr. Van Gieson. The details of this I shall not give, only referring to the points which are of interest in connection with this case. There was some hydrothorax, with chronic circumscribed pericarditis, slight carnification of the right lung, with emphysema and œdema in the left lung, gummata of the liver, infarction of the kidney, atrophy of the medulla of the suprarenal capsules, hypertrophy of the thyroid gland, and persistent thymus. There were circumscribed areas of softening of the cortex of the brain on both sides, in the right the softening being in the inferior parietal lobule, and that of the left in the third frontal convolution. The softening extended into and involved part of the internal capsule.

Specimens of the brain cortex, of the thyroid, and of the medulla, as well as other parts of the body, were taken by Dr. Van Gieson and carefully preserved by him in Lange's fluid and alcohol and other suitable reagents. Specimens of the thyroid, medulla, and cortex thus prepared were given me by Dr. Frankel, and these were stained and prepared for me by Dr. Harlow Brooks, of the Carnegie Laboratory. The sections of the thyroid gland showed a simple hypertrophy of the glandular tissue of that organ.

The sections of the medulla at the level of the twelfth, tenth, and ninth nuclei showed some very



FIG. 3.—Case 2. Cells of vagus nucleus, showing atrophy, vacuolization $\times 160$ in.

well. At that time she had an inflammation of the lung. In two or three weeks after that she began to suffer from palpitations, severe headaches, and enlargement of the thyroid gland. Five months before admission she was admitted to Mt. Sinai Hospital for these symptoms. She at that time had exophthalmia and was emaciating rapidly. She left Mt. Sinai hospital in April, 1896. On June 10th she suddenly lost consciousness and had some twitchings in the right foot. This was followed by right hemiplegia and motor aphasia. She was brought to the Montefiore Home in this condition.

She then was much emaciated, weighing only 75¼ pounds; the pulse was about 148 a minute and very irregular; respiration, 42; temperature, 99.1° F. She showed some paralysis of the right side of the body, especially of the arm, the thyroid gland was enlarged, the neck measuring 31.1 centimetres, and she had exophthalmia and Graefe's symptom. There was repeated nictation. There was some congestion of the lung with bronchitis; the spleen and liver were enlarged. The heart sounds were muffled, but there were no murmurs. The aphasia was of the motor type, but not complete. She could talk a little and could understand spoken and written language. She became able to walk. The knee jerks were exaggerated, the superficial reflexes were lessened on the right side, and there was a distinct hemianæsthesia also on this side. The patient continued in about



FIG. 4.—Case 2. Cells of vagus nucleus, showing degenerative changes $\times 160$ in.

interesting changes. The general field of the section was studded with minute round holes, giving to it an almost cribriform appearance. This, however, I believe to have been mainly a post-mortem change. There were no distinct changes in the blood vessels or evidences of specific disease. The nuclei of the hypoglossal and, to some extent, of the vagus showed very striking degenerative changes. The cell body was markedly pigmented in many cases, and in some of these the pigmentation had involved a destruction of the cell body to such an extent that parts of it had dropped out, leaving a vacuole. This

vacuolization of the cell involved the body and not the nucleus. The cells stained fairly well, showing in a moderate degree the chromophilic granules.

Sections of the brain cortex were taken from the central convolutions. The only characteristics here were a very poor straining of the cells, and a very striking dilatation of the circumcellular spaces, especially of the cells of the same pyramid layer.

Remarks.—The foregoing histories illustrate the fact that at times Basedow's disease runs a very acute course. They also show the unusual complications which occur in this malady, and, finally, the post-mortem examinations show that in at least the long-standing cases there are decided changes in the nerve cells of the nuclei of the pneumogastric and nerves of the floor of the medulla.

Original Communications.

TWO CASES OF SUPPOSED GASTRIC PERFORATION IN WHICH NO EXPLANATION OF THE SYMPTOMS WAS FOUND AT OPERATION.*

By ANDREW H. SMITH, M. D.,

NEW YORK.

CASE I.—F. B., aged twenty-eight years, waitress, admitted to Presbyterian Hospital, March 8th; pronounced tea-habit. No previous history of gastric disturbance except that ten days before admission she had had a dull aching pain in the epigastrium after eating, but without nausea or vomiting. It was accompanied by flatulency and eructations of gas. Three days before admission she had an attack of faintness and cardiac palpitation, with a feeling of suffocation.

An hour later she vomited a large amount of clotted blood. This was twice repeated within an hour. No melæna. The day after admission she passed bright blood and mucus from the bowels, movements frequent and painful.

Physical examination negative. Abdomen soft; no tenderness except in right iliac fossa, which was a little sensitive to pressure. Temperature 100.5° F., pulse, 80, respiration 20, red blood cells 4,720,000. Hæmoglobin 75 per cent.

The patient was at once placed on rectal feeding, which was continued until she was transferred to the surgical side, nothing being given by the mouth.

March 9th, patient vomited several times, bile and a little mucus.

March 10th, a small area of local tenderness was found in the epigastric region. At one p. m. she complained of epigastric pain, and the area found in the morning was much more sensitive and had increased in size. Temperature at 4 p. m. rose to 102° F., pulse to 120. The patient appeared more ill. Abdomen not distended.

March 11th, pain still continues and has been more severe, though there has been no further vomit-

ing. Abdomen still soft, local tenderness more pronounced, slightest touch causes extreme pain. Temperature 101° F., heart action and pulse weaker, pulse 128.

Eight p. m. Pulse has risen to 140, weak and thready. Heart sounds feeble. Patient is in shock, looks very ill. Diagnosis, perforation or hæmorrhage. Patient transferred to the surgical side. Operation at 11 p. m. by Dr. Hawks. Median laparotomy revealed normal peritoneal cavity. The exterior of the stomach appearing normal, the viscus was not opened. Death occurred in twenty-four hours. Autopsy not allowed.

This case presented all the appearances of gastric ulcer, which is so common in young women and particularly in those of the servant class. The supervention of epigastric pain and tenderness the second day after admission, and the marked increase of these symptoms, together with the great acceleration of pulse on the third day followed by a condition of shock, pointed to the occurrence of a very grave lesion. This was at once suspected to be perforation. The absence of symptoms of peritoneal infection was noted, but as the stomach was, and had been for some time, entirely empty, less weight was given to this absence than perhaps should have been allowed.

The urgency of the case seemed to call for an exploratory laparotomy, but the result of this did not warrant the additional shock of opening the stomach. The refusal of the friends to permit an autopsy left us in doubt as to the cause of the symptoms. That they were not due, however, to hæmorrhage *per se* is evident from the absence of blood from the last material vomited, and from the stomach at operation.

CASE II.—J. M., a woman, aged twenty-eight years, admitted February 6, 1902. Habits good. No admitted tea habit. There is an antecedent history of indigestion and gastric disturbances, with slight nausea and a little vomiting.

A week before admission gastric disturbance beginning an hour after meals, no pain, but a sense of soreness. A little dark blood was passed from the bowels the following day.

Physical examination negative, except for a soft murmur at the base and also at the apex. Temperature 100.2° F., pulse 80, respiration 20, no epigastric pain or tenderness. Rectal feeding begun at once, nothing being given by the mouth.

February 7th, patient vomited about six ounces of blood. This was repeated several hours later, only to a small amount. Movements black and tarry.

Red cells 6,000,000. Hæmoglobin 90 per cent. Leucocytes 15,000. Urine 1038, containing a trace of albumin and many epithelial cells.

Enemata were continued for six days; when, in the absence of gastric pain and vomiting, feeding by the mouth was gradually resumed, until, on the 16th, the patient was taking 8 ounces of peptonized milk and 12 ounces of egg-albumen water (representing the whites of two eggs) *per diem*. During this time the temperature had been a little above normal, rang-

* Read by title at the meeting of the Association of American Physicians, April 20, 1902.

ing from 99.5° F. to 101° F., with a pulse rate of from 80 to 100. There had been no pain, nausea, or vomiting. Mental condition good.

On the morning of February 16th, the patient became a little irrational, vomited her food, and a large amount of bile-stained fluid. Pulse remained in good condition. Abdomen soft, no tenderness or pain. Patient a little drowsy and apathetic. Leucocytes 21,000. During the day the heart action became more frequent (120) and in the evening the temperature rose to 103° F. There was repeated vomiting. At midnight this feature became more marked and the vomitus had a distinctly faecal odor, but there was still no pain, tenderness, or distention of the abdomen.

February 11th, 3 a. m. Temperature remains high, vomiting continues of the same character but not frequent. Physical signs as before. At 8 a. m., pulse and heart action have become very weak and frequent. Pulse 134, weak and thready, barely perceptible. Area of cardiac dulness is obscured by tympany. Respirations are shallow and diaphragmatic. Breathing is apparently unimpeded, abdomen soft, but there is a slight muscular resistance, no local pain or tenderness. Lungs: Anteriorly below the level of the left fifth rib there is an area of tympany extending to costal margin. Breathing sounds of undiminished intensity are heard over this area and extending as low as the umbilicus.

Patient had all this time a distinctly septic look, and she was transferred to the surgical side with a diagnosis of perforating gastric ulcer.

Operation (by Dr. McCosh).—On opening the abdomen no free fluid or adhesions were found. The stomach was distended with gas and contained a little brownish fluid, possibly disintegrated blood. The mucous membrane was greatly congested and in the lesser curvature was found an ulcer of the size and shape of a melon seed, which, however, extended only through the epithelial layer, and showed no signs of recent hæmorrhage. The edges of the ulcer were soft and not elevated. The ulcer was excised and the stomach wall sutured to the wall of the abdomen. Saline infusion was resorted to, but death occurred in twenty-four hours.

Autopsy showed fatty degeneration of the liver, otherwise no gross lesion of any organ other than stomach. Microscopical examination of the mucous membrane of the stomach showed tubercles, and two or three tubercle bacilli were found.

In this case the operation verified the diagnosis of ulcer but did not explain the symptoms, except in so far as the ulcer might have been a source of infection. The autopsy showed, in addition, tubercles in the gastric mucous membrane, but none elsewhere, and threw no further light upon the case.

A Native Indian Prophylactic Against Plague.

—R. D. Sinha, medical officer, J. S. Lancers (*Indian Lancet*, March 31st) says that the Hindus burn the fresh leaves of *nim*, the *Azadiracta Indica*, in every nook and corner of the houses when plague appears. They also hang up and strew about fresh branches of the plant. He thinks that the results obtained justify its proper scientific trial.

CEREBRAL LOCALIZATION AND BRAIN FUNCTION.

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(Continued from page 976.)

According to Soury, Lissou has collected since 1882 some eighty-eight cases in which there was disturbance of sensation when the lesion was confined to the motor area. Hence Tripier and Gilbert Ballet have named the cortical area the "sensitive-motor zone." Exner admits that the different areas for tactile sensibility of the various parts of the body are closely intermingled with the motor areas. In his study of aphasia, Dejerine says: "These disturbances of cutaneous sensibility accompany the beginning of the paralysis itself in the majority of cases; sometimes they even precede the latter. These phenomena are not rare in the course of a hemiplegia of cortical origin and they deserve close study." The lesion in Dejerine's case was confined exclusively to the motor cortex, leaving the sensory paths intact. Dupuy notes that Horsley reported to the Congress of Brighton, in 1886, that the removal of a part of the motor cortex in three patients for epileptoid seizures symptomatic of cortical lesions resulted in the partial or complete loss of sensibility. Seguin and Weir reported the case of a man, aged thirty-nine, who complained in the autumn of 1882 of severe head pain and convulsive attacks limited to the right side of the neck and face. From 1885 these attacks occurred very frequently and were associated with a sensation of cold. The spasms involved the right arm and hand as well as the face. Finally paresis supervened in these parts and was accompanied by aphasia and agraphia. The diagnosis was tumor in the facial centre of the left motor zone. Operation proved it to be a sarcoma, about an inch in thickness, nesting beneath the foot of the second frontal and the anterior border of the ascending frontal convolutions. A report of the case in the *Journal of Mental and Nervous Disease*, December, 1888, one year after the operation, states that there was unquestionably anæsthesia of the cheek, hand, and forearm to contact tests as well as with the æsthesiometer. There was also anæsthesia of the lower part of the face, lips, and inside of the cheek. From the study of the sensory tracts and of a series of American cases of cortical lesion, Starr came to the conclusion that the motor and sensory areas coincided, though the

former extended beyond the latter and included the posteroparietal lobe as well as the Rolandic region. Four of the cases in Starr's list belonged to Mills, and in reviewing his notes the latter came to the conclusion that they at least did not support the inference drawn by Starr. From a careful review of one hundred and thirty-seven cases, Dana decided that the sensory (tactile sensation) and motor areas were coextensive. In the discussion of Dana's paper, Starr and Seguin argued with the author, while Mills favored the teaching of Ferrier, namely, that the centre for tactile impressions is to be found in the gyrus fornicatus and gyrus hippocampi.

Stricker maintains that motion and sensation are so intimately related that they are almost identical. His views may be portrayed most clearly by means of an illustration. When one represents to himself, for instance, the movements of a cloud, the muscles of the eyes undergo the same sort of a sensation as though they were actually gazing at a moving cloud. By checking this muscular sensation within the eyes, the mental image of the cloud immediately ceases its movement. The cloud seems absolutely stationary.

Among the Italians, Lussana and Lemoigne maintain that there are sensory and motor areas in the cerebral hemispheres, but that they do not act upon one another after the manner of a simple reflex. Tamburini, Luciani, and Seppilli have elaborated since 1876 the theory that the "motor zone" consists, on the one hand, of the centre for cutaneous and muscular sensibility and, on the other, of the centres for motor ideations. This, it will be recognized, is a very elaborate, mixed, and comprehensive hypothesis. It well illustrates, says Soury, the eclectic tendencies of the Italian school. As a general rule the Italians are as much opposed to the views of Hitzig and Nothnagel as they are to those of Schiff and Goltz. They lean somewhat toward the theories of Ferrier and his English followers. In other words, they believe that the paralysis caused by injury of the cortical motor areas, pathological or experimental, is neither ataxic nor reflex. It is decidedly and entirely a paralysis in the truest sense of the word. Such at least seems to be the opinion of Albertoni and Michieli, Lussana and Lemoigne, Tamburini, Luciani, Seppilli, Maragliano, Bianchi, Palmerini, Tonnini, and others. In the language of Maragliano, all motor phenomena should be regarded "as dependent upon true voluntary motor centres, which are capable, without the intermediation of any other motor centres, of starting into activity the muscular apparatus of the body." Equally concise and clear in their statements are Luciani and Tamburini. These authors, unlike Ferrier, locate even the cen-

tres of voluntary motion in the basal ganglia, especially the corpora striata. Injury to these ganglia as well as to the corresponding centres of the cortex does not result in ataxia, or in the phenomena of incoordination; nor is any alteration of general sensation to be detected in animals whose motor zones have been operated upon. The striate body, it will be remembered, is, according to Ferrier, the general centre for movements which were once voluntary but which have afterward become automatic. Thus a dog can still run and swim if the striate body is left intact, though the corresponding cortical areas may have been removed. Luciani and Tamburini endow the basal ganglia with the same psychic functions possessed by the cortical areas and thus differ considerably with Ferrier. They speak of them as psychomotor centres, probably meaning thereby that the basal ganglia as well as the cortical areas are in direct connection with the sensory centres. "The basal ganglia," they say, "and especially the corpora striata, possess the same physiological value as the centres for voluntary motion do; or, in other words, these centres can be put into action directly by psychosensitive sensorial processes." When these authors promulgated the above-mentioned ideas, it was supposed that the function of the striate bodies was motor; now, however, it is known that the hemiplegias which result from hæmorrhage in this region are caused by the injury done to the internal capsule. In fact, the striate bodies have been transformed completely into cysts without a paralysis occurring so long as the internal capsule remained untouched. Hence these earlier views of Luciani and Tamburini are now regarded as quite untenable. Nevertheless, it must be admitted that the recent study of the striate bodies (caudate nuclei especially by Baginsky and Lehmann seems to demonstrate that there was a modicum of truth in the earlier views of these Italian authors.

The so-called paralysis which results from a destructive lesion of the excitable zone of the cerebral cortex is believed by some of the Italian investigators to be due entirely to a loss of sensation. Silvio Venturi, of Padua, adopted this ataxic theory as far back as 1878. It was Schiff, the distinguished predecessor of Luciani in the chair of physiology at Florence, who became the chief exponent of this sensory explanation of the paralysis. In 1871, the year after the experiments of Fritsch and Hitzig, the editor of *L'Imparziale medico*, inspired by Schiff, wrote that all the immediate effects of injury to the so-called motor centres of Hitzig were really the result of a disturbance of sensibility and were limited entirely to that sphere. In several Florentine publications, issued in 1873 and 1876, Schiff recalls these facts. According to this physiologist,

a dog with a cerebral lesion is not affected with any loss of energy in the muscles of the opposite half of the body, but merely with an absence of the feeling of surety and power of adjustment in its various movements because of the loss of tactile sensibility. The general movements of leaping and running are all well performed, but there are marked evidences of an uncertainty in regard to the position of the limbs. This anaesthesia is entirely cutaneous, according to Schiff, while the sensibility to pain and pressure remains unaffected. Alternations of the sense of pressure and of temperature are caused by the increased depth of the cerebral mutilations. While these views, together with the experiments of Schiff, are not accepted by the majority of physiologists, they have had their influence in greatly modifying the original theories of many of them in regard to the motor character of the so-called motor areas. Hitzig himself, who was so vigorous an upholder of the purely motor theory, has altered his conceptions to such an extent as to refer to these motor phenomena under the name of disorders of the muscular conscience. Schiff's theory is that of a pure reflex. An impulse from the periphery is sent inward to the brain and there within some hitherto undiscovered subcortical centres it is transmuted into an efferent impulse which is sent out again to the muscular apparatus. This cerebral reflex, he insists, is similar to the spinal reflex and the phenomena due to its disturbance are similar to the reflex phenomena due to injury of the posterior columns of the cord. It should be observed that Schiff locates the reflex centres, not in the cortex itself, but somewhere beneath the cortex. Von Monakow holds that all bilaterally acting muscles, such as those of respiration, deglutition, and mastication are innervated from some unknown subcortical centres and vary slightly, if at all, from the cortex. There have been many objections and objectors to these views of Schiff and his following in regard to them is quite small. It must be admitted, however, that, like his opponent, Hitzig, he has done valuable service to the science of cerebral localization; for if Hitzig discovered the results of injury to the motor areas of the cortex, Schiff revealed those due to injury of the centres for tactile sensation. To judge from the doctrines of Munk, Luciani, and Seppilli, the future will have to acknowledge Schiff, as well as Hitzig, as one of its forerunners. When Schiff asserts that "one thing is positive, there are no cortical centres," we are somehow forcibly reminded of Goltz. Though the former enumerated many objectors, chiefly among the followers of Ferrier, such as Lussana, Tamburini, Bechterew, and Horsley, his teachings have acted as a wholesome check upon the too rapid assumption that all movements

of the body originate from certain limited areas of the cerebral cortex. They have induced experimenters to study somewhat more minutely the character of all muscular movements, the relation of the centres for this movement to the centres for sensation and the influence, if there be any, of the higher mental faculties, the purely psychic functions of the brain.

Tamburini has attempted a reconciliation of the two opposing views just described. He admits it is probable that the points of the cortex where the inpouring sensory impulses are transformed into outgoing motor impulses correspond identically with the cortical areas upon which so much study has been expended. In his own words, "Each of these centres may be at the same time the focus for the reception and perception of the sensory excitations sent inward from a given part of the body and the point of departure for the voluntary centrifugal impulse going to the muscles of the same part." This, he believes, explains the absence of sensibility in the direct production of localized movements; for in the one instance the electric current takes the place of the nervous current or impulse and in the other the removal of the cortical centres must necessarily abolish the perception of the peripheral impressions. In conjunction with Luciani, Tamburini has extended the same theory in regard to the excitomotor zone of the cortex to the centres for sight and hearing. The movements of the ear and eyeball, initiated by a sensory impression at the periphery, are not of the nature of a pure reflex, as Ferrier believes, but simply the result of the intermingling of the corresponding sensory and motor elements of the cortex. In other words, corresponding sensory and motor cells lie in close juxtaposition within the various cortical areas. These views of Tamburini's seem to be supported by an anatomical as well as by a physiological basis; for, as I have already pointed out, the region of the hippocampus major, which Ferrier and his followers assert is sensory in function, contains a row of large pyramidal cells between the medullary centre and the so-called stratum radiatum. These cells are identical, so far as their microscopical appearances are concerned, with the supposed motor cells of the central convolutions and anterior horns of the cord.

(To be continued.)

Therapeutical Notes.

For Superficial Burns.—The *Practitioner* for April gives the following as a very soothing application for slight burns, and especially for scalds from water or steam:

R Cocaine 5 grains
Zinc ointment 1 ounce

M. A thin coating may be spread upon gauze and applied to the part.

Silver Vitelline is a new silver protein compound described by Barnes and Hille in the *Medical Record* for May 24th, p. 814. It is a dark brown powder containing thirty per cent. of silver, the equivalent of fifteen per cent. of silver nitrate, extremely soluble in water, an ounce of silver vitelline dissolving in a dessertspoonful of water, according to the discoverers. The solutions do not coagulate albumin or precipitate chlorides.

Convolvulus Soldanella as a Purgative, Cholagogue and Anthelmintic.—M. Lhopitalier (*Gazette hebdomadaire de médecine et de chirurgie*, January 26th) in a Paris thesis, 1901, *Étude des Liserons Indigènes*, says that the resin of *Convolvulus soldanella* has an aromatic odor somewhat resembling those of ambergris or vanilla. It does not cause dryness of the throat or expectoration as jalap does. In a dose of from 12 to 18 grains it is a drastic purgative of great value, equally efficacious with jalap and scammony, but without their irritant effects. It is also a cholagogue to the same extent as the former, but in consequence of its lesser solubility in alkaline media, especially saliva, it is less acrid. It is also anthelmintic to the same degree as jalap. The author gives the following formulæ:

1. Emulsion of soldanella:

℞ Resin of soldanella.....12 grains
Sugar } of each....90 "
Powdered gum arabic }
Orange flower water.....30 minims
Syrup of quince.....½ an ounce
Water.....enough to make 3 ounces

M. ft. emulsio. To be taken at one dose.

2. Compound tincture of soldanella:

℞ Inspissated juice of convolvulus sepium....
.....10 drachms
Soldanella root.....15 "
Bryony root.....5 "
Alcohol8¼ ounces
Macerate for eight days and express. Filter. The dose is from 2 to 3 drachms.

3. Hydragogue pills:

℞ Powdered digitalis.....15 grains
Inspissated juice of soldanella.....15 "
Powdered bryony.....10 "

M. To make 20 pills. Four may be taken in the twenty-four hours.

The resins of the convolvulus order, e. g., scammony, jalap, convolvulus sepium, soldanella, convolvulus arvensis, etc., according to Chevallier, if emulsified with gum arabic in place of yolk of egg, produce their purgative effects without colic.

For Chilblains.—Jones (*Medical Annual*, 1901; *Practitioner*, April) recommends an electrical foot-bath at bedtime for eight or ten consecutive nights. As liniments the following are recommended:

℞ Chloroform 2 drachms
Belladonna liniment ½ ounce
Compound tincture of benzoin.... 2 drachms
Soap liniment 3 ounces

M. To be applied on lint and *not* rubbed in.

℞ Aconitine ½ grain
Atropine ½ grain
Alcohol 1 drachm
Morphine hydrochloride 2 grains
Liniment of potassium iodide
and soap 2 ounces
Oil of bitter almonds 3 minims

M. Rub up well. From twenty to thirty drops to be rubbed into the part affected, night and morning.

℞ Aconite liniment..... of each 1½ drachm
Belladonna liniment)
Tincture of opium..... 3 drachms
Oil of bitter almonds..... 5 minims
or
Oil of lavender 10 minims
Soap liniment to 2 ounces

M. ft. lin. From half a drachm to one drachm to be applied night and morning to the painful part.

For Fermentation in Intestinal Dyspepsia.—

Dr. J. C. Ballard (*Mississippi Medical Record*, March) finds the following prescription useful:

℞ Compound tincture of }
of iodine..... } of each ½ drachm
Carbolic acid..... }
Glycerin..... enough to make 1 ounce

M. Three or four drops, well diluted, three hours after meals.

Mercuric Benzoate in Syphilitic Lesions.—

Lapeyre (*Thèse de Paris*, 1901) reports the results of treatment by subcutaneous injections of mercuric benzoate in grave cases of syphilitic infection, especially in cases of cerebral or spinal syphilis. Mercuric benzoate is obtained by precipitating a solution of mercuric nitrate with a solution of sodium benzoate, and occurs as an odorless, white, crystalline powder, tasteless and slightly soluble, but readily soluble in a solution of common salt. Gaucher recommends the following formula for hypodermic injection:

℞ Mercuric benzoate 4½ grains
Ammonium benzoate..... 22½ grains
Cocaine benzoate from 1⅛ grain to 2¼ grains
Distilled water 450 minims

Two grammes (30 minims) of this solution are injected daily, corresponding to ⅓ grain of mercuric benzoate. The injections are made into the subcutaneous cellular tissue of the buttocks. The injections can be continued for two months, if necessary, and the treatment must be interrupted if local disturbances at the site of injection occur, or if mercurialism ensues. If a fine needle is used, these injections are rarely painful. The indications for this method of treatment are, according to Gaucher, phagedænic chancre, general cutaneous syphilides, the precocious gummata, rebellious mucous patches, nervous lesions, and cases of gastric intolerance for mercury. The use of mercuric benzoate in pregnant syphilitic women usually allows them to bear a child to the end of the term.

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THE SARATOGA MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The opening day of the fifty-third annual meeting of the American Medical Association, held in Saratoga Springs, N. Y., on Tuesday, Wednesday, Thursday, and Friday, June 10th, 11th, 12th, and 13th, showed that the attendance was to be large enough to entitle the meeting to be ranked with the more important of its predecessors, but the fact that the meeting was held within the limits of the State of New York made it decidedly regrettable that the physicians of that State were present in but meagre array. Especially was this state of things remarkable in view of the prominence of New York State interests in the mind of almost everybody who took part in the meeting. The scientific proceedings were quite up to the usual mark, but the uppermost topic of thought was the future relation between the association and the medical profession of the State of New York.

It was generally recognized that the Saratoga meeting could in itself do nothing to directly consummate the unification of the medical profession of the State, but it was also felt that something might be done, if not by definite act, at least by suggestion, to smooth the way for the establishment of a State organization affiliated with the national association and representative of the entire profession of the State. In so far as those were concerned who were in a position to speak unofficially for the profession of the State, it was freely averred that the

members of the New York State Medical Association were prepared for consolidation with the Medical Society of the State of New York under the latter's name. It was generally conceded that, for considerations of precedent and tradition, that title ought to be preserved. Had there been any doubt about it, that doubt would in most men's minds have been set at rest by certain points brought out in connection with the history of the old society. A very telling one was set forth by Dr. William Warren Potter, of Buffalo, in an address delivered at one of the collateral meetings, that of the National Confederation of State Medical Examining and Licensing Boards, because it had local sentiment to give it weight.

It is well known that the conception of the organization of the American Medical Association had its inception in the Medical Society of the State of New York, having been brought forward by Dr. N. S. Davis, for many years now a Chicago physician, but at that time practising in Binghamton, N. Y. It may not be so well known—and this was the point brought out by Dr. Potter—that the establishment of the Medical Society of the State of New York originated in action taken by the physicians of Saratoga and its vicinity so far back as in the year 1805. Thus, then, in the very seat of this year's meeting of the American Medical Association, there was conceived, ninety-seven years ago, the organization to which it owes its existence.

In the light of all this, how grotesque appears the fiction that the American Medical Association is the "parent" of the State organizations! Yet the promotion of this fiction, it was understood, would be demanded by the members of the New York State Medical Association in return for their suffering themselves to be merged with the older organization. However, there can be no harm in submitting to such a fanciful conception if it gratifies anybody, and, happily, there was no disposition in Saratoga to rebel against it. We may hope, therefore, soon to see the profession of the State of New York a unit in its affiliation with the American Medical Association, and the happenings in connection with the Saratoga meeting will have to be recognized as having been largely conducive to that most desirable termination of the bickerings and heartburnings that for now close on to twenty years have prevented the harmony that ought always to have been preserved.

THE SCIENCE AND THE CHRISTIANITY OF CHRISTIAN SCIENCE.

A poor and sickly woman was arraigned as a prisoner on May 23d at the West Side Police Court, charged by an alleged Christian Science "healer" with acting in a disorderly manner in the "First Church of Christ Scientist," in West Forty-eighth Street. The woman's story was that she had spent all the money she had, seventy-eight dollars, with the Christian Scientists, who had undertaken to cure her, but that they had not cured her, and that the charge against her arose out of her going to the "church" to tell them she had no more and to plead with them to continue to treat her till she was cured or to give her back her money. They told her that they were through with her. She avers that she spoke kindly, but that one of them took her by the arm and shook her roughly. This woman evidently had faith in them, notwithstanding her experience, for in Court she is reported to have said: "I don't want their money so much; I would rather they would cure me."

Thus this sect display both their science and their Christianity. They undertake, not like the physician, to exercise all ordinary knowledge and professional care and skill in the treatment of the sick, thus affording the patient all possible human aid toward recovery, but to *cure* the sick by convincing "mortal mind" that to "divine mind" there is no such thing as sickness, and that "divine mind" is the only truth. In this they fail, even with a patient obviously not devoid of faith, but willing to be convinced—Such is their science! And when this poor woman, having paid them all she had, begs that at least they will continue their treatment and effect the promised cure, they tell her that, since she has no more money, they are "through" with her. Such is their Christianity! A witty man once wrote: "When religion marries quackery, quackery is the husband, and one name has to do duty for both." That man was as wise as witty, and the foregoing story is one of his justifications.

WHAT SANITARY SCIENCE IS DOING FOR MALARIA.

On this side of the Atlantic, Major Gorgas, the health officer of Havana, has demonstrated what can be done by persistent effort toward ridding a mosquito-infested neighborhood of the pests. From West Africa, according to a recent issue of the

Lancet, come reports, from Major Ronald Ross, of similar results in Sierra Leone—long known as "the white man's grave." By draining where possible and elsewhere treating pools with crude petroleum, the health of Freetown, the chief city, has been remarkably improved. A great change must indeed have been produced, to justify the statement that now "the Europeans look as cheerful as they do in India. Garden parties and other entertainments follow each other in quick succession, and there are a number of English ladies in the town. It is significant that at a ball given at the Botanical Gardens where eighty Europeans were present, including twenty ladies, the dancing was kept up till 2 a. m. in spite of the so-called malarial vapors of the night and yet no one died." In our recollection of the place nine years ago, we question whether there were more than twenty white ladies, if so many, on the whole West Coast, and certainly balls were not in the programme; while the man who exposed himself to the "malarial vapors of the night," when he was not compelled to, was looked upon as a sort of madman. After a week or two's absence down the coast, it was not tactful on one's return to refer to any of one's friends without first ascertaining that he had not died of "fever" in the interval. Could sanitary science ask for a much better endorsement than the present altered conditions?

THE MEDICAL FRATERNITY AS A SPECIAL SUFFERER BY THE MARTINIQUE CALAMITY.

From the *Progrès médical* for May 24th we learn that in Paris there are many medical students from St. Pierre and its vicinity who have been left destitute as a consequence of the death and devastation dealt by the eruption of Mont Pelée. A committee has been formed which hopes to obtain for them remission of all fees and expenses relating to the university and practical courses; but in very many instances it will be found requisite to replace the small allowances, (*petites mensualités*) upon which these unfortunate students have depended hitherto from their families for their support, but to which they can no longer look forward. In addition, therefore, to the official committee, another has been formed, with Dr. Ducor as secretary, consisting of physicians who are natives of the Antilles, representatives of the medical associations, of scientific associations, the medical press, etc., to meet this pressing need. It is certainly to be hoped that a sufficient response will be forthcoming, for, as the *Progrès médical* says, without abridging in any way the generalized efforts arising from our common humanity, "the medical family is specially interested in its own members so deplorably stricken."

THE TEMPERATURE IN CAISSON DISEASE.

Dr. L. W. Ladd, in the *Cleveland Medical Journal* for May, reports a case of caisson disease ending in recovery, in which a marked feature was extreme initial low temperature. But few writers, Dr. Ladd points out, mention the temperature beyond stating that the skin was cold and clammy, or using other general terms. Dr. Ladd's patient showed a temperature by the rectum of 30° C., or 86° F. The thermometer was repeatedly subjected to comparative tests on other subjects, so that error from that source was eliminated. Further observations on the temperature at the inception of caisson disease are undoubtedly called for.

A SMOKE DEFILED ATMOSPHERE.

The fear expressed in a recent issue of this *Journal*, that advantage of the coal strike would be taken by some manufacturers as an excuse for burning soft coal, was well founded. The city as viewed from Brooklyn Bridge is now covered with a dense pall of black smoke and many complaints have been made. The department of health has given notice to a large number of manufacturers and others who are now using bituminous coal to desist therefrom, and the assistant corporation counsel is proceeding against many offenders, under the ordinance forbidding the burning of such coal within the city limits. It is to be hoped that the cases will be vigorously prosecuted in the various district courts, for New York is already a filthy city by comparison with what it was a few weeks ago.

AN OBJECT LESSON ON VACCINATION.

Perhaps no better instance of the preventive value of vaccination against small-pox could be found than is contained in the recent Report on the Administration and Condition of Egypt for 1901, by Lord Cromer, the British commissioner, as pointed out by the *Cleveland Medical Journal* for May. In Port Said, that eddy of the floating population of the East and the West, itself a place of upwards of 47,000 population, it was found that among 35,000 natives there had been but 18 deaths due to small-pox, while among the 12,500 Europeans the deaths had numbered 35, or nearly twice as many deaths to about one third the number of people. One would naturally expect the conditions to be just the reverse, seeing that the Europeans have all the advantages of superior economic and sanitary conditions. The explanation, however, is to be found in Lord Cromer's statement that it is possible to enforce vaccination among the natives, but not among the Europeans. This, coupled with our own experience in our newly acquired colonial possessions, should surely be evidence convincing enough to all whose minds are not too warped to be convinced.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 16th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, June 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, June 18th.—Woman's Medical Association (New York Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, June 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, June 20th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Eastern District Hospital, of Brooklyn.—Dr. S. Deutsch and Dr. Frank Doyle have been appointed to the Eastern District Hospital vice Dr. Claude G. Hoffman, and Dr. J. W. Delaney resigned.

New Superintendent for the Montreal General Hospital.—Dr. W. G. Turner has been appointed superintendent of the Montreal General Hospital, and will assume office on September 1st. He is at present the senior house surgeon of the hospital.

Bubonic Plague at San Francisco.—Three cases of bubonic plague have been recently reported (May 31, 1902) among the Chinese population of San Francisco, all of which were fatal.

Medical Law of Idaho Declared Constitutional.—In the supreme court of Idaho on May 28th a decision was handed down affirming the validity of the medical law of the State. One L. F. Inman was arrested for practising medicine in Lewiston and applied for a writ of habeas corpus which was refused, the court holding that the proceedings leading to his arrest were in accordance with law. The case was one of great importance to the medical profession of the State and the decision was hailed with satisfaction.

Bellevue Hospital and the Board of Coroners.—One of the members of the Board of Coroners having made complaint that the Bellevue Hospital authorities were negligent in the matter of notifying the Board about cases for ante-mortem statement, the superintendent of Bellevue Hospital has announced that all dangerous cases will hereafter be reported to the Board at once. It is said that since the complaint the four Coroners have been working night and day getting ante-mortem statements from Bellevue, and in many cases, the notification was said to be ridiculous.

Brooklyn Department of Health to be Open Night and Day.—The fact that the mortality from diphtheria in the borough of Brooklyn is 19.8 per cent., as compared with 11.4 per cent. in the boroughs of Manhattan and the Bronx, has led Dr. J. H. Raymond, the chief of the Department of Health in Brooklyn, to keep the health office open all night and to keep an inspector in the building at all times. The Health Department has established its own culture oven. Cultures from the infected person can now be sent direct to the Brooklyn office, instead of being left at drug stores, collected in the morning by inspectors, sent to the bacteriological laboratory in Manhattan and returned to Brooklyn.

Mild Censure for Milwaukee Medical College.—The Wisconsin State Board of Medical Examiners has issued its formal findings in the investigation of charges against the Milwaukee Medical College. The Board finds that irregularities existed concerning the graduation of students, but these were not held to be sufficient evidence of habitual and intentional disobedience of medical law. Some of the charges, while not disproved, were held to be overdrawn, and yet they were found to be timely and justifiable in an attempt that was being made to improve existing conditions in the college. The final clause of the findings insists that the college hereafter live up strictly to the spirit and the letter of the law.

State and County Civil Service Examinations for New York will be held on June 28th in Albany, Amsterdam, Auburn, Binghamton, Buffalo, Elmira, Hornellsville, Ithaca, Jamestown, Kingston, Lockport, Malone, Newburg, New York, Ogdensburg, Olean, Oneonta, Plattsburg, Poughkeepsie, Rochester, Sandy Hill, Syracuse, Utica, Watertown, for, among other positions, that of *Woman Physician* to State Hospitals and Institutions. Usual salary \$1,000 and maintenance. Candidates of both regular and homœopathic schools desired.

Applications for these positions must be filed in the office of the Commission on or before noon of June 23rd. For further particulars and application blank, address the Chief Examiner, State Civil Service Commission, Albany, N. Y.

Needs of the New York Lying-in Hospital.—The Lying-in Hospital at Second avenue and 17th street, which has accommodations for 186 patients, is obliged by its scanty income to restrict the accommodation for the first year to 62 beds, and even this limit has been exceeded with 68 women at present in the hospital. The Board of Governors has issued an appeal to the public for support, for what it believes to be a very important and deserving charity. They at the same time desire to correct an impression which seems to be gaining ground that the hospital is or is likely to be richly endowed. The actual income on investments of the hospital is stated to be a little over \$13,000 a year. In addition to this it receives for the care of patients from the city an annual amount limited to \$12,000, and it expects \$5,000 more from students' fees, making a maximum total of \$30,000, annually. The hospital has no means or resources other than this, and unless the requisite financial aid be given by the people

of the city, the beds at present in use will have to be discontinued at the end of the present fiscal year. An appeal has consequently been made for annual or other donations, and the public is urged to visit and inspect the hospital, and the work which is being carried on there.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 7, 1902:

DISEASES.	Week end'g May 31		Week end'g June 7.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	20	5	23	12
Scarlet fever.....	322	20	340	22
Cerebro-spinal meningitis.....	0	3	0	3
Measles.....	545	12	532	21
Diphtheria and Croup.....	204	36	304	15
Small-pox.....	63	2	63	10
Tuberculosis.....	212	138	310	148

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending June 7, 1902:

Smallpox—United States.

Colorado.....	Denver.....	May 17-24.....	7 cases.	
Florida.....	Jacksonville.....	May 24-31.....	1 case.	
Illinois.....	Chicago.....	May 24-31.....	12 cases.	
"	Freeport.....	May 17-24.....	4 cases.	
Indiana.....	Indianapolis.....	May 17-24.....	14 cases.	
"	Terre Haute.....	May 17-24.....	1 case.	
Kansas.....	Wichita.....	May 17-24.....	5 cases.	
Kentucky.....	Covington.....	May 24-31.....	8 cases.	
Louisiana.....	New Orleans.....	May 24-31.....	2 cases.	Traced to outside infection.
Maine.....	Biddeford.....	Jan. 1-May 29.....	2 cases.	
Massachusetts.....	Boston.....	May 24-31.....	23 cases.	3 deaths.
"	Brockton.....	May 17-24.....	1 case.	
"	Cambridge.....	May 10-31.....	12 cases.	
"	Everett.....	May 24-31.....	1 case.	
"	Lawrence.....	May 17-24.....	2 cases.	
"	Malden.....	May 24-31.....	3 cases.	
"	Melrose.....	May 24-31.....	2 cases.	
"	Newton.....	May 24-31.....	2 cases.	
Missouri.....	St. Louis.....	May 18-25.....	5 cases.	
Montana.....	Butte.....	May 18-25.....	4 cases.	
Nebraska.....	Omaha.....	May 17-31.....	47 cases.	
N. Hampshire.....	Nashua.....	May 24-31.....	2 cases.	
New Jersey.....	Hudson County, including Jersey City.....	May 18-25.....	36 cases.	1 death.
New York.....	Elmira.....	May 17-31.....	1 case.	1 death.
"	New York.....	May 24-31.....	63 cases.	2 deaths.
Ohio.....	Cincinnati.....	May 23-30.....	11 cases.	
"	Cleveland.....	May 17-31.....	68 cases.	5 deaths.
"	Hamilton.....	May 24-31.....	2 cases.	
"	Toledo.....	May 17-24.....	6 cases.	
Pennsylvania.....	Erie.....	May 17-24.....	2 cases.	
"	Johnstown.....	May 24-31.....	2 cases.	
"	Philadelphia.....	May 24-31.....	9 cases.	5 deaths.
Tennessee.....	Memphis.....	May 24-31.....	12 cases.	
Utah.....	Salt Lake City.....	May 17-24.....	0 cases.	
Vermont.....	Rutland.....	Apr. 26-May 31.....	13 cases.	1 death.
Washington.....	Tacoma.....	May 18-25.....	1 case.	
Wisconsin.....	Green Bay.....	May 18-June 1.....	5 cases.	
"	Janesville.....	May 17-24.....	2 cases.	
"	Milwaukee.....	May 17-31.....	12 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	May 3-17.....	8 cases.	
Belgium.....	Antwerp.....	May 3-17.....	14 cases.	4 deaths.
"	Brussels.....	May 10-17.....	1 case.	1 death.
Canada.....	Halifax.....	May 17-31.....	2 cases.	1 death.
"	Quebec.....	May 3-24.....	34 cases.	
"	Winnipeg.....	May 17-24.....	2 cases.	
France.....	Paris.....	May 10-17.....	1 case.	2 deaths
Great Britain.....	Birmingham.....	May 10-17.....	4 cases.	1 death.
"	Glasgow.....	May 16-23.....	4 cases.	
"	Liverpool.....	May 10-17.....	1 case.	
"	London.....	May 10-17.....	233 cases.	37 deaths.
India.....	Bombay.....	Apr. 22-29.....	5 cases.	7 deaths.
Italy.....	Naples.....	May 10-17.....	5 cases.	
Mexico.....	City of Mexico.....	May 11-25.....	1 case.	1 death.
"	Vera Cruz.....	May 18-24.....	1 case.	3 deaths.
Russia.....	Moscow.....	May 3-10.....	16 cases.	1 death.
"	Odessa.....	May 3-17.....	15 cases.	3 deaths.

Yellow Fever.

Colombia	Panama	May 10-18	8 cases	6 deaths.
Mexico	City of Mexico	May 11-18	1 death.	
"	Vera Cruz	May 18-24	36 cases	15 deaths.

Cholera Insular.

Philippines	Manila	Mar. 20-Apr. 18	278 cases.	208 deaths.
"	Bataan Prov.	Mar. 30-Apr. 18	241 cases.	166 deaths.
"	Bulacan Prov.	Mar. 30-Apr. 18	123 cases.	89 deaths.
"	Camarines Prov.	Mar. 30-Apr. 18	204 cases.	113 deaths.
"	Cavite Prov.	Mar. 30-Apr. 18	5 cases.	5 deaths.
"	Iloos Norte			
"	Province	Mar. 30-Apr. 18	1 case.	1 death.
"	Laguna Prov.	Mar. 30-Apr. 18	1 case.	1 death.
"	Pampanga Prov.	Mar. 30-Apr. 18	29 cases.	30 deaths.
"	Rizal Prov.	Mar. 30-Apr. 18	47 cases.	34 deaths.

Cholera Foreign.

India	Bombay	Apr. 22-29		2 deaths.
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Plague.

India	Bombay	Apr. 22-29		520 deaths.
"	Karachi	Apr. 26-May 4	127 cases.	105 deaths.

Army Intelligence :

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending June 7, 1902:

COX, WALTER, First Lieutenant and Assistant Surgeon, will proceed to Fort Banks, Massachusetts, for duty.

HARVEY, PHILIP F., Lieutenant-Colonel and Deputy Surgeon-General, will proceed to San Francisco for orders.

SNYDER, HENRY D., Captain and Assistant Surgeon, will report in person to CALVIN DE WITT, Colonel and Assistant Surgeon-General, president of the examining board at the Army Medical Museum Building, Washington, to determine his fitness for promotion.

RICHMOND, SHANNON, Captain and Assistant Surgeon, having tendered his resignation, is honorably discharged.

TRUBY, ALBERT E., First Lieutenant and Assistant Surgeon, will proceed to Fort H. G. Wright, Fisher's Island, for temporary duty.

WILSON, JAMES S., Major and Surgeon, United States volunteers, will proceed to San Francisco for further orders.

Naval Intelligence :

Official List of Changes in the Medical Corps of the United States Navy for the Week ending June 7, 1902:

BIDDLE, G., Surgeon. Detached from the *Indiana* and ordered to the naval recruiting rendezvous, Philadelphia.

GREEN, E. H., Medical Inspector. Detached from duty as a member of the medical examining board, Washington, and ordered to the *Wisconsin* as fleet surgeon of the Pacific Station.

KERR, D. B., Passed Assistant Surgeon. Detached from the Boston Navy Yard, and ordered to duty with a recruiting party.

PERCY, H. T., Surgeon. Detached from the naval recruiting rendezvous, Philadelphia, and ordered to the *Indiana*.

ROSS, JOHN W., Surgeon, retired. Relieved from duty with the War Department in Cuba, June 15th, when he will report to the Secretary of the Navy.

Births, Marriages, and Deaths.*Married.*

APPLEGATE—GARNER.—In Kansas City, Missouri, on Wednesday, June 4th, Dr. Charles Franklin Applegate and Miss Mabel Everett Garner.

ARBuckle—MARSHALL.—In Richmond, on Tuesday, June 3rd, Dr. John Alexander Arbuckle, of Lewisburg, West Virginia, and Miss Jessie Wallace Marshall.

BARNEY—YOUNG.—In Morristown, N. J., on Monday, June 9th, Dr. Charles Norton Barney, United States Army, and Miss Helen Bourdel Young.

BLAKER—LOVELESS.—In Philadelphia, on Wednesday, June 4th, Dr. Charles Stackhouse Blaker and Miss Anna Johnson Loveless.

COBB—ANDERSON.—In Buffalo, on Thursday, May 29th, Mr. Lorenzo Marsh Cobb and Miss Helen Ogden Anderson, daughter of Dr. M. E. Anderson.

FIELD—JOY.—In Groton, Massachusetts, on Tuesday, June 10th, Dr. Cyrus W. Field, of New York, and Miss Edith Joy.

GORDON—SMITH.—In St. Louis, on Wednesday, May 28th, Dr. Louis J. Gordon, of Pocahontas, Illinois, and Miss Mary Smith.

JAMES—EVANS.—In Philadelphia, on Tuesday, June 3rd, Dr. David Bushrod James and Miss May Alice Evans.

MAIDENBAUER—SARGEANT.—In Malden, Massachusetts, on Wednesday, June 4th, Dr. John George Maidenbauer, of Buffalo, and Miss Ida Frances Sargeant.

MOORE—SMITH.—In Washington, on Monday, June 2d, Dr. Seth Eastman Moore, of Philadelphia, to Miss Elizabeth Edith Smith.

NEVINS—BIXLER.—In Louisville, on Tuesday, June 3rd, Dr. John T. Nevins, of Harrodsburg, Kentucky, and Miss Susan Bixler.

OSTRAM—RIGHTER.—In Brooklyn, on Wednesday, June 11th, Mr. Arthur H. Ostram and Miss Marion Robins Righter, daughter of Dr. H. W. Righter.

OWEN—MC CARTHY.—In Butte, Montana, on Saturday, May 24th, Dr. George B. Owen, of Anaconda, Montana, and Miss Kate McCarthy.

ROWLAND—HUBBELL.—In Greenwich, Connecticut, on Tuesday, June 3rd, Dr. Henry Cottrell Rowland and Miss Grace Churchill Hubbell.

SALISBURY—BUSBEY.—In Tucson, Arizona, on Monday, June 2d, Dr. Trafford B. Salisbury, of New York, and Miss Winifred Shreve Busbey.

SCHROEDER—MCGURN.—In Brooklyn, on Wednesday, June 4th, Dr. William Schroeder, Jr., and Miss Melita E. McGurn.

STARLING—COOLING.—In Minneapolis, on Monday, June 2d, Dr. H. L. Starling, of Fargo, N. D., and Mrs. Maude Kenyon Coolings.

TODD—O'CONOR.—In New York, on Tuesday, June 10th, Dr. Joseph Francis William Todd and Miss Mary Frances Josephine O'Conor.

TURNER—CHATTERLEY.—In Brooklyn, on Wednesday, June 4th, Dr. Leslie Allen Turner and Miss Sara Parsons Chatterley.

Died.

CHURCH.—In Oneonta, N. Y., on Friday, June 6th, Dr. Benjamin A. Church, in the forty-seventh year of his age.

DEWEY.—In Orion, Michigan, on Monday, June 2d, Dr. H. A. Dewey, in the sixty-sixth year of his age.

DUFFY.—In Lubec, Maine, on Wednesday, May 28th, Dr. N. P. Duffy, in the forty-eighth year of his age.

FAIRBROTHER.—In New York, on Friday, June 6th, Dr. Charles M. Fairbrother, in the seventieth year of his age.

FITZGERALD.—In Washington, on Sunday, June 1st, Dr. Samuel C. Fitzgerald, United States Army.

FREEMAN.—In Freehold, N. J., on Sunday, June 8th, Dr. Otis R. Freeman, in the ninety-fourth year of his age.

NELSON.—In New York, on Thursday, June 5th, Dr. William Armistead Nelson, formerly of the United States Army.

O'BRYAN.—In Kansas City, Missouri, on Wednesday, May 28th, Dr. William O'Bryan, in the fifty-ninth year of his age.

ROBINSON—MESSNER.—In Philadelphia, on Thursday, June 5th, Dr. Agnes B. Robinson-Messner.

VOLLUM.—In Munich, Bavaria, on Saturday, May 31st, Dr. Edward P. Vollum, United States Army, retired, in the seventy-fifth year of his age.

Book Notices.

Anatomy and Physiology of the Eye. With Hints for the Preservation of the Eyesight. By J. FREDERICK HERBERT, M. D. Second Edition. Philadelphia, 1902. Pp. 68. (Price 60 cents.)

The value of a book on a medical subject written for popular reading varies directly as it contributes to preventive medicine, and inversely as it encourages its readers to imagine themselves competent to treat the ills of which they read. Put to this test, the little book now under consideration is of a high order of merit and is well worth the study of intelligent people. Possibly it is an unattainable ideal that "before beginning any life-work requiring the use of the eyes, we should know and have the assurance of one who is competent to judge that the organs of sight are in proper working condition"; but such an ideal, thoroughly disseminated among the laity, would cause a great advance to be made in the preventive medicine, or hygiene, of the eye.

This monograph is devoted to the anatomy and physiology of the eye, the abnormal, not diseased, conditions of that organ which physicians are called upon to treat, and a description of the manufacture of spectacles, together with a brief history of their development. The language employed is so very concise that the use of a certain number of technical terms may perhaps be unavoidable, but this number should be made as small as possible. On page 32 there is a curious typographical error by which the writer is made to say "treatment" of myopia "is merely *orthopædic* and preventive." The word meant is probably *orthoptic*.

With regard to the correction of refractive errors, the author speaks in no uncertain terms. "There are so many points of great importance to be considered when prescribing spectacles, such as a thorough knowledge of the anatomy and physiology of the eye and the general health of the patient, that the only competent individual to examine the eye and prescribe glasses is the physician who has paid special attention to the science of ophthalmology. The optician should not take upon himself the responsibility of prescribing glasses. The same relation should exist between the ophthalmologist and the optician as exists between the physician and the druggist."

An Experimental and Clinical Research into Certain Problems relating to Surgical Operations. An Essay awarded the Alvarenga Prize for 1901 by the College of Physicians of Philadelphia. By GEORGE W. CRILE, A. M., M. D., Ph.D., Professor of Clinical Surgery, Medical Department, Western Reserve University, etc. Philadelphia: J. B. Lippincott Company, 1901. Pp. 3 to 200.

It is quite refreshing to encounter in a review of these pages work in experimental surgery not based solely on pathology and bacteriology, but conducted along lines of physiology and anatomy.

The subjects under consideration are resection of the vagus, intravenous infusion of saline solution, the physiological action of cocaine and eucaine, and the temporary closure of the carotid arteries; and these constitute a large part of the advanced surgery of the day.

Resection experiments of one vagus on dogs

showed but temporary interference with the circulation, and while the frequency of respiration was diminished, it was compensated for by the greater amplitude of the respiration. The three instances in which this observation was put to clinical use showed the feasibility of such a procedure, when extensive excision in the removal of new growths was called for. The outcome of the investigations with cocaine and eucaine has been its application for a very novel purpose, that of suspending the reflex inhibitory function of the vagi. This is of great value in preventing collapse incident to all operations on the larynx and pharynx. In like manner the reflex inhibition of the splanchnics is excluded, and the author recommends the use of cocaine as a preliminary to all operations about to be performed on the splanchnic area. In two cases of abdominal gunshot wounds it proved effective in averting shock.

It is not a favorable estimate of spinal anæsthesia which this astute observer offers when he says: "The operator has little control over the extent of the anæsthesia produced under a subarachnoid injection, and in 692 cases six deaths attributed to it constitute a mortality fifty times greater than that of chloroform." The acme of the author's experimentation is embodied in his observation that a properly adjustable clamp could be applied to one or both carotid arteries, completely interrupting the circulation for from twenty-four to forty-eight hours without impairing the lining of these vessels or interfering with the cerebral circulation, since the medullary centres are vascularized sufficiently by the vertebral arteries. This procedure was recently communicated independently by Schlatter of Zürich and signalizes a distinct advance in bloodless operations on the head.

The thorough, original, and practical observations herein outlined justify the author's own encomium, that a combination of these procedures renders operations on the head and neck so much safer as to greatly increase surgical possibilities."

Transactions of the American Surgical Association. Volume XIX.

This official publication, the mouthpiece of America's foremost surgeons, is, like its predecessors, replete with the surgical advances of the day. A mere enumeration of the titles of the papers is not possible in these pages, nor would it convey an adequate idea of their purpose. We can, however, say that the topics cover, not the exceptional, but rather the commonplace affections.

In his opening address, Dr. Park gives a decidedly *ex parte* presentation of the Buffalo investigation on cancer. The rôle of blood changes in their relation to all the phases of surgery is well covered by numerous papers and very freely discussed by various members. Two very exhaustive articles are contributed by Mayo Robson, on Chronic Ulcer of the Stomach and on Pancreatitis. Partly of the nature of a criticism, and partly explaining his method of using the rubber ligature for visceral anastomosis, is the article contributed by McGraw, on The Vicious Circle in Gastro-enterostomy. The instances cited appeal to us on the grounds of originality, but by no means detract from the interest of the many other thorough articles abounding in this volume.

THE SARATOGA MEETING.

THE PLACE OF MEETING.

The two features of Saratoga Springs which first impress the visitor are the abundance and beauty of the trees and the number and large size of the hotels. The roadways are well made and well kept and are lined with tall maples and elms whose spreading boughs form lofty, pointed, gothic arches of green above. Here some thousand or more members of the medical profession gathered to profit by an interchange of ideas and to enjoy the pleasures of America's oldest fashionable watering place. Fashion was, however, conspicuous by its absence at the early date set for the fifty-third annual meeting of the American Medical Association and the members were left to the undisturbed enjoyment of their surroundings.

The opening hours of the week were marked by a tragedy, a fire in which five lives were lost and three hundred thousand dollars worth of property destroyed. The fire occurred about three o'clock on Monday morning in the block immediately opposite the United States Hotel, the official headquarters of the association, where many members had already been quartered. These were treated to a stirring spectacle and the illustration on page 1053 gives an idea of the scene which greeted the members arriving at the United States Hotel on Monday morning.

The generous hospitalities extended to the visitors enabled them to see Saratoga to the best advantage, and, save for a cold and chilly rain which fell during Tuesday, the weather was all that could be desired though members from the south found the temperature unexpectedly low. Following is the programme of general entertainment:

TUESDAY AFTERNOON, JUNE 10th. Informal reception for ladies, United States Hotel Parlors.

TUESDAY EVENING—SECTION DINNERS. Ophthalmology, Grand Union Hotel. Diseases of Children, Stomatology, Kensington Hotel. Surgery and Anatomy, Obstetrics and Gynecology, Cutaneous Medicine and Surgery, United States Hotel.

Practice of Medicine, Materia Medica, Pharmacy and Therapeutics, Physiology and Pathology, Hygiene and Sanitary Science, Grand Union Hotel. Laryngology and Otology, Arrowhead, Saratoga Lake. Nervous and Mental Diseases, Worden Hotel. Orchestral and Vocal Concert, United States Piazza.

WEDNESDAY, JUNE 11th. Morning: Concert in Congress Spring Park. Afternoon: Carriage Drive around the village. Evening: Reception and Ball at United States Hotel. The Alumni of the University of Pennsylvania were invited to meet in the small parlor of the United States Hotel from 10 to 10.30 p. m.

THURSDAY, JUNE 12th. Morning: Excursion through Lake George. Evening: President's Reception at the United States Hotel.

Saratoga is well provided with halls for meeting places, and save for the fact that it is somewhat off the main lines of travel is almost

an ideal place for holding conventions. Convention Hall in which the general sessions were held has an auditorium which has a seating capacity of several thousand, and at the first general session at which addresses of welcome were delivered, and the President's address read, the hall was little more than one-third full. Owing to the destruction by fire of the Arcade building early Monday morning, it was necessary to change the meeting places of some of the sections, and as a guide to these places, a revised directory card was promptly issued by the local committee.

THE MEETING.

The new plan of having the executive business of the Association cared for by the House of Delegates, which was put into operation for the first time this year, proved very successful, and greatly facilitated the transaction of the executive work of the body. In several minor points the present plan of organization will probably be slightly changed to facilitate the transaction of business.



Convention Hall, where the General Sessions were held.

In point of attendance the meeting was somewhat of a disappointment. It had been hoped that this convention would form in some sort a neutral ground on which these several factions in medical affairs in New York State would meet and amicably adjust such differences as existed, but this hope was scarcely fulfilled to the extent which had been looked for.

By far the most popular sections, judging from the number of members in attendance, were those in Medicine and in Surgery. The meetings of the

arranged in a well lighted room, spacious enough for the purpose and readily accessible from the various hotels and other places in which the members congregated. The collection was eminently instructive. It included so many specimens of normal anatomy that the term pathological might perhaps have been replaced to advantage by some more general designation. Especially commendable among these normal specimens were those from the College of Physicians and Surgeons of Chicago. Other particularly noteworthy specimens were some



View of the Fire on Broadway as seen Monday Morning from the steps of the United States Hotel.

former section were held in the parlors of the Grand Union Hotel, while the meeting of the Section in Surgery and Anatomy took place in the Patterson Spring building. There is something daring and brilliant about surgery which attracts attention even among the laity, and in the course of the discussions in this section, the audience not infrequently broke into applause at some particularly novel, brilliant, or occasionally humorous allusion on the part of the speakers.

The pathological exhibit was advantageously

exceedingly clear Röntgen pictures prepared by Dr. M. K. Kassabian, of Philadelphia.

Through the courtesy of the proprietor of the Hathorn Spring, the entire Spring house, with the exception of a very small space around the bottling machines was turned over to the local committee. Along one side of the lobby a dozen or more clerks were installed in a well arranged Bureau of Registration and Information. Here each of the visitors registered on his arrival, receiving a conveniently arranged and complete programme of the meeting.

comprising upward of a hundred pages, together with invitations to the social features of the meeting and a neat button and ribbon which, when worn, gave the bearer admission to all the entertainments of the meeting and also to the several mineral springs, all of which were thrown open to the visitors. The remainder of the Hathorn Spring House was devoted to the commercial exhibit which has come to be a very large factor in the finances of the local committee. It was reported that the amount received as rental from exhibitors this year was larger than had ever been received before, being quite suffi-



DR. GEORGE H. SIMMONS,
OF CHICAGO,

Secretary of the American Medical Association.

cient to discharge whatever pecuniary obligations had been assumed by the local committee. The exhibits ranged in variety from underwear to X-ray apparatus and the exhibit rooms were filled with visitors from eight o'clock in the morning until nine at night.

The various social features of the programme were well managed throughout and sufficient entertainment was provided to keep the ladies in attendance busily engaged. The result showed excellent management on the part of the local committee, whose efforts on behalf of the visitors seemed to be very generally and very thoroughly appreciated.

The Proceedings.

THE GENERAL SESSIONS.

The Fifty-third Annual Meeting of the American Medical Association was opened in Convention Hall, Saratoga Springs, N. Y., on Tuesday, June 10, 1902.

The President, Dr. John A. Wyeth, of New York, took the chair, and called the meeting to order at 11.10 a. m.

After the opening prayer, by the Rev. T. F. Chambers, the report of the committee of arrangements was read by its chairman, Dr. George F. Comstock.

The President then introduced the Hon. S. F. Nixon, Speaker of the New York State Assembly, who in a felicitous address officially welcomed the association. In the course of his remarks he said: "I can promise you, on behalf of this commonwealth, that no matter where your conventions may be held, be it in the east, west, north or south, nowhere will your work receive a higher degree of appreciation than by the people of this State. We are delighted to have your convention held here, for the State of New York is always ready to extend a warm welcome to those who are striving for the advancement or improvement of mankind. We are glad to have you here because we believe your deliberations will be productive of much good. We are in entire sympathy with the principles upon which and for which your association was organized, and I believe it was at a medical society in this State, in 1845 or 1846, that the idea of a national organization such as this had its inception. I believe I can say, without danger of being accused of egotism, that the State of New York stands foremost in educational work; we are endeavoring, with the cooperation of the civil departments of the State, to have our standard of education as near the ideal as is possible, and we are heartily in sympathy with you in your efforts to raise the standard of medical education. I desire again, on the part of the people of this great commonwealth, to welcome this association to the State of New York, and I trust that the few days you are to remain with us may be freighted with both pleasure and profit."

State Senator Edgar T. Brackett next welcomed the association on behalf of the village of Saratoga Springs. He humorously alluded to the possibility that the warmth of Speaker Nixon's welcome was in a measure due to the fact that that gentleman was a successful dealer in granite and marble. He was at a loss to understand why he had been selected to deliver the address of welcome, unless it was that it gave him an opportunity to confess that during the past session of the Legislature he had been bunched into consenting to introduce a bill favoring

the osteopaths, which luckily failed to pass. Since that occurrence he had engaged an attendant to see that he neither blew out the gas nor bought a gold brick.

Speaking more seriously, Senator Brackett called attention to the great strides made in the science of medicine during recent years, and in conclusion he said: "I cannot forbear, on behalf of those outside of the medical profession to assure you that it recognizes your work and your achievements, and you deserve and have the thanks and gratitude of the sick world that leans upon you."

Next in order followed the Presidential address, delivered by Dr. John A. Wyeth, of New York (see p. 1013). During the reading of this address, the chair was occupied by Dr. Alonzo Garcelon, of Maine, who was the first President of the Association and is now one of its vice-presidents.

The closing general session was held in Convention Hall on Friday, June 13th, at noon. The report of the house of delegates was received, the nominating committee having made the following recommendations of officers for the ensuing year:

President, Dr. Frank Billings, of Illinois; first vice-president, Dr. W. A. Witherspoon, of Tennessee; second vice-president, Dr. G. F. Comstock, of Saratoga Springs; third vice-president, Dr. C. R. Holmes, of Ohio; fourth vice-president, Dr. James H. Dann, of Minnesota; treasurer, Dr. Henry P. Newman, of Illinois; secretary, Dr. George H. Simmons, of Illinois. Dr. J. M. Anderson of Philadelphia was invited to give the oration in medicine; Dr. A. F. Jonas, of Omaha, the oration in surgery; and Dr. William H. Welch, of Baltimore, the oration in state medicine.

A portrait of Dr. Billings appears on page 1019.

Hot Springs, Arkansas, was recommended as the next place of meeting, but later New Orleans was substituted.

This was followed by the formal installation of the newly-elected officers after which the closing exercises being completed, the association adjourned to meet in New Orleans in 1903.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

The first session of the House of Delegates of the American Medical Association was held in the United States Hotel on Tuesday afternoon, June 10th, at 3.15 p. m., the President, Dr. John A. Wyeth, in the Chair.

Upon motion made by Dr. J. N. McCormack, of Kentucky, it was decided to appoint a business committee of five members, which should be in continuous session during the session of the House of Delegates, and to which all or part of the resolutions relating to the business of the association might be referred for consideration, but the final decision upon such resolutions should rest with the House of Delegates.

The following members were named by the President to serve on this committee:

Dr. J. N. McCormack, of Kentucky; Dr. E. D. Ferguson, of New York; Dr. P. Maxwell Foshay, of Ohio; Dr. George H. Simmons, of Illinois, and Dr. Murray, of Montana.

Address of President: Dr. Wyeth made a brief address to the delegates, in which he traced the growth and gradual development of the association until it had come to occupy its present important position. In order to further stimulate its growth and secure more concerted action in its business and scientific deliberations, a plan of reorganization was adopted at its last meeting in St. Paul. These new methods of transacting the business of the association were still untried, and he cautioned the delegates to exercise the greatest forbearance in their deliberations.

The secretary, Dr. George H. Simmons, of Chicago, then read his report, in which he stated that in reference to the reorganization of the American Medical Association, the State and territorial societies, through their officers had shown, not only a willingness, but an earnest desire to cooperate in this work. Owing to some doubt on the part of many of the State societies, as to how they could arrange their constitution and by-laws in accordance with the principles recommended, the original committee on reorganization, Dr. J. N. McCormack, Dr. P. Maxwell Foshay, and Dr. George H. Simmons, had been appointed by the president to formulate a suggested constitution and by-laws for the State societies. Many of these societies had adopted this constitution and by-laws, some with slight modification, and others as submitted by the committee. Regarding members in the American Medical Association not members of affiliated societies, the present conditions were not satisfactory, the society having on its books not only many members who did not fulfil the affiliation conditions, but many whose professional conduct rendered them undesirable, and in fact inadmissible, members. But the secretary pointed out that the by-laws did not state whose duty it was to take action in this matter, and recommended that such specific statement should be added to the by-laws, which could probably be done by resolution. A system of verification of membership qualification had been set on foot last February, when circulars were sent to each member by districts asking for many details of personal information. Seven States had so far been covered in this manner. In regard to those now in the association and not eligible to membership, the secretary recommended notifying all such that their membership must terminate in a definite length of time, say six months, or at the outside one year, provided they did not affiliate themselves with the recognized branch of this association. Other points touched on were the rights of non-members to appear on the programme and to read papers before the Section; the details of abstracts to be published in the programme; the question of representative teachers and students of allied sciences, not physicians, as associate members; and the admissibility of dentists. Finally, as to the membership of the association, during the past twelve months 2,022 members had been added, and 729 dropped, from all causes, making the net increase of membership in the twelve

months, 1,293. The total membership at date was approximately 11,500.

The report of the Board of Trustees was next read by the chairman, Dr. T. J. Happel. The finances of the association were shown to be in a very satisfactory and gratifying condition. The increasing prosperity of the Association's *Journal* was a subject of much congratulation. In regard to papers yearly entered on the programme, the trustees said that many of them were not intended to be read, but merely to advertise the parties who had entered their names. Not more than thirty papers, if all were read, could be well discussed and disposed of in each section at the annual meetings; it was therefore advised that the secretaries of sections should be notified not to exceed that number of papers in the programmes of their respective sections. In future all papers not read would be treated as volunteer papers, and no papers from members



DR. HENRY P. NEWMAN,
OF CHICAGO,

Treasurer of the American Medical Association.

of the medical profession in the United States, who were not members of the American Medical Association, would be allowed on the programme. Finally, the trustees formally announced the purchase of a property for the erection of a home for the journal and a headquarters for the American Medical Association.

Dr. E. D. Ferguson, of New York, introduced a resolution to the effect that in the future no article or drug should be allowed space in the commercial exhibit of the association which was of such a character that it was ineligible for the advertising pages of the *Journal* of the American Medical Association.

WORK OF THE SECTIONS.

SECTION IN THE PRACTICE OF MEDICINE.

First Day, June 10th.

Address of the Chairman.—DR. FRANK A. JONES, of Memphis, Tenn., described conservatism in our standard of educational qualifications for admittance into a medical school as a tendency to ultra-education; a piling up of useless knowledge after the fashion of German schools. The questions were asked: Should a student have an A. B. degree? Should he have a B. S. degree? Should he have a high school certificate? None of these questions would suffice. We must take a broad view of what constituted an education. *No dogmatic, iron-clad, bark-tight rule could be laid down.* After all, the great axiom "worth makes the man" must be applied. What were his powers of observation? What was his capacity for work? How much enthusiasm had he in his work? All the questions must be considered when a student applied for entrance to a medical school. The English language was fast becoming the language of commerce, the language of science, the language of letters, the *universal language*. Teach the student more English, better English, good measure, heaped up and running over.

Text books on pathology and biology could be improved by using English words in phraseology and nomenclature. The chapter on the blood in our modern text books on pathology needed an English overhauling. It would require a classical dictionary to ferret out the significance in the description of blood cells. We needed less ornamentation of words and more dress of thought. Lord Bacon's dictum, "Observation, application, and reading make the full man," should be the test as to whether a student was qualified or not. Latin and Greek, French and German, were accomplishments that served the student well, but were not absolutely essential as requirements in the study of medicine.

There was a tendency to too many terms and too long courses in our medical schools, making in a measure learned, impractical, neurasthenic physicians. Any organized medical body, like the American Medical Association, should advocate a high standard, but let justice and equity to the student be applied. If we had a good high-school education as a qualification, a four years' course of eight months to the term should be all that could be asked.

The author made a plea for reciprocity and for some uniformity between our various State boards of examiners. When a California State board granted a license to practise its standard should be so high that if the student decided to practise in New York, the New York State board's requirements and those of the California board should be so nearly parallel as to permit him to practise without re-examination. Should a voluntary national board be established? There were two sides to this question, a negative and an affirmative, and with the present conception, the balance was in favor of the negative. There might be a tendency under the existence of a national examining board to throw a damper over State medical boards. The American

Medical Association should be truly the alma mater. It should stimulate the various State associations in every way possible. The State associations should encourage and assist in organizing county associations, and all together as a great army through the agency of combined action create a sentiment in favor of uniformity of questions for the various State boards. Let us have a broad reciprocity. If the national voluntary board viewed the question in this light, all right; if not there was no need for such a board.

Amœbic Dysentery in Michigan.—Dr. GEORGE DOCK, of Ann Arbor, reported the case of a farmer who had not been out of Michigan for nine years and who developed chronic diarrhœa in the summer of 1901. The drinking water was not examined but was not obviously contaminated. Examination showed that the numerous small stools almost always contained mucus, blood, some leucocytes, and occasional small and superficial sloughs. In the mucus there were almost always Charcot's crystals and amœbæ, the latter usually in large numbers. The amœbæ measured from 20 to 30 microns in diameter; they contained red blood corpuscles almost always, and showed the characteristic motion. The patient's blood serum did not react with a culture of the Shiga bacillus furnished by Professor Flexner. No characteristic bacilli could be cultivated from the stools. Quinine enemata were almost entirely without effect on the process. Sublimed sulphur, in from 40 to 60 grain doses a day, had some effect on the number and character of the stools, and under its use the amœbæ became less numerous but did not entirely disappear. This was the first case of amœbic enteritis the writer had found in Michigan. In a case of ulcerated carcinoma of the rectum a smaller amœba was found without enclosed blood corpuscles. In a large number of cases treated with Carlsbad salts, amœbæ were never found, and the writer denied the truth of the assertion frequently made, that amœbæ were common parasites in healthy men. The writer discussed the relation of amœbæ to enteritis and urged the need of further work in American dysenteries.

Dr. McCrae, of Baltimore, said that several years ago he had seen one case occurring in a man who had never been out of the State of Maryland; this contradicted the assertion that all cases came from the south. In Maryland the disease was not infrequently found. A point of increasing interest was the fact that the disease was being more often noted in children, the majority of cases coming from the habit of many of these children of drinking the impure water from the street gutter.

Dr. James I. Walsh, of New York, had seen two such cases occurring in New York.

Dr. E. Libman, of New York, mentioned the frequent occurrence of liver abscesses at the Mt. Sinai Hospital, New York.

Dr. Dock, in closing, said that he did not include in his paper such cases occurring in soldiers who returned from Cuba or the Philippines.

The Origin of the Vesicular Respiratory Sound.—Dr. C. F. HOOVER, of Cleveland, said that the origin of vesicular breathing was attributed by Laennec to friction of the inspired air in the bronchioles and its entrance to the infundibula. This ex-

planation was sanctioned by Skoda and others, and remained unquestioned until Baas attempted to explain, upon purely acoustic grounds, the impossibility of any audible sound originating in tubes the size of the bronchioles from the passage of a current of air with the slow velocity which must attend the entrance of inspired air in the vesicles of the lung. Penzoldt later offered experimental evidence to sustain the logic of Baas. His experiment consisted in inflating a calf's lung and placing it over the trachea of a man, who was instructed to breathe in the ordinary way; if a stethoscope was placed over the inflated lung, the observer would perceive the tracheal breathing transformed to the vesicular type of respiration. This was accounted for by the fact of refraction and partial reflection of sound waves, which must occur during their transmission through such heterogeneous media as were presented by the inflated lung. If a more homogeneous medium was used, such as a calf's liver, the tracheal breathing retained its so-called bronchial character. Sahli tried the experiment, as described by Penzoldt, but found that the respiratory murmur transmitted through the inflated lung retained the bronchial character. The only modification, according to Sahli, was a diminution in the intensity of the respiratory sound. His own observations confirmed those made by Sahli. In repeating this experiment it seemed to him that only a vigorous use of the imagination could transform the audible sound into a vesicular murmur. Vesicular breathing and bronchial breathing had several differences which would not admit of the transition of the former into the latter on the acoustic grounds cited by Baas. The terms sound and murmur were differentiating terms which were descriptive of the two phenomena. Bronchial respiration gave a clearly definite and simple sound, which could be assigned to a certain pitch. Vesicular respiration gave a confused mingling of sounds, which suggested a multiplicity of points of origin. The pitch was much lower and the respiratory sound of shorter duration than in bronchial breathing. However remote and faint bronchial breathing might be, the long duration of the expiratory sound remained the same; whereas, in vesicular breathing, the expiratory sound was relatively short whatever its intensity might be.

The Causal Relation of Blood Power to Gastric Ulcer, with Report of an Illustrative Case with Atypical Findings.—Dr. ROBERT N. WILLSON, of Philadelphia, read this interesting paper, and gave the following conclusions as to the causation of peptic ulcer of the stomach: 1. In many, perhaps in most cases, a high grade of anæmia precedes the appearance of the peptic ulcer, and this anæmia usually assumes the chlorotic form. 2. With few exceptions, gastric ulcer is attended by the symptoms of marked anæmia. In certain cases in which the blood picture fails to show a reduction in the hæmoglobin percentage and in the number of red cells, the fact seems to be due to concentration of the blood, dependent upon anæmic causes. 3. General anæmia means anæmia also of the pylorus, and consequent inanition of its mucous membrane. 4. The venous outlet from the pylorus is one that in anæmic subjects would predispose still further to an unhealthy condition of the muscular and membra-

nous coats of the pyloric wall. 5. Hyperacidity is usually present in chlorosis and often in other forms of anæmia, and when present in any condition, it is an influence predisposing to gastric ulcer, when associated with an anæmic gastric wall. 6. Hyperacidity is not essential to self-digestion of the stomach wall, provided that wall lacks proper nourishment and stimulation from a healthy or sufficient blood supply. 7. Any form of hæmorrhage, menstrual, operative, or anæmic, may either predispose to, or accentuate, an already present anæmic condition of the gastric wall, and such hæmorrhages are *de facto* often followed by gastric ulcer. 8. The foregoing facts, in association with the general one, that gastric ulcers are seen almost invariably in anæmic subjects, warrant the conclusion that blood poverty is a leading and the usual predisposing cause of peptic ulcer.

Dr. Fenton B. Turck, of Chicago, said that the chief factor in the causation of gastric ulcer was a lack of motility. He reported an instance in which ulcers appeared in the jejunum after a gastro-enterostomy; here there was a lack of motility, together with some disturbance of the splanchnics, and especially of the liver circulation. His opinion, from a purely clinical standpoint, was that there were two factors present in such a condition, namely, the disturbance of the circulation and the lack of gastric tone, or motility, sometimes referred to as *myasthenia*.

Dr. James J. Walsh, of New York, said it was well known that an anæmic condition was the basis of the causation of gastric ulcers. He referred to the traumatic causes, from the use of vibrating machines.

Dr. H. B. Favel, of Chicago, considered the lack of hæmoglobin the active determining cause, and he emphasized its importance on account of its bearing on therapeutics.

On the Association of Graves's Disease and Glycosuria.—Dr. HEINRICH STERN, of New York, said the association of glycosuria and Graves's disease might occur as alimentary glycosuria *e saccharo*, as spontaneous transitory glycosuria, or as diabetic glycosuria. In the ten cases of Graves's disease which he had seen within two years, alimentary glycosuria could be inferred in one instance. Transitory glycosuria associated with *morbus Gravesii* he had seen in one case, a negro s, forty-one years old, who soon died after this association had occurred. He had also seen a case of Graves's disease associated with true diabetes mellitus. There were altogether twenty-four cases reported in which the two affections had occurred at one and the same time. This case was the only one as yet described by an American observer. The association might occur in one of the following ways: (1) Diabetes antedating Graves's disease; (2) both affections produced contemporaneously; (3) diabetes ensuing after Graves's disease was fully established. Where both affections were produced at the same time, or where Graves's disease was the original, and diabetes the secondary affection, there must be an interdependence. This interdependence was seen by the comparative frequency of alimentary glycosuria *e saccharo* in hyperthyroidism; it was also demonstrated after thyroid medication, where it occurred occasionally. It was not due to

hyperthyroidism as such, but to a ferment not occurring in the thyroid secretion.

Dr. E. F. Wells, of Chicago, said that when he considered the frequency with which Graves's disease was encountered, and also the frequency with which diabetes was encountered, it seemed to him remarkable that only 24 cases should be found in the literature in which they were associated. For many years he had derived much benefit in exophthalmic goitre from the use of codeine in fairly large doses; the beneficial use of this drug, of course, was well known in diabetes.

SECTION IN SURGERY AND ANATOMY.

First Day, Tuesday, June 10th.

Address of the Chairman: The Surgery of Tuberculous Cavities of the Lungs.—Dr. DE FOREST WILLARD, of Philadelphia, based his remarks upon a series of experiments made upon dogs the lungs of which had been rendered tuberculous by injection of emulsion of tuberculin, and which were afterwards operated on by pneumonotomy, pneumonectomy, and the production of pleural adhesions. Both incision and drainage and the excision of a portion of the lung were demonstrated to be perfectly feasible operations. If adhesions existed between the two layers of the pleura, the dangers of pneumothorax and empyema were greatly diminished, and entrance to the lung was safe. If adhesions were absent, the operation should be temporarily delayed or divided into two stages. Adhesions, when non-existent, were best produced after subperiosteal resection of the ribs, by long sutures carried through the wall into the lung, and then out through the wall again in the form of a parallelogram around the operative field. When tied just sufficiently tightly to bring the two pleural surfaces in apposition, adhesions occurred in from twenty-four to forty-eight hours; the incision of the lung could be then completed under local anæsthesia.

The author drew the following conclusions as to human surgery: 1. Pneumonotomy is a feasible operation, even in cavities at the apex, and is likely to be helpful in the early period of cavity formation, but it is exceedingly difficult at this stage to obtain the consent of the patient. 2. In advanced cases, both tuberculous and streptococcic infection are present; the cavities are usually multiple, and the operation cannot cure. It may be employed, however, as a palliative to cough, hæmoptysis and sepsis. 3. In abscess of the lower lobes, following pneumonia or pleurisy, whether tuberculous or not, incision and drainage is to be recommended in any stage. 4. Pneumonectomy, in our present stage of surgical technics, is not advisable in tuberculosis. 5. Pneumothorax is so serious a menace to life that in all operations upon the lung, an artificial respiration apparatus, like the Fell-O'Dwyer or Matas instrument, should be at hand, together with a full jar of oxygen. With improved technics, tuberculous foci will in the future be eradicated, as we now eradicate tuberculosis in joints and other tissues. 6. An efficient and certain method of producing strong adhesions between the two layers of the pleura at the site of disease is the most important step in the technics.

The Surgical Treatment of Pulmonary Abscess Following Lobar Pneumonia.—Dr. FLOYD W. McRAE, of Atlanta, said that the literature on this subject was very limited. He had succeeded, however, in collecting 73 cases of the acute and chronic types. It was not to be doubted that one of the chief reasons why so little of this work had been done was due to the fact that the general practitioner frowned upon it. This attitude was brought about largely by his inability to diagnosticate conditions suitable for operation. There were, however, symptoms which were tolerably characteristic, the most important one being the coughing up at stated intervals of great quantities of pus, quiescent periods marking the interim; large moist râles, with dulness and a curious metallic sound; absence of the tubercle bacilli in the sputum; occasional pneumococci. These signs were usually to be elicited. His two cases showed very wonderful results. The first was that of a lad, eighteen years of age, who coughed up a pint of pus once a month. This had been going on for eighteen months and the lad had become so emaciated and weak that his life was despaired of. The abscess was discovered in the lower lobe of the right lung, the fifth and sixth ribs were resected, and the cavity opened. At that moment a free discharge of pus and blood took place from the mouth and nose. It was curious that almost no discharge had been noticed since the operation. This case went on to cure with astounding

A Contribution to the Surgery of the Lung as Based Upon Original Observations.—Dr. H. J. WHITACRE, of Cincinnati, said that, with the modern technics, lungs could be operated upon with impunity, even in the absence of adhesions. He gave an interesting and detailed account of the history of pulmonic surgery since the early days of asepsis. There was in Cincinnati a magnificent opportunity to study pulmonary tuberculosis at the bedside and in the morgue at the hospital for contagious diseases. He based his conclusions on a study of 978 cases and 100 autopsies. In a number of cases he had been able to study the effect of compression by nitrogen gas and had concluded that it was not



North Broadway, Looking South.



Congress Spring Park, where the Concert was given on Wednesday Morning.

rapidity. In forty days the wound had healed and the boy had gained fifty pounds in weight. His second case was that of a man, aged fifty-seven years, who had had an abscess for six years. He also had the characteristic mode of emptying his cavity and said very graphically that his path could be traced by the masses of sputum which he cast upon the sidewalk. This patient was operated upon six months ago, and although he has gained forty pounds, the sinus had not yet closed. There was every indication, however, that this was taking place. Great masses of calcareous material lined this cavity, and the operator was unable to effect drainage from the most dependant point. This was undoubtedly the cause of the prolonged discharge.

without merit. So far as resecting the lung went, while it was of necessity a serious operation, the mortality percentage did not gainsay its execution, but unhappily only the typical cases were suitable for its execution. These constituted only about two per cent. of all cases, and incidentally it was this type precisely which was cured by climatic and dietetic treatment. In conclusion, he said that typical cases which had gone on to liquefaction drained better through a bronchus than through an external wound; that the tuberculous cheese was by no means a satisfactory nidus for the tubercle germs to live upon. It afforded food for development only to the hardier pus-producing organisms; that inasmuch as the type of cases cured by surgical intervention was precisely that which responded to medical treatment, almost none could properly come under the knife; that thoracoplastics, if carried to the extent which was necessary for the obliteration of large chronic cavities, was too dangerous to be commended.

In the discussion of these papers Dr. Mayo, of Rochester, said that he wished to speak upon two important topics touching upon the surgery of the chest. Here, perhaps, more emphatically than anywhere else, drainage was a most important factor. If it could be obtained by the resection of two or more ribs, it must be had at the cost of more. It was usually assumed that adhesions existed somewhat in proportion to the amount of tuberculous involvement, nevertheless a lung might be absolutely

destroyed without pleuritic involvement. In such event there were no adhesions, and before it was possible to operate they must be created. He had found that a convenient technics was to stitch wet gauze directly to the lungs; at the time of incision of that organ, this gauze, being turned back upon the skin, formed a very efficient gross protection for the pleural cavity. He remembered on one occasion tearing through a band which he felt stretched across the emptied abscess cavity. Immediately there was a hæmorrhage which imperiled the patient's life. As was often the case, the band contained the artery, the vein and bronchus. These bands could, therefore, only be severed with safety between hæmostatic forceps.

Dr. Gibbons, of Scranton, said that in the anthracite coal regions the workmen often received injuries which laid bare the lung. There were few immediate deaths resulting from such wounds, and it seemed to him inexplicable that patients should die on the operating table from pneumothorax.

Dr. Oliver, of Cincinnati, said that although comparatively little pneumonic surgery had as yet been done, enough had been accomplished for us to state positively one conclusion, viz., that operative intervention in tuberculous cavities was contraindicated.

Dr. McRae in closing said that the section had slightly misunderstood him. He had purposely omitted a consideration of tuberculous cavities, having limited himself to a consideration of those caused by the pneumococcus. He agreed very cordially with all that *Dr. Mayo* had said.

Dr. Whitacre, also in closing, said that the causation of many cases of empyema was unknown, but there was little doubt that many originated in small abscesses of the pleura, which subsequently broke into and infected the cavity. A very important point to remember in this work was that adhesions were in no way proportionate to the amount of disease.

Report of a Case of Encysted Dropsy of the Peritonæum, Tuberculous in Character, with Hernia of a Portion of the Cyst; Operation; Recovery; Light as a Curative Agent in Tuberculous Peritonitis.—*Dr. MILES F. PORTER*, of Fort Wayne, said that his observations on tuberculous peritonitis led him to conclude that the proportion of recovery from surgical intervention, usually placed at 50 per cent. was too high. Whatever might be the cause of these recoveries, which unquestionably did result in the most desperate of cases from simple sections, there was no doubt that all of the many theories which had been advanced, played their part. It had seemed to him that of these supposed factors perhaps the most potent were air and light. The exudative type of peritonitis afforded the best subject for surgical intervention. The incision should be free, and no matter whether any tuberculous tissue was removed or not, the wound should be kept open for at least fifteen minutes and the viscera exposed to the brightest light obtainable. He suggested that the time was ripe for the introduction into the abdomen of Finsen's and the x-rays, as an adjuvant to the simple section. He cited a case of hernia on which he had operated, and in which he discovered the anomalous condition that the sac contained only ascitic fluid. At first he feared it might be the bladder, but on cutting the

abdomen higher up, the true cause of the condition was found to be tuberculous infection.

Dr. Ransohoff, of Cincinnati, said that unquestionably many cases recovered by medical treatment. We were on the borderland of extensive therapeutic applications of the x and other rays to tuberculous lesions, and until we knew more about it, no conclusions could possibly be reached as to the value of surgical intervention.

Dr. Halstead, of Chicago, said that in his opinion light and air had no effect whatsoever, the improvement being entirely due to the increased blood supply caused by the wound. Inasmuch as infected tubes were often the cause of peritonitis, they should be removed, and if the sacculations were multiple, they should be met with a like number of drains.

Dr. Weir, of New York, said that, speaking quite extemporaneously, he believed that he should voice the general opinion of the members if he said that no one at present knew just how infection occurred. Many cases were doubtless brought about by an involved genital system. Others came from the appendix, still others from the consumption of infected food. Surgically considered, there were two distinct types, the exudative and the productive. In the first, the fluid might be either free or encysted. Either responded well to intervention. Inasmuch as there was but little danger attendant upon simple drainage, why leave the individual in bed for months to undergo a medical treatment, the outcome of which was at best questionable? The productive type should be cared for by the internist. He had been much encouraged by the discussions, and did not take by any means the pessimistic views of certain gentlemen, and his conclusions, from his own observations and from those of others, were that he would continue to operate in all, save the productive type.

Dr. Ochsner, of Chicago, said that after studying a long series of these cases, he had determined that more than 50 per cent. recovered by surgical treatment. In the acute form with ascites, the patient should be put upon suitable medical treatment and kept upon it until recovery took place, provided that within a couple of months gain was manifest. If not, operation was absolutely indicated, but, save in those abdominal conditions where isolated organs or deposits of tuberculous material could be removed without injury to the peritonæum, they should be let alone, and the less surgery that was done, taken as a whole, the better off were these cases. Too much meddling resulted in fistulæ or more serious complications.

Dr. La Place, of Philadelphia, said that the tubercle bacillus was characterized by low vitality but extraordinary persistency. Clinically, there were two very distinct types of tuberculosis, the pure and the mixed. Inasmuch as the first was a self limiting disease, it tended to cure itself. The abdominal lesion was of this type. That of the lungs and of the joints was usually mixed. They must, therefore, be considered under separate heads. Every one at all used to laboratory work knew how frail a germ it was, how readily it perished when exposed to light and air.

Dr. Tinker, of Baltimore, said that Virchow believed that the bactericidal power of the blood was the potent factor in curing tuberculous peritonitis.



DR. FRANK ALLPORT,
CHICAGO,
Section in Ophthalmology



DR. HENRY W. STELWAGON,
PHILADELPHIA,
Section in Cutaneous Medicine and Surgery.



DR. J. H. CARSTENS,
DETROIT, MICH.,
Section in Obstetrics and Diseases of Women



DR. DE FOREST WILLARD,
PHILADELPHIA,
Section in Surgery and Anatomy.



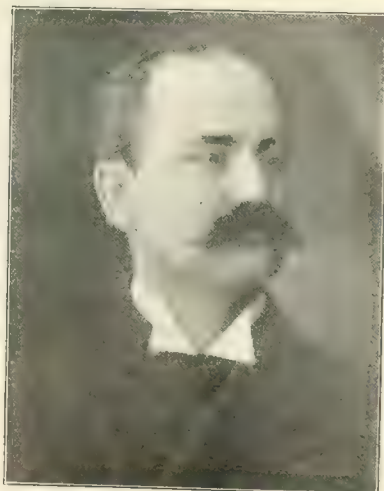
DR. G. HUDSON MAKUEN,
PHILADELPHIA,
Section in Laryngology and Otology



DR. GEORGE F. BUTLER,
ALMA, MICH.,
Section in Materia Medica, Pharmacy, and Therapeutics.



DR. ARTHUR R. REYNOLDS,
CHICAGO,
Section in Hygiene and Sanitary Science.



DR. A. H. PECK,
CHICAGO,
Section in Stomatology.



DR. FRANK A. JONES,
MEMPHIS, TENN.,
Section in Practice of Medicine.

Chairmen of Several of the Sections.

The trauma produced at the time of operation determined great quantities of blood to the abdominal region. In Johns Hopkins, out of several hundred herniotomies, he recalled but one case similar to Dr. Porter's.

Dr. Porter, in closing, said that he was by no means unaware of Virchow's teachings, but that he believed light and air to be at least equal to the serum in effecting cures. He called the attention of the section to the fact that Dr. La Place, who had stated that they possessed no beneficial powers, had said a moment before, that in the laboratory the slightest exposure to air and light killed the tubercle germs. Was it therefore not reasonable to grant them their share of therapeutic potency?

Low Lateral Pharyngotomy for Approach to the Lower Portion of the Pharynx, Upper Portion of the Oesophagus and Posterior Surface of the Larynx, with an Illustrative Case.—Dr. JOSEPH D. BRYANT, of New York, said that the case which he wished to report was one of extraordinary interest, both from a technical and a surgical standpoint, and from the clinical side as well. He gave in admirable detail the anatomical surgery of the part, and stated his reasons for using the lateral incision. There were very few signs or symptoms to guide the operator. The one most to be expected, dysphagia, was limited to a curious attitude which the patient assumed while swallowing—a sort of straining and elongating of the neck which made one think of a fowl swallowing. Save in profound slumber, there was no dyspnoea. Externally, there was nothing to suggest the trouble. No tumor, little tenderness, none of the classic signs. The growth proved on removal to be a fibrosarcoma broadly pedunculated, weighing almost 500 grains, and involving the muscular tissue. It was, however, sufficiently benign to permit of enucleation.

Dr. Dawbarn, of New York, said that Dr. Bryant's case was one of peculiar interest to him, both for the anatomical detail with which it had been delivered, and because it called to his mind a singular error into which he had been led while doing a similar operation many years ago. He was seeking for a false-tooth plate which had been swallowed, and on inserting his finger into the wound he felt what he supposed to be the plate. A moment later he discovered that he had been deceived by the posterior margin of the thyroid cartilage. He believed that in all cases involving the pharynx, larynx, or trachea, the utmost care should be given to the after treatment. For three weeks patients should be fed through the skin by animal fats, and by the rectum with thoroughly peptonized foods.

Dr. Bryant, in closing, said that he chose the lateral route only after profound deliberation. It was clearly indicated by this fact alone, that the tumor seemed adherent to the deep parts and that it was attached on the right side. There was absolutely no danger from the primary lateral incision. He suggested that operators would find great satisfaction from lifting the greater cornua of the hyoid with a tenaculum, since this technique afforded an opportunity to tie the lingual arteries and enabled one to put tension on the deeper parts before incising them.

Second Day, Wednesday, June 11th.

Further Experiences with a Modified Method for the Cure of Relapsing Talipes Equino-Varus.

Dr. A. E. JONAS, of Omaha, first spoke of the frequency of this disorder. All the varied old forms of treatment tend to recovery, but unfortunately in many cases recur. In the poorer class of cases, where this deformity is most marked, it is particularly difficult to assure to the patient the care which is necessary. The description of the deformity was given in detail and the remarkable contraction on the concave side of the foot emphasized. Twenty years ago Phelps departed broadly from the older forms of treatment and made a wide open incision. This form of treatment, when it embraced osteotomy, was further advanced by the discovery of Schede that blood clots, if sterile, organize. Dr. Jonas's modification of Phelps' operation consists in the formation of a broadly pedunculated flap, which is v-shaped and covers the site left bare by Phelps. His conclusions in favor of this operation were; first, that the triangular flap should be used in pronounced cases whenever the open operation is indicated; second, the astragalo-scapoid articulation and ligament should not be torn; third, if simple division of the soft parts does not suffice, cut the neck of the astragalus and remove a wedge. If still insufficient, excise the whole bone; fourth, no success can be hoped for unless every single obstruction to restitution be removed.

Prevention of Deformity.—Dr. WISNER R. TOWNSEND, of New York, said that preventive surgery is at least as important as preventive medicine. It is no exaggeration to state that more than half of the present deformities which the surgeon is called upon to treat could have been prevented by the early, intelligent action of the general practitioner. All deformities due to anterior poliomyelitis, rheumatism, burns and chronic joint diseases could have in this manner been prevented. One deformity causes another to such an extent that very slight deviations from the normal in the foot, for example (not in themselves dangerous) may be productive of the gravest disorders in the joints above. The ætiology of deformity may be classified under three heads: first, the simple acquired; second, the paralytic; third, the traumatic. More than one-half are non-congenital. Surgeons who do skilful resections of joints often forget that bones do not become strong enough to bear weights for many months, and these cases often fall into the hands of orthopaedic surgeons. Faulty decubitus, particularly in aggravated cases of typhoid and kindred disorders, is often another factor which leads to serious deformities. In conclusion, and emphatically, it is the family physician whose business it is to prevent such latent tendencies from developing.

Dr. Henry L. Taylor, of New York, opened the discussion of these papers. He spoke of the fallacy of postponing treatment, and of the evil arising from the old woman's belief that children grow out of deformities; particularly is this true in infantile paralysis, where, if the time which is usually bestowed upon the application of electricity was devoted to simple splinting, the results would be much better. There are many cases of traumatic bone injuries which, on account of evil primary treatment,

come to the orthopaedist. It seemed to him that Jonas' plan to cover the gaping wounds made by the Phelps technic may not be necessary, save in the most pronounced cases, where it surely marks a step in advance of the use of skin grafts.

Dr. Sherman, of San Francisco, said he had abandoned Phelps' method years ago and reverted to Brisement and subcutaneous cutting. Jonas' incision is certainly ingenious, but a curved one would answer as well. Dr. Townsend would throw an added burden on the unhappy general practitioner in making him responsible for all non-congenital deformities. He said that no splint existed which could correct certain backward displacements of the leg after excision of the knee.

Dr. Steele, of St. Louis, also could not agree with Dr. Jonas, having long since given up the open operation. Laymen would say of Dr. Townsend that he is taking bread out of his own mouth, but the profession whose ultimate end is to further altruism could give nothing but warm praise for his able paper.

Dr. Ruth, of Iowa, said that he had found that under four years of age section of the bone is usually unnecessary. In one case he had had admirable results from excision of the astragalus, but care should always be taken in these extensive operations on the foot not to break its arch.

Dr. Warner, of Columbus, said that success in the open work depends entirely upon cutting until all tendency to return had disappeared. The character of the incision is immaterial.

Dr. Sullivan, of Chicago, said that Sayre used to teach, when answering the question of "when to begin treatment in the congenital forms" that it was immediately after the third stage of labor was over. The mother's hand was the best apparatus.

Dr. Thompson, of Scranton, had never had the good fortune to begin so early as Sayre taught, but he had on several occasions begun after the first bath. Long ago he gave up the open incision and now attaches great importance to the value of using the patient's weight in walking as a corrective agent.

Dr. Jonas, in closing, said that some of the gentlemen had misunderstood him. He had referred only to old relapsing cases. If any cutting is to be done, the open is more surgical than the closed incision. Tendons and fasciæ can then be divided diagonally rather than transversely.

Gun Shot Wounds of Cavities; Civil Side.—

Dr. William L. Rodman, of Philadelphia, spoke of the diagnosis, the prognosis, and treatment of this class of injuries. Wounds of the thorax and abdomen divide themselves into penetrating and perforating. It must not be forgotten that a slight hemoptysis may accompany the first type, from the mere impact of the blow. In all wounds, the probe is always contra-indicated. As to the prognosis of chest wounds, statistics are very pessimistic, for unless the cases die within the first two or three hours, or are killed by meddlesome surgery, they recover in a vast majority of cases. It is certain that here a masterly inactivity should characterize the operator. In dealing with lodged balls, he could not do better than quote Abernethy, who, in speaking to his students, said that when Sir Ralph Abercrombie, who had received a bullet in the thigh, was placed under the surgeon's care, "they groped and they groped,

and they groped and Sir Ralph died." It must be remembered that perforating wounds of the abdomen do not in many cases enter through the abdominal wall. Many have entered *via* the pelvis or the chest. In wounds above the umbilicus, probably, there are three per cent. which penetrate without perforating. The direction of the bullet has importance, the antero-posterior being better than the oblique and these in turn being more favorable than the flank to flank type. Prognosis is based properly upon the statistics of many cases. These in general show that unoperated cases give 55 per cent. of mortality. In patients operated upon during the first four hours, there is but 15 per cent.; to 4 to 8 hours, 44 per cent.; in 9 to 12 hours, 63 per cent.; after 12 hours, 70 per cent. The speaker emphasized the importance of early diagnosis. Fæcal extrusion usually does not occur until after the fourth hour. This is due partly to the intestinal paresis resulting from the impact. The treatment is to cover the wound and not handle it too much. Infusion of very free type and equally generous drainage, particularly in civil practice, are both indicated. Injuries of the posterior cavity call for posterior drainage. Seeking the ball is contra-indicated, unless indeed it comes into view without effort, it should be left alone.

Dr. McGraw, of Detroit, opened the discussion by saying that many men were led astray by the old and erroneous teaching that the circuitous route in the abdomen is an utter impossibility. It may chance that a spent bullet striking the skull may be deflected by the bone, but no bullet can be turned aside by the soft viscera. Another point is that the shape of the abdomen is constantly changing. It is by no means difficult to place an athlete in such a position of strain that the anterior abdominal wall is in contact with the backbone. This no doubt explains the anomalous conditions where bullets have traversed the abdomen without injuring the viscera.

Dr. Grant, of Denver, said that army surgeons are averse to early operations on the field. The fact that officers who had lain in the open for 24 hours with no care save a protective dressing, with absolutely no food or drink, had recovered, is instructive; it may very likely be that such absence of eating or drinking is a desideratum.

Dr. Oliver, of Cincinnati, was very glad that Dr. Rodman had so clearly brought out the fact that cases of lung injury who survive the first two or three hours almost invariably recover. Rest is all these patients need. *Dr. Roberts*, of Philadelphia, said that the importance of venesection in incipient pneumonia following bullet wounds should not be overlooked. Shock, as a previous speaker had said, is entirely distinct from hæmorrhage.

Dr. Ochsner, of Chicago, said that he had learned recently from a St. Louis surgeon that the all important treatment in the case of chest wounds was absolute costal immobilization. The manner of accomplishing this is to put on a cast of either plaster of Paris or rubber plaster, extending from the umbilicus to and over the shoulders.

Dr. LaPlace, of Philadelphia, said the prognosis depended very materially on whether the viscera was full or empty. If empty, the same forces which when full extrude food, close the wound. The value of aseptic food had been altogether overestimated for the alimentary canal contains about every known

pus-producing organism. It is the injury to the mucus membrane which kills the patient.

Dr. Grant, of Louisville, said that little attention had been given so far to technics. In the first place, exploratory operation is practically without mortality, and in cases of doubt should always be done. It is either hemorrhage or sepsis which kills. The emergency steps are as follows: First, control hemorrhage; second, find and close the perforation; third, do the toilet of the peritonæum. In accomplishing the second, the direction of the bullet is of the utmost aid and importance; also of value is the question whether the perforations found are odd or even. The speaker always uses drainage.

Dr. Gibbons, of Scranton, called attention to the importance of introducing a catheter into the bladder prior to operating. If blood is found at once, the bladder is injured. If it appears after a half hour, the lesion exists in the upper part of the tract.

Dr. McRae, of Atlanta, said that during the race riots in the South he had recently operated on five cases, and he desired to call attention to the fact that stab wounds are more favorable in the abdomen than in the chest.

Dr. Dawbarn, of New York, said that in controlling the hemorrhage from chest wounds, a most valuable method was that of cording three extremities for 15 minutes, then passing on to the fourth, alternating in this way for several hours. It serves the same purpose as venesection, but preserves the blood. He had heard from a great many of his old students who had been operating in the Philippines and Cuba, and gave their reports to him in detail. They agreed that on the battlefield operations cannot be done, because of the absence of two essentials—fire and water. The value of morphine, pushed to its limit, which constitutes a so-called opium splint and which makes the patient comfortable, is probably a very important factor in saving lives.

Dr. Rodman, in closing, said that he agreed with *Dr. McGraw*, that no soft parts could deflect a bullet. We have reached the "parting of the ways," military cases passing to one side, civil to the other. They are absolutely and emphatically separate and distinct. They vary in the character of the bullet in its size, in its shape, in its composition, in the speed with which it travels and in the rotations which it makes. These variations unite to give a septic wound in the one case, aseptic in the other. The one is lacerated, the other incised.

Case of Unique Foreign Body in Stomach.—

Dr. D. J. C. OLIVER, of Cincinnati, had had the strange fortune to operate upon a child 10 years of age, the only symptoms leading to operation being the sudden appearance of a large and movable tumor over the region of the stomach. The only history was that eight days before she had eaten copiously of persimmons. He removed a large kidney shaped mass, weighing almost a pound, which consisted of shells, twigs, and seeds of the tree and fruit.

Dr. Jacobson, of Syracuse, had operated upon a child for a similar tumor. He found on opening the stomach that the patient had eaten the ends of her own hair to such an extent that the mass weighed a pound. This was the first case of the kind on record which had been diagnosed. Literature furnishes 20

similar cases and it is singular that in no instance has the child been feeble minded. Unless operated upon, the hair ultimately perforates the stomach and results fatally.

Intestinal Anastomosis.—*Dr. F. G. CONNELL*, of Leadville, gave a long and detailed history of the efforts which have been made to advance the diagnostic power of the surgeon. He cited the various efforts which began a hundred years ago to establish positive proof of perforation of the bowels. Going on the principle that the introduction of filtered air or sterile fluid into the abdominal cavity is harmless, and that if perforation has occurred, chemical examination of these bodies after removal should give positive information on this point, he had performed a number of experiments from which he deduced the following conclusions:

1. All previous efforts are valueless.
2. There are no pathognomonic signs of perforation.
3. Exploratory laparotomy is not harmless.
4. Injection of air or fluid into the peritonæum is not attended by danger, and may be of diagnostic value.

HYGIENE AND SANITARY SCIENCE.

First Day, Tuesday, June 10th.

This section was formally opened by the chairman, *Dr. ARTHUR O. REYNOLDS*, of Chicago, after which the first paper was read by *Dr. WALTER WYMAN*, Surgeon-general of the Marine Hospital Service, Washington, the subject being

Sanitation and Politics.—In this paper the author showed that while sanitation and politics might frequently be antagonistic to one another, the latter might frequently aid the former. Just as there were bad politics and bad politicians there were also good politics and good politicians, and it was important that the best people in the country should take an active part in politics, and insist on sanitary questions and those relating to the public health being made public issues at elections. As things were the rich enjoyed the advantages of good hygienic and sanitary surroundings more than the poor, but even they could not get the full benefit unless the poor were looked after, as if disease broke out among the poor it might also spread to the rich.

In the discussion which followed *Dr. S. Smith* and *Dr. S. A. Knopf*, of New York, and *Dr. S. Egbert*, Philadelphia, gave an account of the difficulties encountered in these cities and how triumphs had been obtained by bringing the force of public opinion to bear on political elections.

The Drainage Canal of the Valley of Mexico.—

This paper was presented by *Dr. H. O. MARCY*, Boston, who spent some time last winter in the adjacent republic, where it was a revelation for Americans to see the progress which had been made, largely by means of American capital and enterprise. There was also cause for wonder at the work done centuries ago. In the year 1607 a French engineer, *Henri Martin*, had prepared plans for the drainage of the valley, and the works, though on a smaller scale, were carried to completion in eleven months, 15,000 Indians being employed on them. Notwithstanding this the City of



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Secretary of the Section in Cutaneous Medicine and
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DR. C. L. BONIFIELD,
OF CINCINNATI,
Secretary of the Section in Obstetrics and Diseases of
Women.



DR. FRANK B. WYNN,
OF INDIANAPOLIS,
Chairman of the Section in Physiology and Pathology.

Mexico, besides being exposed to inundation, remained in a very unsanitary condition until a modern system of improvement had been carried out, being begun in 1879 and finished in 1900, at a cost of \$16,000,000. The city was thus freed from danger of flooding; arrangements were made for the sewage of the valley; the water level was controlled, rendered available for dynamic purposes, and irrigation was possible.

On motion of Dr. Knopf, seconded by Dr. Benjamin Lee, Philadelphia, a vote of thanks was awarded the author for his interesting paper.

Microscopic Aid in the Diagnosis of Scarlet Fever.—Dr. W. K. JAKES, of Chicago, showed the value of microscopic evidence dependent upon knowledge of the presence or absence of the diplococcus scarlatinæ. Immunity in man or animal was the rule; susceptibility the exception. By means of cultures taken from the throat a diagnosis of scarlet fever might often be made before the rash appeared, and it was possible by the same means to detect mixed infections of diphtheria and scarlet fever. He advised the giving of antitoxine in all cases of doubt.

Boards of Health and the Manufacture of Vaccine Virus and Antitoxine.—Dr. H. O. MARCY, of Boston, introduced this subject, which he said was causing a great discussion in Massachusetts at present. The question was should they rely on private manufacturers or should they allow the State to act as a parent to the extent of undertaking the manufacture of these articles. Dr. Knopf repeated what he had said on previous occasions, that central laboratories should be established in every State for the testing of serums and similar products. Dr. Lee, Dr. C. B. Johnson, Dr. Champlain Egbert, Dr. H. M. Bracken and others took part in the discussion, various views being expressed, in some cases expediency being placed before principle.

Second Day, Wednesday, June 11th.

State and Municipal Sanitaria—The Present Aspect of the Tuberculosis Problem in the United States.—Dr. S. A. KNOFF gave the replies from forty-seven States and Territories, and from some of the most important cities in the Union, which he had received to the following queries: 1. What laws or regulations exist in your State to combat the spread of tuberculosis (pulmonary or other)? 2. What recommendations, ordinances, circulars, public notices, etc., has your Honorable Board issued with the same purpose in view? 3. What sanatoria, special hospitals, or dispensaries for the exclusive treatment of tuberculosis, private or public, for adults or children, exist in or near your city? 4. Has your State, or any city in your State, a society for the prevention of tuberculosis? 5. What measures, laws, or regulations exist in your State to combat bovine tuberculosis?

The author presented a comparative statement of the progress made in the anti-tuberculosis crusade in the United States since the appearance of his paper, (read at the meeting of the association in the Section on State Medicine, in Philadelphia, on June 2, 1897), entitled *The Present Status of Preventive Means Against the Spread of Tuberculosis in the Various States of the Union Crit-*

ically Reviewed. The author offered some further suggestions for a united effort to combat tuberculosis in this country, and also demonstrated some new devices for preventing the spread of tuberculosis through expectorating in streets, public places, homes, and hospitals.

A summary of the replies to the questions enumerated above shows that in three States and four cities the reporting of cases is obligatory, in four States and five cities, optional. In Detroit the matter is under litigation. Two States have general anti-spitting laws; five States report local, and thirteen cities individual, anti-spitting laws. Twenty-two States and seven cities issue circulars and recommendations for the prevention of tuberculosis. In five States there are five special State institutions, and in one State an agricultural colony for tuberculosis prisoners. Tent colonies are reported from Massachusetts and Pennsylvania. Three cities maintain their consumptive poor in eight institutions; while only New York City has a special tuberculosis dispensary. Eleven States have forty-one private institutions for pay and charity patients. Five States have State societies, five cities local societies, for the prevention of tuberculosis. Twenty States have State, and twelve cities local, laws against bovine tuberculosis. Three States are without boards of health. Twenty States have taken no steps in regard to either human or bovine tuberculosis, six have taken steps in regard to human tuberculosis alone, and eight in regard to bovine tuberculosis alone. The following States have projected State Sanatoria for the consumptive poor: Connecticut, Louisiana, Maryland, Minnesota, New Hampshire, New York, Ohio, Rhode Island, and Wisconsin. New York has already decided upon a site near Raybrook in the Adirondacks. The State Sanatorium of Massachusetts is already in operation.

SECTION IN NERVOUS AND MENTAL DISEASES.

First Day, Tuesday, June 10th.

The meeting was called to order at 2.30 P. M. by the Chairman, Dr. RICHARD DEWEY, of Wauwatosa, Wisconsin. The minutes of the previous meeting were read and approved, which was followed by the address of the Chairman on **Hospitals for the Neuropathic and Psychopathic**. The author directed attention to the need of special hospitals for the treatment of neuropathic and psychopathic patients, and expressed the opinion that a close relation existed between the two conditions, and that what was ordinarily termed insanity was but a greater manifestation of the symptoms than existed in the neuropathic. Owing to the fact that many of these patients were in what is called the neuropathic condition one day, and perhaps the next the psychopathic condition was present, it was thought that the best results, and also those accessible to the greatest number of people, would be obtained by having the two departments connected with the same institution, in two separate buildings, so that the patients might be transferred from one to the other as their condition demanded. The designation of a certain kind of psychosis by the term "insanity" was strongly disapproved of, owing to the fact that it carried with it to the public mind a shadow of dis-

grace, thus preventing many persons from availing themselves of treatment that would do so but for this reason.

Dr. CHARLES K. MILLS, of Philadelphia, and Dr. FRANK P. NORBURY, of Jacksonville, Illinois, read memorials to Dr. J. T. Eskridge, of Denver, Colorado.

The Treatment of Locomotor Ataxia by Educational Methods was the title of a paper read by Dr. JOHN H. W. RHEIN, of Philadelphia, who divided the subject into three headings: exercises in bed; exercises in the sitting posture, and standing and walking exercises, illustrating by written description, as well as by drawings, five of the first class, four of the second and seven of the third. A series of seven exercises for the correction of ataxia of the hands was in like manner described. It was recommended that the exercises be few in number and of a simple character, so as to be capable of proper performance by the patient of average intelligence, and whenever practicable it was recommended that the movements be at first performed under the direction of a trained assistant. Uniformity and accuracy should be insisted upon, and the duration of the treatment should be for months or years, even though the improvement in the inco-ordination had been so great as to make this apparently unnecessary.

The discussion was opened by Dr. J. D. McCarthy, of Philadelphia, who stated that he had observed several cases where very good results had been obtained in overcoming the tabes, but where the patient had not sufficient power to practise the exercises recommended.

Dr. *Wm. M. Leszynsky*, of New York, stated that he had for several years employed the method of Fraenkel for these conditions, but that he considered this treatment was not the ideal one in every case, as all cases of tabes were not inco-ordinative. The reason why the exercises were not suitable in the class of cases referred to by Dr. McCarthy was thought to be the fact that these patients were suffering not only from the sensory ataxic conditions, but also from motor disturbances. Attention was directed to the fact that the disease was purely one of the brain and not of the cord and that to benefit the patient the treatment must affect this organ. In regard to the cases which were reported to have been cured by exercises the speaker thought that it was quite possible that the patients had been suffering from multiple neuritis, instead of the true ataxia.

In closing the discussion Dr. Rhein stated that in the cases where there was loss of power the treatment was not likely to be followed by very encouraging results. For these cases an appliance for supporting the leg by means of a pulley and weight was recommended, in order that the entire strength of the muscles might be devoted to the exercises. Reference was made to a case of combined sclerosis, in which the difficulty was due not only to the inco-ordination, but also to a moderate degree of paralysis, in which by the treatment above referred to, which was carried out with an unusual degree of persistence and intelligence, the patient became sufficiently improved to be able to ride a wheel and on horseback.

Symmetrical Gangrene (Raynaud) versus Endarteritis Obliterans was the subject of a paper read by Dr. JAMES D. MORGAN, of Washington, in which he dwelt at considerable length upon the symptomatology and ætiology of the disease, and gave a report of two cases of the former condition. The first of these cases occurred in a Hebrew, and the second in a young colored woman; in neither could a history of specific disease be elicited. In the second case the disease almost simultaneously attacked all four extremities, and although radical measures were resorted to, it resulted fatally.

Alcoholic Epilepsy was the title of a paper read by Dr. T. D. CROTHERS of Hartford, Conn. The author divided these conditions into three classes: (1) the convulsive and maniacal type; (2) dementia and confusional states; and (3) automatic trance and psychical cases. Hereditary tendencies and predispositions, together with condition of the patient's health were recognized as factors in varying the type of the disease. Reference was made to the development of the delusional states among epileptics, the common manifestations being fear of death or injury, which was usually but temporary. Cases were reported illustrating each of the three forms of the disease, and as a sequence of the first was mentioned pneumoparesis; of the second cerebral hemorrhages and nephritis, while epileptic convulsions were more common in the third. Homicide and suicide were more frequent in the two former classes. Reference was made to the increase in alcoholic epilepsy, which was considered to be due to the change in the character of the spirits used over those employed in former years, wood alcohol being believed to be among the notable constituents in the newer mixed drinks. For the treatment of these cases total abstinence, nerve and brain rest, sharp elimination, restricted diet, and a radical change in business and surroundings were thought to be the most efficient methods.

The discussion was opened by Dr. C. H. Hughes, who reported the case of a young man who had come under his observation several years ago. The patient had been attacked with the convulsion while in a drinking place and fell under the table. He was taken into the hospital under the observation of the speaker, where he remained unconscious until the next day; having reformed in this direction, he has never since suffered a similar attack.

Dr. J. D. McBride, of Los Angeles, California, referred to a case of alcoholic epilepsy which had come under his observation in a young man. This patient was in the habit of going on sprees for about three or four weeks in each year and during each of these times the epileptic symptoms would appear.

Dr. James Hendrie Lloyd, of Philadelphia, stated that he did not consider that there was any distinct form of epilepsy that could be properly called "alcoholic epilepsy." He was rather inclined to look upon alcohol as one of a class of a number of causative agents of this condition, and he also expressed the opinion that it was quite as likely that the epilepsy acted as a cause of the patient becoming an inebriate. It was thought well to confine the classification of these conditions to as few headings as possible, as too large a variety of names for the same disease would be apt to lead to confusion.

Dr. J. M. Keniston, of Middletown, Connecticut, stated that in his experience, which had been entirely confined to male epileptics, the symptoms did not disappear on the removal of the alcohol, and that there had been a marked tendency towards dementia among these patients.

Dr. A. B. Richardson, of Washington, stated that he considered in tracing the ætiology of these cases we should take into consideration the heredity and condition of health of the patient, and he expressed the opinion that there were very few cases that could be traced directly to alcohol.

Dr. Herdman stated he felt that there were many other causes that would account for the epileptic convulsions and he did favor the classification of alcoholic epilepsy as a separate variety.

Dr. Richard Dewey, of Wauwatosa, Wisconsin, reported the case of a man who had never indulged in alcohol to excess except upon one or two occasions, and at each of these times he had suffered from epileptic convulsions.

Dr. F. Savary Pearce, of Philadelphia, stated that he believed a great many of these attacks were due to an acute congestion of the brain, and reported the case of a man who during the recent warm spell was seized with an attack of typical epilepsy. When seen by the speaker he was suffering from his fourth convulsion; venesection was promptly performed, and in a few days the patient was apparently well.

In closing the discussion *Dr. Crothers* stated that while there was no doubt that there were very many other causes for epilepsy, yet he felt that such a distinct number were brought on by this factor that we were justified in making such a classification.

The Babinski Phenomenon in Insane Epileptics (Results of a Thousand Observations), was the title of a paper read by *Dr. J. M. Keniston*, of Middletown, Connecticut, in which particular attention was directed to the reflexes, especially the plantar; these had been little noticed by the majority of writers. After giving an abstract of available literature and the methods of testing and precautions, he gave a brief report of 35 cases, including two autopsies, and a brief résumé of the results of 1088 tests directly after clonus had ceased, and a similar number one hour later. In each case the individual intervallary reflex obtained by numerous tests was used as a basis for comparison.

SECTION IN PHYSIOLOGY AND PATHOLOGY.

Address of the Chairman.—The address of *Dr. Frank B. Wynn*, chairman of the Section on Physiology and Pathology, was devoted largely to the evolution of the pathological exhibit as a feature of medical society work. In his review of the development of the movement he gave due credit for its origin to the Indiana State Medical Society. After two or three years' trial of the pathological exhibit idea in this organization, proving its great usefulness, *Dr. W. W. Keen*, President of the American Medical Association felt warranted in appointing a committee to inaugurate a similar exhibit at the Atlantic City meeting of the American Medical Association. Although unofficial, the project was carried to a most successful issue and made a permanent feature of the association. The complete and official consummation of the Pathological Exhibit,

in a national sense, was not accomplished until the St. Paul meeting, where a magnificent collection of over 2,100 exhibits was presented. Although the assembling of such a fine array of pathological material was an achievement on which the committee felicitated themselves, the very magnitude of the collection was a hindrance to its greatest usefulness. Careful observers must have been impressed with the fact that only casual and superficial inspection was possible. Systematic demonstration of so many specimens was practically out of the question. Hence, much valuable material stood upon the shelves unseen and impotent for educational advancement. Future tendencies would be to condense and specialize the pathological exhibit. Certain phases of pathology should be illuminated by groups of specimens. The subject to be so illustrated might be varied from year to year, according to tendencies in the medical world. Under such conditions, the advantage to visitors would be greatly increased, inasmuch as systematic demonstration would be possible. A change in name to Scientific Exhibit would enlarge the sphere of usefulness of this feature of the association. It would insure a wider range of scientific demonstration and enlist more general cooperation on the part of members. It would make plain that the exhibit belonged to the whole association.

Further gain would be made if the exhibit was placed in entire charge of a director, who should be selected by the board of trustees and receive a fair salary for the labor performed. In his hands should be placed funds for the encouragement of research work. Let the exhibit become the arena in which the investigator demonstrated to his co-workers the proofs of original work. What in this way could be made plain to many competent witnesses would be spared the inuendoes of skepticism and receive just recognition promptly.

The secretaries of the various sections should constitute an advisory board, to the director of the exhibit. It would thus be possible in the preparation of the annual programmes to develop a correlation between the work of the sections and that of the exhibit. A competent director would, in this manner, be able to render as valuable assistance to clinicians as he would to those carrying on research work.

A Note on the Chemical Diagnosis of Hypernephromas (Suprarenal Tumors) of the Kidney.

—*Dr. Alfred C. Croftan*, of Philadelphia, called attention to the fact that, as he had shown in previous publications, fresh suprarenal extract possesses the following properties: (1) Injected into the body of a dog or a rabbit it can produce glycosuria; (2) it possesses the power of converting starch into sugar, a power that is lost on boiling; (3) it causes the blue color produced by iodine in a fresh solution to disappear. It occurred to the author that possibly hypernephromata, that is tumors of the kidney that develop from suprarenal rests, might possess properties similar to those shown to be possessed by the suprarenals themselves, and that an investigation of this question might lead to an important means of distinguishing hypernephromata from tumors derived from proper renal structure. The first experiments were performed with a fresh hyper-



DR. JOSEPH MCFARLAND
PHILADELPHIA.
Secretary, Section in Physiology and Pathology.

nephroma furnished by the courtesy of Dr. A. O. J. Kelly. It was found that this hypernephroma actually possessed the power of producing glycosuria, that it had a distinct diastatic action, and that it could decolorize iodine starch solution. In order to determine whether other tumors of the kidney, or normal kidney tissue also possessed this power, that portion of the kidney, from the same patient, that was not yet invaded by the tumor growth, squamous epithelia of the pelvis of the kidney, and fresh normal kidney were examined. It was found that none of these tissues possessed properties typical of suprarenal tissue.

Dr. Croftan called attention to the fact that it was possible by these simple chemical tests to distinguish hypernephromata from other tumors of the kidney. The last-named reaction, in particular, was so easy and rapid of execution and so characteristic, even pathognomonic, of suprarenal tissue, that should occasion arise it might be made use of as a convenient and time-saving means for diagnosing hypernephromata immediately at the time of operation or at the necropsy table. Dr. Croftan also called attention to the fact that these tests constituted a demonstration of the fact that the cells of hypernephromata were



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not only morphologically, but also functionally, identical with suprarenal cells, a fact that was especially interesting when we considered that the massive and malignant hypernephromata resulted from proliferation of aberrant suprarenal rests that were often microscopical in size. The suggestion was finally made to utilize these tests for determining the exact and hitherto undefined character of the so-called accessory adrenals.

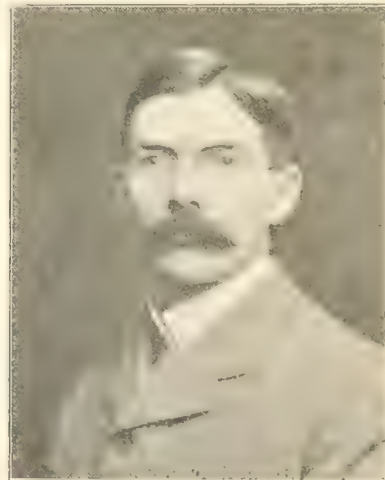
The Prophylaxis of Sinus Disease.—Dr. D. Bryson Delavan, of New York, said that the prevalence and serious nature of diseases of the



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DR. C. A. VEASEY,
PHILADELPHIA.
Secretary, Section in Ophthalmology.



DR. JOHN T. BARNHILL.
INDIANAPOLIS, IND.
Secretary, Section in Laryngology and Otolology.

accessory cavities rendered it desirable to understand clearly not only how they might be cured, but also in what manner, if possible, they might be prevented. The common predisposing causes were anatomical deformities of the nasal septum, of the middle turbinated bodies, and of the nasal cavity itself; thickening of the soft parts lining the septum and turbinates; in short any condition which hindered free drainage from the nasal cavity.

Exciting causes were various exanthematous and infectious diseases; certain chronic conditions, such as syphilis, tuberculosis, and the various types of new growths; dental irritation; traumatism, and the introduction of various infectious germs. The most common exciting cause appeared to be grippe.

The possibilities of sinus disease, immediate or remote, should be remembered in dealing with fractures of the nose and in the existence of permanent nasal deformities, and care should be taken to secure the normal drainage of the middle turbinal region. Hypertrophic conditions tending to occlude this neighborhood should be recognized and relieved. The greatest opportunity for the prevention of serious sinus disease lay in the prompt recognition and immediate effective treatment of all acute inflammatory conditions of the accessory sinuses. This was especially true of grippe. Treatment for the acute inflammations was recommended in detail.

In the prophylaxis of sinus disease much good might be accomplished: (1.) By recognizing the conditions under which inflammation of the sinuses were likely to recur and, if possible, removing them. (2.) When removal of the predisposing condition was not practicable, by guarding the patient against the various exciting causes which might determine an acute attack. (3.) When acute inflammation was already threatened, by applying immediate treatment for its relief, the great danger being recognized of recurrent mild acute attack.

Cell Implantation in the Production of Tumors.—Professor LEO LOEB, of Chicago, said that the problem of the origin of tumors was a part of the physiology of growth. In explaining malignant tumors pathologists made use of two of the most obvious instances of ordinary tissue growth, namely, embryonic development and regenerative phenomena. Accordingly, two theories had been advanced to explain tumor growth: 1. Cohnheim's (Wilm's); and 2, Ribbert's. The result of experimental investigation showed that both theories were insufficient to explain the production of malignant tumors. Neither the regenerative factor alone, nor the embryonic character of the cells added to the regenerative factor, was able to change ordinary cells into cells of a malignant tumor. It was not yet even certain that transplanted embryonic cells grew better than adult ones, with the exception of cartilage. However, cells of a malignant growth transplanted could give rise to malignant tumors. These latter experiments demonstrated among other facts, that the formation of metastases was caused by a primary increase in the energy of growth of the tumor cells, and did not depend, as had been maintained, upon a constitutional factor in the individual affected by the tumor.

To strengthen the two first-named theories, auxiliary hypotheses had been added. The secondary factors thus introduced were not yet definite and

had still to be tested experimentally. Certain teratomata could be explained by Cohnheim's theory. Certain difficulties, however, existed even in this case. Of special interest for the explanation of certain teratomata were the recent experiments of Spemann on triton. A further experimental analysis of the causative factors of growth was necessary for the advancement of our knowledge of the ætiology of tumors.

SECTION IN MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

Report by the Secretary, June 10th.

The Address of the Chairman.—Dr. GEORGE E. BUTLER said that the trend of therapeutics was in the same direction as the trend of experimental medicine. The ion principle, while not clear from obscurity, threw light on therapeutic nerve action. The organic metals and metalloids tended to explain the tonic action, as likewise the alternative action, of certain drugs. The discovery of an organic arsenic in the thyroid gland explained the tonic and alternative action of arsenic in cases where iron was contraindicated. The trend of thought in the *Pharmacopæia*, as shown by the adaptation of ointments to therapeutic rather than cosmetic pharmacy, was along the line of experimental medicine. The vegetable substitutes for venesection were, as might be anticipated, of late showing greater depressing action on the heart. The study of the untoward effects of drugs, as shown in the untoward effects of borax in epilepsy, indicated that the range of cumulative effects among drugs was much greater than was at first believed. The cumulative effects of drugs like borax, trional, sulphonal and the bromides, indicated a condition of disturbed metabolism evidenced by the presence in the urine of substances such as were found in hæmatoporphyrinuria. The use of organic principles in the treatment of disease, other than those of the ductless glands had been extended. The enormous subjective factor in aphrodisiacs and other drugs used in combating impotence and sterility, had been signally illustrated during the past year in a comparative failure of many newly introduced agents. The therapeutic problems for the future involved a closer study of disease physiology, of experimental medicine, and of comparative medicine.

The Place and Importance in the College Curriculum of Materia Medica.—In presenting this paper Dr. WARREN B. HILL, of Milwaukee, drew attention to the fact that the papers read at the different meetings showed that the tendency in modern medicine was away from therapeutics based on materia medica. In the text books the study of pathology was almost excluded, and materia medica took a minor place in the curriculum of colleges, but still the reason why the study of surgery was so attractive was that it was built on therapeutics. Then again surgeons would listen to the very smallest details and they had surgical rather than medical therapeutics in the ascendancy. There was a lack of systematic training in physiology, functional pathology and pharmacodynamics and this was the principal cause of the medical unbelief of the present day. The speaker espoused the cause of those

who asked that the study of materia medica, therapeutics and pharmacy should be spread over the four years' course. He also impressed upon the meeting the importance of studying a small but carefully selected list of drugs and advocated their classification. If only they would teach physiological action and do away with class books as far as possible they would have students who would love materia medica for its own sake and not merely study it in order to pass an examination.

In the absence of Dr. JACOB ALLEN PATTON, of Chicago, his paper on **The Place and Importance in the College Curriculum of Pharmacy** was read by title.

The Place and Importance in the College Curriculum of Therapeutics was the title of a paper read by Dr. N. A. HARE, of Philadelphia, who in opening gave a definition of materia medica and therapeutics as he understood them. The words pharmacy and therapeutics, he said, were frequently used as if they meant one and the same thing and then again they were often used with altogether different applications. Speaking of the length of time during which the medical student should continue the study of this branch he considered that it should extend throughout the course at college. The speaker thought that more time than was necessary was devoted to botany. He then showed in what manner his students allotted their time during the four years, the fourth having much time spent in conferences. The author was also in the habit of using the stereopticon to illustrate the pathological condition of the subject. His experience with regard to the classification of drugs was that it had many disadvantages and he pointed out that there was a great abuse of remedies by physicians simply because of the wrong impressions which they had received when they were students. Thus it was a common thing to find sedatives used as stimulants and stimulants as sedatives. In concluding the doctor condemned the action of State Boards of Examiners whose action in putting questions relating to minor drugs prevented colleges directing the attention of their students to the careful study of the more important.

In the discussion on the two papers which followed, Dr. Lefebvre, of New York, after details as to his methods of teaching, declared his belief in four years' study and cordially agreed with the previous speaker as to the action of State Boards of Health. He was of the same opinion as Dr. Hill with reference to classification, and was sure that eventually therapeutics would occupy a higher place than now. Dr. A. W. Baer, of Chicago, thought it would be a good thing for every student to spend his summer vacation in some drug store where he would learn more of pharmacology in a few months than he would in two years in a college or from books. Dr. W. J. Robinson, of New York, thought that therapeutics were too much neglected. They were now paying the penalty for their neglect of therapeutics. He was at one with Dr. Hare regarding the difficulties of classification, and agreed with Dr. Hare as to the absurdity of the minor questions which were asked by State Boards. Dr. E. H. Long, of Buffalo, said it was a hopeful sign that those who had given the subject so much thought agreed so well in the main. Therapeutics

did attract too small a share of attention, but they had the remedy in their own hands, and the time was not far distant when physicians and surgeons would recognize the place of remedial agents. With regard to students and teaching he attached great importance to leading them to think and reason out. In the fourth year they should be made to write out prescription. Dr. H. C. Wood, Jr., of Philadelphia, and Dr. H. R. Slack, of La Grange, Ga., agreed with Dr. Hill as to classification. Dr. S. S. Cohen, of Philadelphia, said that patent medicines flourished because the average physician had not learned how to prescribe intelligently; the remedy was not to give a student a diploma until he could make out a proper prescription.

SECTION IN DISEASES OF CHILDREN.

First Day, Tuesday, June 10th.

The Chairman's Address.—Dr. H. M. McCLANAHAN, of Omaha, suggested the appointment of a committee on necrology and also a committee for the general investigation of the subjects relating to the diseases of children. His address reviewed quite thoroughly the current pædiatric literature for the year. Four hundred and seventy-seven papers had been written during the year on this subject. He emphasized the fact that the wonderful advances made in the subject of the diseases of children had been accomplished almost entirely by the physicians of this country.

Tuberculous Peritonitis.—Dr. T. M. ROTCH, of Boston, said that a clinical differentiation of cases based solely on the pathological findings was inadequate for a satisfactory decision, first, as to diagnosis, second, as to ætiology and treatment. The reason why laparotomy in cases of tuberculous peritonitis had proved to be curative was not definitely known. Tuberculosis of the peritonæum might be a primary infection. Most commonly, however, it was secondary. We might practically speak of three forms from a pathological standpoint: First, a miliary tuberculosis with ascites; second, a fibrous form, and this form was essentially chronic, and thirdly, a later stage of the form just described, in which there occurred tuberculous deposits with caseation and softening. This had been called the ulcerative form. We were confronted with five salient questions: a. the recognition of the presence of tuberculous peritonitis; b. the detection of which pathological form was present; c. whether the tuberculosis of the peritonæum was localized, or was secondary to tuberculosis elsewhere; d. which of these forms was amenable to treatment and under what circumstances laparotomy should be performed. The symptoms of tuberculosis of the peritonæum in infancy and early childhood were very unsatisfactory and obscure. The tuberculin reaction was therefore of value, when present, although its negative evidence was not decisive. When we had a localized tuberculous process in the peritonæum which was chronic in its course, it was this class of cases which should be treated by laparotomy. The most favorable of these cases for treatment by laparotomy was the occurrence of miliary tubercles in the peritonæum accompanied with ascites, while the less favorable form for laparotomy was the fibrous. In the so-called ulcerative tuberculosis of the peritonæum, tuberculosis was usually found elsewhere than in the

peritoneal cavity, and these cases, as a rule, could not be benefitted by laparotomy.

Dr. J. M. Dodson, of Chicago, emphasized the great value of tuberculin as a diagnostic measure, and called attention to the x-ray, which had been used in a number of cases as a remedial measure. While the x-ray had been used with gratifying results in many cases, the number was not yet sufficiently large to speak with certainty as to its positive value.

Cerebrospinal Fever.—In illustration of the well-known tendency for infectious diseases, and especially for cerebro-spinal fever, to vary greatly in type, *Dr. J. P. Crozier Griffith*, of Philadelphia, reported three different family epidemics. In the first family there were two sisters, aged four years and three years and four months respectively. Both of these were severe cases with well-marked typical symptoms, one patient recovering, with absolute deafness of central origin, the other dying after protracted illness.

The second family showed three types of the disease; the malignant, that of average severity, and



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SECTION IN DISEASES OF CHILDREN

the very mild. The first patient, a baby, died in convulsions after twenty-four hours' illness. Diagnosis would have been impossible if the patient had been seen alone. The second case ran a continuous subacute course with relapses. The third patient was so little ill that consciousness was always preserved, and the slight characteristic rigidity of the neck could easily have been overlooked had the disease not been a family one.

The third epidemic illustrated especially the relationship of cerebrospinal fever to pneumonia. One case in the family, that of a child six years of age, ran a rather severe course with characteristic symptoms, and terminated fatally. Another case, in a child aged ten years, began with cerebrospinal symptoms, which soon disappeared and lesions of a pneumonia developed. The third case never showed any cerebrospinal symptoms except an unusually well-marked abdominal tache. There was, however, a well-developed pneumonia from the beginning. In this last case diagnosis would have been impossible had it not been for the family history.

Dr. I. A. Abt, of Chicago, called attention to the relation of cerebro-spinal fever to deaf mutism, and stated that observations had been made showing a greater increase of deaf mutism after severe epidemics of cerebro-spinal meningitis.

Dr. T. M. Rotch, of Boston, spoke of the frequent great difficulty in making a diagnosis in the earlier periods of life. We do not get marked symptoms of either a cerebral or spinal type in many cases. We may have cases without rigidity and without opisthotonus. Lumbar puncture is exceedingly important for diagnosis, but in order to be of value, it must be made in the first few days of the disease. If we wait until later, the conditions may have so changed that it loses its value. The Widal re-action, as in one of *Dr. Griffith's* cases, may show the presence of an accompanying typhoid fever or may indicate that the child had typhoid fever in the past. It is exceedingly important to make the diagnosis in cases occurring in private practice. The prognosis in chronic cases is bad, and the disease may leave the child mentally and physically imperfect: the child, indeed, may become idiotic. Sometimes, however, it passes off, and while it is always a dangerous disease, there is usually some hope for complete recovery.

Dr. E. F. Brush, of Mt. Vernon, N. Y., reported an interesting case of typhoid fever in an infant. *Dr. A. C. Cotton*, of Chicago, disagreed with the statement that children were exempt from typhoid fever because they did not drink water. Even the child in *utero* may develop typhoid fever, and the nursing child often develops the disease.

Dr. Edwin Rosenthal, of Philadelphia, presented a paper on *Serum Therapy* in which he reviewed the general status of the serums used in the treatment of disease.

Dr. A. C. Cotton, of Chicago, said that his experience with anti-tetanic serum had proved to be unsatisfactory. There were many cases that recovered anyway, and it was doubtful whether the serum had any effect. Croupous pneumonia did not have that formidable aspect to him as to most physicians. With good hygiene most cases got well with very little medication; hence serum treatment yielded clinical evidence of very uncertain value. In catarrhal pneumonia, he considered serum treatment of very little value.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

First Day, Tuesday, June 10th.

Treatment of Retroversion and Retroflexion of the Uterus. By *J. W. Cokenower*, of Des Moines, Iowa.—The best treatment, of course, in these conditions, is to operate, although other measures are used, especially in those cases where we can afford to procrastinate. The condition produces either local, remote or general symptoms, or all together, depending on its severity and the duration. When cases are found practically free from adhesions, vaginal fixation is the best method for a cure; while in other cases Alexander's operation applies. When there are prospects of a future possible pregnancy, ventro-suspension should not be done. The best and proper method for the radical correction of these conditions must be left to the skill and judgment of the gynæcologist.

The Permanent Results that Should Constitute the Minimum Requirement of Surgical Treatment of Retroversion of the Uterus.

By Dr. A. GOLDSPOHN, of Chicago.—In these cases neither ventro-fixation, vagino-fixation nor ventro-suspension should be done because it would most markedly interfere with the proper course of pregnancy; the uterus would be unable to rise if these women conceived. These operations by artificial ligaments should be abandoned. The author further stated that the main point for discussion was how to use the round ligaments to obtain the very best results. By median, ventral and vaginal sections these ligaments could be shortened only by reduplication or transplantation of their strongest median portions, while their distal parts remain as weak as ever. Only *via* the inguinal canals from without could this gross inconsistency be avoided and an anatomically correct shortening of these structures be secured, because these canals and the internal abdominal rings admitted of ample room, without cutting, for the introduction of a finger to liberate all adhesions and to lead out the annexa for reconstructive treatment, or for partial removal; and if the wound was properly closed, hernia could not follow. This had been shown in over 200 cases. The only operation that had withstood the double test of pregnancy of the author, was the Alexander method. This had been shown in about 100 per cent. of 80 cases examined after a subsequent labor. Retroversion in these cases had not been known to occur.

Surgical Treatment of the Utero-sacral Ligaments through the Vagina in Retroversion of the Uterus.

By J. WESLEY BOVEE, of Washington, D. C.—The author refers to various other methods and procedures for retro-displacements of the uterus, and the various rôles assumed by the ligaments in uterine support. He speaks of the inefficiency of many popular operations for relief of these displacements and reports a number of successful cases in which he used his operation.

Electrothermic Hæmostasis.

By Dr. A. J. DOWNES, of Philadelphia.—In this paper the author gives a résumé of a previous paper and a list of operations performed by this method. He has practically bloodless hysterectomies. He advanced special and logical claims for its use in uterine cancer, salpingitis and ectopic pregnancy and found its ideal use in occlusion and exclusion of the infectious canal of the appendix. The entire absence of post operative raw surfaces and the absolute avoidance of adhesions, its cleanliness and excellence in the removal of hæmorrhoids were also referred to.

Second Day, Wednesday Morning, June 11th.

High Amputation of the Cervix Versus Hysterectomy for Operable Carcinoma of the Cervix.

Dr. C. C. FREDERICK, of Buffalo, N. Y., said that the results of hysterectomy for carcinoma of the cervix were not what enthusiastic writers would lead the profession to expect. A very small percentage of cases were cured. Relapse in the vaginal scar was the rule. Amputation of the cervix at or above the internal os was very much simpler

and decidedly less dangerous. The results as to relapse were as favorable as from hysterectomy, the period of relief was as long, and the patient was able to be up in a much shorter period; the shock of operation was materially lessened, and the results in general were as good. The author urges high amputation of the cervix in operable carcinoma of the cervix as a substitute for hysterectomy.

Operation for Recurrence of Cancer after Hysterectomy.—Dr. E. W. CUSHING, of Boston, Mass., said that early diagnosis and radical operation certainly gave better results now than were formerly secured. The successful cases were those in which absolutely all the involved lymphatics were removed and no infection of the wound took place at the time of the operation. The cases should remain under observation for years. If recurrence occurred radical operation should be resorted to at once through abdominal incision.

Hæmostasis of the Broad Ligament. Dr. H. P. NEWMAN, of Chicago, said that if the stump sloughed he applied ninety-five per cent. carbolic acid, or did a resection of the interstitial portion of the tube. The advantages of the use of this method were absolute and permanent hæmostasis, and there was no possibility of the ligament slipping, or of the artery contracting and drawing away from the ligature and forming a hæmatocle. By the use of the angiotribe, multiple thrombi were formed. By the method described no strangulated stump tissue remained to slough, and the amount of foreign matter was reduced to a minimum. Post operative shock was materially lessened.

Dr. Rosenblatt, of Fort Wayne, said that he used a Ferguson forceps and had had excellent results from its use.

Dr. A. Palmer Dudley, of New York, said that the use of the angiotribe in the broad ligament seemed to be for the purpose of preventing hæmorrhage. We must not overlook the fact that we could not crush a vessel so that it would not bleed without doing injury to the nerves and other structures in the pelvis. If all the cases were faithfully reported, we would find that quite a few patients had died of tetanus. Secondary hæmorrhage had also carried off quite a few, in proportion to those who had died of secondary hæmorrhage by the ligature in many years. In England, three out of four cases of hysterectomy by the broad clamp died. In Holland, in three cases, all had died, one of secondary hæmorrhage, one of tetanus, and one of peritonitis. In Russia there had been four cases, with four deaths. He would fortify the use of this instrument by a ligature behind it. The old-fashioned way of picking up a vessel and putting a ligature behind it would stand when this instrument had become an object of curiosity.

Dr. A. Goldsphon, of Chicago, did not like the instrument, because in crushing, the force necessary caused a vibration which must tear or injure the surrounding tissues. Its crushing power seemed to be exerted chiefly at the apex of the instrument; it was not so perfect at the base.

What Cases of Placenta Prævia can be Best Treated by Cæsarean Section?—Dr. F. D. DONAGHER, of Boston, said that the justification for Cæsarean section in certain cases was found in its superiority in saving foetal life without adding at all to the mother's danger. It should, however, not be urged as a substitute for version or other forms of delivery except in the proper cases. The Porro-Cæsarean had not by any means the justification of the more conservative Sænger. The latter should be done in cases of complete prævia, prævia in primiparæ in the presence of severe hæmorrhage and a rigid os, and where one got a history of previous operative delivery.

Massage and Exercise in the Management of the Puerperium.—Dr. G. S. BACON, of Chicago, recommended a rest in bed for from two to four weeks after labor, to recuperate sufficiently from the exhaustion of pregnancy. Maintenance of the horizontal posture was especially necessary in patients with poor muscular development on account of splanchnoptosis, etc. There were, however, the following objections to the bed: The muscular system became weakened and the circulation poor, and the secretions and excretions were impaired. To overcome these objections and retain the advantages of the recumbent posture, systematic exercise and massage were desirable, such as moving the arms, legs, thighs, and abdominal muscles in various exercises by voluntary and resisted movements. Also thorough massage of the extremities, back, and abdomen.

Contribution to Ureteral Surgery, with Report of Four Cases, Including a New Operation for Double Uretero-vaginal Fistula.—Dr. X. O. WERDER, of Pittsburg, said that in an experience of over 1,500 abdominal sections, injuries to the ureters had occurred four times. Three had been followed by immediate implantation into the bladder, two of which had proved successful; in the third, however, in which both ureters had become involved, there had been a urinary discharge from the vagina on the fifth day, and, on the sixth, all the urine had passed away *per vaginam*, the bladder remaining perfectly empty. By a novel procedure the upper portion of the vagina had been subsequently made a diverticulum of the bladder, completely curing the patient.

Ætiology and Pathology of Ectopic Pregnancy.

Dr. H. D. ENGRAHAM, of Buffalo, read a paper on this subject. He said that the diagnosis of ectopic pregnancy could be made with a reasonable degree of certainty when it followed the usual symptoms given in the text-books, yet even in such cases it was too frequently mistaken for some other morbid condition, quite often a miscarriage. The reason for these frequent mistakes in diagnoses must be due to a superficial examination of the patient; it certainly could not be attributed to the ignorance of the physician. When, however, ectopic pregnancy did not follow the usual course, but deviated from the classical symptoms, it was not so strange that a mistaken diagnosis was made; yet a complete history of the case, followed by a thorough and careful examination of the patient, should in most instances enable any competent physician to be quite sure of the true condition, at least, after rupture had occurred. Before rupture

took place it was possible to make a diagnosis in many cases, but the patient rarely consulted the physician. Many mistakes had been made in the past, resulting in too great a loss of life. With a more thorough understanding of the matter the mortality should be much less than at the present time.

Cæsarean Section Made Necessary by a Ventrofixation.—Dr. W. M. FINDLEY, of Altoona, Pa., read a paper thus entitled. He said that Cæsarean sections were not so numerous that the careful recording of each case was unnecessary. Much of value had been placed on record, but many points were yet fit subjects for discussion, especially the necessity of careful instructions to the woman. The more careful recording of all the statistics of ventrofixation in its relation to the child-bearing period was desirable. The author reported a case in which the evil effects of ventrofixation were made manifest at the time of delivery. Necessity of written information to guide the doctor who might treat a case subsequent to operation of this character when the patient was removed, was also advised.

Coincident Meetings.

THE AMERICAN ACADEMY OF MEDICINE.

The twenty-seventh annual meeting of the American Academy of Medicine was convened at the Hotel Kensington, Saratoga Springs, on Saturday morning, June 7th, at eleven o'clock, by the president, Dr. Victor C. Vaughan, of Ann Arbor, Mich. The first session was an executive session, the most important business transacted being the presentation and adoption of the report of the council, the election of fellows, the reports of the officers and the adoption of minor changes in the by-laws affecting financial matters. This was followed by an open session, at which the Committee on Time Allowance in the Combined Collegiate and Medical Course reported through Dr. A. L. Benedict, as chairman. The report was approved and the committee continued. Dr. L. Duncan Bulkley, of New York, submitted the report of the Committee on Reciprocity in Medical Licensure, while the secretary, Dr. Charles McIntire, of Easton, Pa., made a report on the examinations for medical licensure for 1901. Dr. McIntire also read a paper on the Personal Equation in Marking Examination Papers, based upon the ratings given on the same set of papers by a number of medical examiners.

Dr. S. A. Knopf, of New York, drew a rather discouraging picture of the present condition of the family physician as compared with that occupied by him twenty-five or fifty years ago, and protested against the unfair methods by which he had been relegated to a subordinate and unremunerative position. He said that the community should employ a sufficient number of competent general practitioners to look after the health of all the indigent families and this example would do much to restore the family physician to his proper place in the

community. Dr. Charles M. Culver, of Albany, pointed out the laxity and general incompetence of physicians as accountants, and insisted upon the necessity of accuracy in this direction even if it were necessary to employ a clerk to attain it. Dr. Winfield S. Hall, of Chicago, presented a paper on Pure Science *versus* Applied Science in Medicine. The evening was devoted to an address on the Religion of Science, by Dr. Victor C. Vaughan, president of the Academy.

On Monday morning, June 9th, Dr. Edward L. Devine, general secretary of the Charity Organization Society of New York City, read a paper on The Medical Profession and Social Reform. Other papers were presented on Monday by Dr. John B. Roberts, of Philadelphia; Dr. D. C. Hawley, of Burlington, Vt.; Dr. T. D. Davis, of Pittsburg; Dr. Augustus A. Eshner, of Philadelphia; Dr. P. Maxwell Foshay, of Cleveland; Dr. S. D. Risley, of Philadelphia; Dr. Charles McIntire, of Easton, Pa., and Dr. Rosa Engelmann, of Chicago.

The following officers were elected for the ensuing year: President, Dr. Charles McIntire, Easton, Pa.; Vice-Presidents: Dr. Wm. R. White, Providence, R. I.; Dr. George Dock, Ann Arbor, Mich.; Dr. Rosa Engelmann, Chicago, Ill., and Dr. D. C. Hawley, Burlington, Vt.; Secretary, Dr. A. R. Craig, Columbia, Pa.; Treasurer, Dr. Edgar M. Green, Easton, Pa.; Assistant Secretary, Dr. John S. Davis, University of Virginia.

THE NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

The twelfth annual meeting of this body was convened by the president, Dr. N. R. Coleman, of Columbus, Ohio, in the hall of the Young Men's Christian Association, Saratoga Springs, at ten o'clock on Monday, June 9th. After addresses of welcome from various officials the president presented his annual address, which dealt with the question of uniformity in the medical practice acts. He was followed by James Russel Parsons, secretary of the University of the State of New York, who made an address upon the work of the Regents of the State University in so far as it affected the practice of medicine. In the course of his remarks he dwelt particularly on the character of the preliminary requirements for the study of medicine. Johns Hopkins and Harvard universities required college graduation as a qualification for admission to the study of medicine, the Western Reserve University required the completion of the junior year at college, the University of Minnesota required the completion of the freshman year, seventeen other medical colleges required four years of high school work, nine required three years, fourteen required two years, ninety required one year of high school work, eleven required completion of the grammar school, while three medical schools were indefinite in their requirements. The statutory requirement in the States of New York, New Hampshire, Ohio and Vermont was the completion of a four-year high school course. This Mr. Parsons believed to be the highest practicable statutory requirement. Anything beyond this should be left

to the initiative of the medical schools themselves. Seventy-nine out of eighty leading medical schools of the United States reported that they accepted at the face value the New York State medical student's certificate, which was evidence that in this there was a common ground to work on. The Regents of the University of the State of New York had desired a high school course leading up to the medical school, and in this they had been followed by twelve leading universities of the United States, which had arranged preparatory courses for students proposing to enter on the study of medicine. Dr. Suiter, in the absence of the author, read a paper by Dr. Joseph H. Raymond, president of the Medical Council of New York, on Divided Examinations for License, which provoked a lively discussion, which was participated in by Dr. E. B. Harvey, of Boston; Dr. Morrill, of Missouri, and Dr. Lewi, of New York.

The following papers were also presented and discussed: What Can Be Done to Regulate the Number of Young Men Studying Medicine? by Dr. R. S. Martin, Stuart, Va.; The Results of the Medical Law of Tennessee, by Dr. T. J. Happel, Trenton, Tenn.; Should There Be the Same Examination for Old Practitioners as for Recent Graduates When Applying for a License? by Dr. Maurice J. Lewi, New York; The Definition of the Practice of Medicine in Medical Practice Acts, by Dr. Harold N. Moyer, Chicago; How may the Topics in Examinations for License be Best Arranged by Examining Boards? by Dr. Henry Beates, Jr., Philadelphia.

All the officers were reelected as follows: President, Dr. N. R. Coleman, Columbus, Ohio; Vice-Presidents, Dr. Henry Beates, Jr., Philadelphia, Pa.; Dr. James A. Egan, Springfield, Ill.; Secretary-Treasurer, Dr. A. Walter Suiter, Herkimer, N. Y.; Executive Council, Dr. William S. Foster, Chairman, Pittsburg, Pa.; Dr. Joseph M. Mathews, Louisville, Ky.; Dr. William A. Spurgeon, Muncie, Ind.; Dr. William Warren Potter, Buffalo, N. Y.; Dr. Augustus Korndorfer, Philadelphia, Pa.

THE AMERICAN PROCTOLOGIC ASSO- CIATION.

The fourth annual meeting of the American Proctologic Association was held at Saratoga Springs on June 9th and 10th, under the presidency of Dr. Thomas Charles Martin, of Cleveland, Ohio. The sessions were held on the afternoons of the dates mentioned in the parlors of the United States Hotel. Following are the titles of the papers presented: President's Address, by Dr. Thomas Charles Martin, on The Relation of the Rectal Valve to Obstipation, a Clinical Research; Dietary Regulation in the Treatment of Rectal Diseases, by Dr. A. P. Buchman, Ft. Wayne; Diagnosis and Treatment of Proctitis, by Dr. Howard A. Kelly, Baltimore; Some Unusual Causes of Proctitis and Diarrhoea, by Dr. James Tuttle, New York City; Muco-Membranous Colitis, by Dr. George J. Cook, Indianapolis; The Treatment of Rectal Fistula by Complete Excision and Immediate Closure with Buried Sutures, by Dr. Floyd W. McRae, Atlanta; The Causes and Treatment of Rectal Abscess,

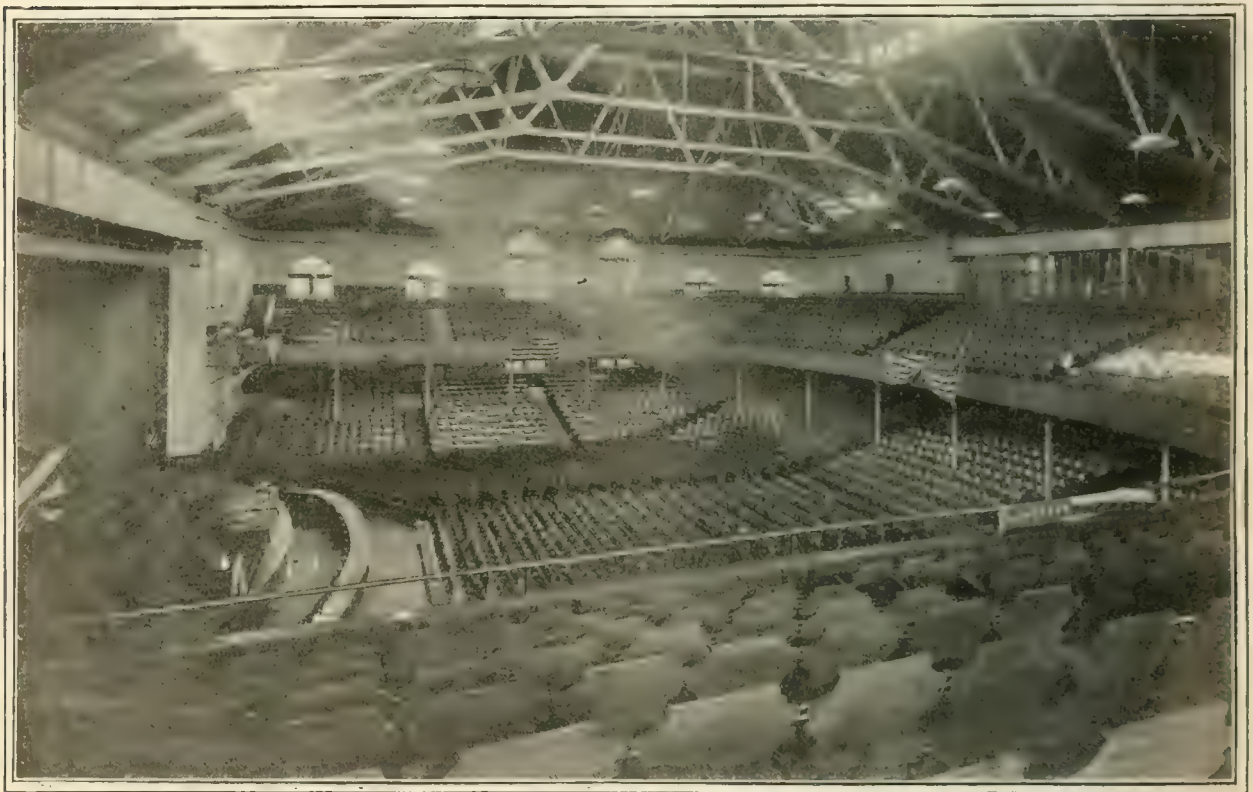
by Dr. William M. Beach, Pittsburg; Excision of Cancer of the Rectum, with Report of two cases, by Dr. Lewis H. Adler, Philadelphia; Colotomy—Tumors Complicating It, by Dr. B. Merrill Ricketts, Cincinnati; The Significance and Treatment of Hæmorrhage from the Rectum, by Dr. A. Bennett Cooke, Nashville; Treatment of Hæmorrhoids by Enucleation, by Dr. Geo. B. Evans, Dayton; A Report on Ulcerations of the Rectum, by Dr. Samuel T. Earle, Baltimore; Reports of Cases, by Dr. Louis J. Krouse, Cincinnati, Dr. Joseph M. Mathews, and Dr. J. Rawson Pennington.

The following officers were elected for the next year: President, Dr. Samuel C. T. Earle, of Baltimore, Md.; vice-president, Dr. Floyd W. McRae, of Atlanta, Ga.; secretary and treasurer, Dr. William M. Beach, of Pittsburg, Pa.; executive council, Dr. George J. Cook, of Indianapolis, chairman; Dr. Lewis H. Adler, of Philadelphia; and Dr. Chas. T. Martin, of Cleveland, Ohio.

Byron G. Van Horne, of Englewood, N. J.; A Résumé upon the Form of the Chest in Phthisis, by Dr. Woods Hutchinson and Dr. William A. Evans, of Chicago; and an interesting paper upon the early diagnosis of pulmonary tuberculosis, by Dr. Charles Lyman Greene, of St. Paul. The following officers were elected for the ensuing year: President, Dr. Charles Lyman Greene, of St. Paul; first vice-president, Dr. William B. De Garmo, of New York; second vice-president, Dr. James T. Priestley, of Des Moines; third vice-president, Dr. P. Maxwell Foshay, of Cleveland; fourth vice-president, Dr. William A. Adams, of Ft. Worth, Texas; secretary and treasurer, Dr. J. J. Morrissey, of New York.

THE AMERICAN MEDICAL TEMPERANCE SOCIETY.

The eleventh annual meeting of this society was held in the parlors of the United States Hotel

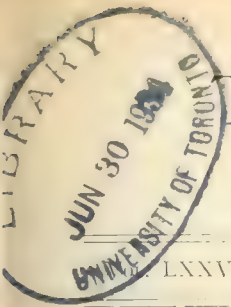


Interior of Convention Hall, where the General Sessions were held.

AMERICAN ASSOCIATION OF LIFE INSURANCE EXAMINING SURGEONS.

The annual meeting of the American Association of Life Insurance Examining Surgeons was held in the gymnasium of the Young Men's Christian Association, Saratoga, on Monday, June 9th, where a very interesting programme was discussed. The meeting was presided over by the President, Dr. James H. Stowell, of Chicago. Among the papers presented were the following: The Prognosis in Organic Disease of the Heart, by Dr. William A. Adams, of Texas; Hernia and Life Insurance, by Dr.

on June 11th and 12th. Dr. N. S. Davis, of Chicago, delivered his presidential address on The Regulations of Alcoholic Liquors to the Economic and Sanitary Interests of the Race, and the Principles of Legislation Which Should Govern Them. Addresses were also delivered by the first vice-president, Dr. H. D. Didama, On the Alcohol Question, and by Dr. D. S. Reynolds, On the Tobacco Habit. Papers were also read by Dr. J. H. Kellogg, Dr. H. F. Hewes, Dr. L. D. Mason, Dr. D. Paulsen, Dr. Dr. John Madden, Dr. J. N. French, Dr. C. H. Sheppard, Dr. V. A. Ellsworth, Dr. T. D. Crothers, and Dr. J. W. Long.



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Original Communications.

DIFFICULTIES IN THE DIAGNOSIS OF CERTAIN FEBRILE DISEASES.*

By GLENTWORTH R. BUTLER, M. D.,

BROOKLYN.

PHYSICIAN TO THE METHODIST EPISCOPAL AND BROOKLYN HOSPITALS.

In the presentation of this paper there is no intention of doing more than to note some of the difficulties in diagnosis which may be encountered by the practitioner of internal medicine. As the years pass, there are certain instances of illness which stand out rather prominently in one's memory, because of the embarrassing diagnostic problems which they present. Among these are the cases to be described. They are united by no bond of pathological unity except when specially grouped, and have little in common besides the perplexity of diagnosis and the presence of fever. In some the diagnosis has been correctly made during life; in others an autopsy afforded unexpected revelations regarding the nature of the disease.

It is not intended to tax your time and patience with the giving of detailed histories; clinical summaries of the salient points, such as are afforded by a backward glance over a case, will suffice for the present purpose.

CASE I.—A man, thirty-two years of age, was sent into my hospital service with a diagnosis of a four-weeks' typhoid fever, during which time the temperature had been irregularly remittent. No prodromal history was available. On admission he exemplified one of the most marked and typical instances of the typhoid status that can be imagined. The low, muttering delirium, the dry, brown tongue, the twitching tendons, the distended abdomen, the diarrhoea, and the high temperature led to an immediate concurrence in the diagnosis under which he entered. But, after observing the case for three or four days, some suspicion was excited by the unusual variations in the fever, and a very systematic examination was rewarded by the finding of moderate boggiess and semi-fluctuation in the perinæum. Incision of a deep-seated perineal abscess evacuated a small quantity of excessively foul pus, followed by a prompt fall of temperature and a rapid recovery.

Comment.—The difficulties in this case arose from the absence of a prodromal history, the inability of

a delirious patient to state his subjective symptoms, the slightness of the physical signs of the abscess, and the location of the latter at a site which ordinarily would not be investigated, unless attention was directed to it by subjective complaints. The making of the correct diagnosis depended entirely upon a systematic and complete physical examination—perhaps also upon the element of good luck.

CASE II.—Some ten years ago a young man, twenty-four years of age, took to bed after a period of malaise, headache, and feverishness. The temperature gradually rose, and for three weeks ran a somewhat irregular curve, by no means typical, and yet no more anomalous than may be seen in an irregular typhoid. Nose-bleed, rose-spots, palpable spleen, diarrhoea, and delirium, did not appear. The bowels were constipated, and there was not the slightest abdominal pain or tenderness during the entire course of the case. About the end of the third week the temperature began to come down and the announced diagnosis of a mild irregular typhoid fever was regarded as certain. But, out of the clearing sky came a thunderbolt—a chill followed by high fever and sweating. The chill and fever recurred at irregular intervals varying from a few hours to a day or two. Nothing could be found in the heart or the lungs to account for this development. The abdomen slowly became distended, but not the slightest abdominal pain or tenderness developed. The patient during this period was twice seen by a most competent surgeon, who could find no indication for opening the abdomen. Under the repeated assaults of chill and fever the patient finally succumbed. The autopsy showed a total absence of the lesions of typhoid fever, and the presence of an appendicitis. The appendix, lying well back, had perforated, with the resulting formation of a small abscess in the retro-cæcal tissues. The abscess had in turn perforated, and discharged into, the cæcum. In consequence, the mesenteric veins had become inflamed, and infected pylephlebotic emboli had been carried to the liver, which was riddled by from 40 to 50 metastatic abscesses of varying size. The peritonæum was not inflamed, the entire suppurative process having taken place posteriorly to the cæcum.

Comment. In this case the total absence of pain or tenderness, due mainly to the non-involvement of the peritonæum, deprived the observer of the principal diagnostic, almost pathognomonic, sign—the localized tenderness—of appendicitis. The early, but imperfect, drainage (for both perforations appeared to be nearly of the same age), of the appendical abscess into the cæcum, accounted for the rather slow rise, maintenance, and fall of the temperature. Had it not been for the well-nigh accidental involve-

* Read at the Annual Scientific Meeting of the Association of Alumni of the Long Island College Hospital, May 10, 1902.

ment of the radicles of the portal vein and the sequent hepatic abscesses nature would have assured a recovery.

CASE III.—A woman, thirty-five years of age, was subjected to operation for repair of the cervix. After a slight rise for a day or two after operation, the temperature ran flat for ten days, at which time there was chilliness, followed by fever and headache, but no abdominal or other pain. Repeated examinations of the pelvis by the operator in a search for some local inflammatory or suppurative focus were absolutely negative. The fever ran an irregularly remittent course for between three and four weeks, during which period I saw the patient twice. The headache lasted for a week, the tongue presented nothing characteristic, the bowels were constipated, the abdomen was flat and without tenderness, the mind was perfectly clear, no rose-spots were observed, and the temperature curve did not approach the type of typhoid fever. Repeated Widal tests were negative, but the blood examinations showed no increase in the leucocytes. Heart and lungs apparently normal. The spleen, however, was sufficiently enlarged to be palpable. In spite of the scanty diagnostic data a provisional diagnosis of typhoid fever was ventured. This was based upon the week-long headache, the enlarged spleen, the fever lasting over ten days without the finding of the malarial parasite, and the absence of a leucocytosis. This diagnosis was finally confirmed, for the convalescence was interrupted by a relapse, during which the delayed Widal reaction made its appearance.

Comment. This case brings up a question of some diagnostic interest, namely, the onset of some medical ailment concurrently with a surgical operation, or following the latter so closely in point of time that a doubt at once arises as to whether the observed symptoms constitute a part of some surgical, usually septic or suppurative, sequel, or whether there is an accidental association of an independent medical disease with an operation. I am well aware that the conscientious surgeon or obstetrician of to-day, no matter how much confidence he may have in the perfection of his aseptic technics, will exhaust all the resources of diagnosis in searching for a focus of infection before deciding that a febrile attack following an operation is a coincidence rather than a result. Not so commonly now as in former times does puerperal sepsis masquerade as malaria, or a septic fever as a cold. The rule is a good one in these cases, not to consider the operation as innocent until it has been proved not to be guilty. In the majority of cases adhesion to this rule is rewarded by the finding of a surgical cause for the symptoms, but an open mind is desirable, and in the case just summarized the surgeon had a clean record.

CASE IV.—A strong man, previously healthy except for some genital irritation for which he was undergoing a course of stripping of the seminal vesicles, was taken ill, not very suddenly, with chilli-

ness and fever. The fever ran for a period of between eight and nine weeks. For the most part it was of a remittent type, interrupted at irregular intervals by slight chills, sometimes only by chilliness, followed by a considerable rise of temperature. The chills were accompanied by violent fits of coughing, sometimes terminating in vomiting, and a feeling of discomfort and uneasiness, not amounting to actual pain, in the right hypochondrium. The only significant findings during the illness, and he was most carefully gone over by two well-known consultants, were a slight increase in the size of the liver, the presence of soft crepitations over that portion of the pleura which interposes between the liver and the anterolateral chest wall, a decided tendency to abdominal distention, and a somewhat uncertain moderate rigidity of the abdominal walls. Those who saw him declined with much unanimity to make a diagnosis, but, perhaps out of courtesy to the attending physician, looked with tolerance upon a bare suggestion of small hepatic abscesses and subacute peritonitis. The fever gradually subsided, the patient recovered from the attack, and, but for a sequel which manifested itself at a time when he was thoroughly convalescent, the nature of the disease might have remained in the limbo of uncertainties. But there appeared a non-fluctuating swelling over the third and fourth costal cartilages, and this, growing in size, was finally operated upon and proved to be tuberculous. This local tuberculous manifestation was sufficiently deep-seated to require, some months later, a second operation, involving resection of the affected cartilages and adjoining portion of their ribs. This happened some six or seven years ago and the patient is in the best of health.

Comment. There are one or two things about this case which are matters of belief, rather than demonstrated facts, and are therefore subject to contradiction at pleasure. I believe that the patient had a tuberculous peritonitis including a perihepatitis, with some small tuberculous abscesses in the liver, thereby accounting for the abdominal rigidity and distention, the friction sounds over the liver, the violent fit of coughing—the so-called “liver cough”—with each chill, and for the chill itself. Furthermore, I believe that the tubercle bacilli gained entrance by way of the rectum, either conveyed by the finger of the operator who stripped the seminal vesicles, or being already present. In either case the prolonged friction of the rectal mucous membrane may readily have caused abrasions and areas of infection. There are sufficient anastomoses between the hæmorrhoidal veins and the portal radicles to furnish a further channel for the passage of the germs.

CASE V.—A middle-aged man, in fair health, was seized with a severe rigor followed by fever of 104° F. For four weeks he ran a typhoid-fever-like temperature, then after a week of normal or nearly normal temperature the fever returned and became irregularly remittent, rising in the evening from 101° to 103° F. No cause for the recrudes-

cence of fever could be discovered in the thorax or abdomen, until after ten days or two weeks he complained of some discomfort in the rectum, and an ulcerating hæmorrhoid was found. Examination of the secretion from this showed the presence of tubercle bacilli. Very shortly the evidences of pulmonary tuberculosis appeared. This ran a very rapid course and the patient died after a total illness of three months.

Comment. This case, seen two or three times by the courtesy of a friend, was difficult of diagnosis, although tuberculosis was suspected almost from the beginning, because of the unusual delay in the appearance of any local lesion sufficiently distinctive to enable a positive decision, although repeated blood and sputum examinations were made prior to the finding of the bacillus in the rectal discharge.

CASE VI.—A hale, hearty man, in his early seventies, had enjoyed forty years of perfect health, except for an abscess of the scrotum three years before, and a slight attack of dyspeptic diarrhœa two months previous to the illness about to be described. He was suddenly attacked one afternoon with a severe chill, attended by vomiting, rapid respiration, delirium, and a rise of temperature to 101.5° F. The next morning the vomiting, rapid respiration, and delirium had ceased, and the temperature was much lower and came to normal the day after. One month later there was a similar attack, of greater severity, the fever (102° F.) taking three days to subside. Five weeks later there were, in one afternoon and evening, three rather severe chills with the usual rapid respiration (44) and pulse (120) with fever to 103° F. In two or three days the temperature became normal, and up to the present time, now four months, he has been in good health. Absolutely the only physical sign elicited from the beginning to the end of the illness was, with the first attack, a very slight and evanescent tenderness on deep pressure under the right costal margin with a bare suspicion of rigidity as compared to the left side; with the second attack, the tenderness was a little more marked; at the third attack, following the three chills, there was distinct tenderness, circumscribed, elicited by the pressure of a single finger-tip, and deep-seated, over the anatomical site of the gall-bladder, with moderate but unmistakable rigidity of the upper segments of the right rectus. These signs diminished daily so that in from ten to twelve days they disappeared. The patient was willing to have a consultant palpate his abdomen six days after the triple chill, but objected good-humoredly to have me do so, because of my greater familiarity with the exact topographical anatomy of the painful point. The prostate was a trifle enlarged, and the urine, which was repeatedly examined, presented nothing but the evidences of an extremely slight cystitis. There was no bile pigment.

The first attack was regarded as malarial, the second as probably malarial but with a suspicion of the gall-bladder. No search was made for the plasmodium after either of these chills, as the patient was promptly saturated with quinine. After the triple chill and the subsequent physical findings, a diagnosis of an acute catarrhal non-calculous chole-

cystitis, of very moderate intensity, was made. At this time the blood was twice examined, and showed the absence of the plasmodium (no quinine having been given), and the presence of a marked leucocytosis (15,000 to 25,000). This diagnosis was agreed with by a prominent consultant.

Comment. The difficulty of diagnosis in this instance lay in the paucity and slowness of the physical signs. Even at their height a rather minute and painstaking physical examination was requisite for their detection. The diagnosis of malaria in the first attack was not made until the wise rule had been observed which forbids us to consider chill and fever as of malarial origin until all other causes have, so far as possible, been excluded. Pyelitis, with obstruction of the ureter, was considered as a possibility, but a continuous watch of the urine showed no pus.

With reference to the aetiology, it may be noted that the patient had poor teeth, ate two to three times as much food as one of his age should take, and that the diet consisted largely of vegetables like carrots, turnips, cabbage, and cauliflower, all of the best and freshest, but surely coarse and irritating to the duodenal mucosa. The fact that under a much modified diet four months have passed without a recurrence is certainly suggestive.

CASE VII.—A previously healthy man, of early middle age, had an attack of influenza from which he was fairly convalescent, when there came a sudden chill followed by high fever. At the same time there was frequent and painful micturition with much vesical tenesmus. The temperature fell nearly to normal during the next few days, and coincidentally with the lessening of the fever, pus in naked-eye quantities appeared in the urine. The pus steadily diminished in amount until ten days after the first chill, when a second rigor occurred, followed by a renewal of the pyuria. Two weeks later, a third chill, fever, and discharge of pus occurred. Between seven and eight weeks from the first onset the temperature was normal, and the patient is now, some three years since, in good health.

Comment. It is comparatively easy to make a diagnosis in this case from the description just given—namely, that of a pyelitis with recurring retention due to swelling or plugging of the ureter. The diagnosis was confirmed by catheterization of both ureters and examination of the obtained urine. That from the right kidney contained pus. Nevertheless, up to the crucial test, there was some difference of opinion, owing to the rather curious, but not unusual, fact that the symptoms were almost purely vesical. There was an entire absence of pain in the region of either kidney, and the utmost that the patient would admit was a vague sense of discomfort on the right, as compared with the left, side, when almost brutally strong bimanual palpation of the kidney (with closed fist anteriorly) was

made. There were four different diagnoses in the case, viz., malaria, severe cystitis, tuberculous kidney, and suppurative pyelitis originating in influenza with recurrent retention.

CASE VIII.—A woman, thirty-five years of age, became feverish, gradually and without a chill. The fever ran for six weeks, of a low, remittent type, the highest evening record rarely exceeding 101° F. During the major portion of this time no cause for the fever could be found, although the attending physician suspected some local source of sepsis. During the sixth week, there was complaint of some pain and discomfort in the left lower abdomen and in the rectum. The physical signs of an ischio-rectal abscess rapidly supervened, and operation disclosed a large accumulation of pus which had burrowed very extensively.

Comment. In this case the suppuration was deep-seated, slow, and late in manifesting the usual signs of a phlegmonous inflammation. Finally it presented to the left of the anus.

CASE IX.—A woman entered my hospital service with a history of a low fever of three or four weeks duration. The second or third day subsequent to admission, having so far failed to ascertain the nature of the fever, and the patient having complained of some abdominal distress, I was carefully palpating the abdomen when a small, deep-seated, ill-defined mass was discovered, almost in the median line and near the umbilicus. On the chance she was transferred to the surgical side, when an exploratory operation revealed an intestinal diverticulum, containing foreign bodies and pus. The removal of this rare finding resulted in recovery.

CASE X.—A man of middle age had an attack of influenza, which left him debilitated. Two or three months later, an anal fistula developed, which, after having had non-surgical treatment for three months, was operated on and healed promptly. During the persistence of the fistula he lost flesh and strength to a notable degree. Ten days after the operation there was a heavy chill followed by high fever. This proved the beginning of a series of chills and high temperatures, the fever, of an irregular pyæmic type, running something over three months, at the end of which time the case terminated fatally. Within a week after the first chill the left knee became swollen and painful, but this subsided in a few days, and was followed shortly by a similar condition of the right thigh, which was also of brief duration. Through the kindness of a friend I had an opportunity of examining this gentleman a week or two before his death. He was very anæmic, but not so emaciated as one would expect from the long continued fever, a fact largely due to the extremely good care he had received. The only noticeable physical findings were a dilated heart and a systolic bruit at the apex. Neither the spleen nor the liver was palpable, and no petechiæ or ecchymoses were visible. This patient was examined by several men. The earlier diagnoses were of malaria; the later, of tuberculosis, with a suggestion, more on general principles than for any valid reason, that it might be malignant endocarditis. An autopsy by Dr. Raymond Clark showed the presence of the lat-

ter disease. There was an old one-finger mitral stenosis, the left auricle was dilated to at least twice its normal capacity, and the right heart was also greatly dilated, with very thin walls. The tricuspid orifice was enlarged, and, so great was the tricuspid insufficiency, that the right auricle and ventricle constituted practically one cavity. The left ventricle was slightly hypertrophied, but little or not at all dilated. The heart muscle was pale and fatty. The most interesting finding was upon the auricular surface of one of the mitral cusps, which presented a globular vegetative growth as large as an English walnut, firm, rough, and freshly coated with fibrin. The growth appeared to fill exactly the stenosed mitral orifice. Smaller vegetations were seen on the other cusp. The remaining valves showed no vegetations. The lungs and liver presented the signs of chronic congestion, but the liver was not enlarged. In the apices of both lungs evidences of old healed tuberculous lesions were found.

Comment. In spite of the pyæmic type of fever this case was erroneously regarded as probably one of general tuberculous infection, mainly because of the history of an anal fistula associated with increasing debility and loss of flesh. The difficulties in the way of a correct diagnosis were of some consequence. The existence of an old mitral stenosis was not known, as the attending physician took charge of the case some three or four weeks after the onset of the fever, and during the course of the latter the valvular lesion was not recognized owing to the absence of the abrupt first sound and the pre-systolic murmur or thrill of mitral stenosis. The absence of these characteristic physical signs was due mainly to the weakness of the degenerated heart muscle, partly to the complete tricuspid insufficiency. The cardiac signs indicated simply a dilated heart with a probable relative mitral incompetency.

The diagnosis of malignant endocarditis was not made, principally because of the practical absence of embolic phenomena, the importance of the transient swellings (undoubtedly of embolic origin) which occurred in the first two or three weeks of the fever having been overlooked or underestimated, on account of their brief duration and lack of subsequent suppuration. Otherwise, there were no evidences of embolism of the lungs, kidney, spleen, liver, stomach, intestines, meninges, cerebrum, retina, or skin (petechiæ and ecchymoses), or of metastatic abscesses. In this case, an example of the septic or pyæmic type of ulcerative endocarditis, the infection presumably originated from the suppurating fistula, the presence of the old endocarditic mitral valve predisposing.

Conclusions.—The ten cases, of which clinical summaries have been given, with comments on the difficulties of diagnosis in each, form a rather heterogeneous collection. But by adding a number of similar cases of which some record has been kept, and collating them with reference to their pathological

character, it is possible to divide them into four groups, viz., those in which the febrile symptoms were due: First, to concealed suppuration; second, to tuberculous infection; third, to irregular forms of typhoid fever; fourth, to malignant endocarditis.

A certain conclusion, of practical value, can, I believe, justly be drawn, even from such a brief and necessarily sketchy study as this. The conclusion is empirical and belongs, perhaps, to the rules-of-thumb. Nevertheless, when one stands in perplexity at the bedside of an obscure febrile case, it may bring, and has brought, light from darkness, to bear in mind, and examine most carefully for, the evidences of concealed suppuration, tuberculosis, irregular typhoid fever and malignant endocarditis.

GASTROPTOSIA THE CAUSE OF SYMPTOMS ERRONEOUSLY ATTRIBUTED TO NEPHROPTOSIA.*

By ACHILLES ROSE, M. D.,

NEW YORK.

At the last meeting of this society I had the honor to read a paper on atonia gastrica. To-day I may be permitted to add some practical consequences of the theory of gastric atonia as it was laid before you a year ago.

Atonia gastrica, gastroptosis, and dilatation of the stomach are identical, and if we keep this fact in view we shall succeed in doing away with the *tohu wabohu* in the writings of many authors in regard to these terms.

Relaxation of the muscles of the stomach means that the stomach does not contract around its contents, that the muscles follow the pressure, *i. e.*, the weight of the ingesta, and this is gastroptosis.

Relaxation of the fibres of the muscles means elongation of the fibres, and therefore dilatation of the stomach.

In view of the fact that some writers understand by the term atonia gastrica motor insufficiency of the stomach it is necessary to insist that the word atonia means relaxation and nothing else.

Gastroptosis and nephroptosis form part of enteroptosis, or, if we prefer another word, splanchnoptosis. We may have to speak of gastroptosis and nephroptosis independently from enteroptosis, but it is doubtful whether displacement of stomach or kidney ever exists without the whole splanchnon being more or less relaxed.

In order to show how necessary it is to clear up the existing confusion in regard to these terms, let us quote at hazard from a paper of E. W. Andrews in the *Journal of the American Medical Association* for October 6, 1900, entitled The Reefing Operation for movable Kidney: "Nephropexy will often

fail in wandering kidney brought about by gastroptosis and enteroptosis." It is difficult to see how this author imagines that wandering kidney can be brought about by gastroptosis. Wandering kidney brought about by enteroptosis sounds as though one should say belly ache brought about by the belly; it is *tohu wabohu*. The same paper treats on a case in which the right kidney descended so far as to touch the bladder, and was easily palpated in any position, but, as the author adds, there was no enteroptosis. This is a regular contradiction in adjectu, another *tohu wabohu*.

In their enthusiasm over the study of bacterial, chemical, and toxic processes, many physicians of the present time have overlooked the mechanical conditions of the abdomen, conditions which play a part not only in the diseases of the abdominal organs, but also in those of the organs of respiration and circulation, and of the nervous system likewise.

For the sake of illustration let us quote a case reported by Dr. Groddeck, of Baden Baden: An elderly gentleman is suffering for several years from attacks of vertigo and unconsciousness. Almost daily, sometimes hourly, and even at shorter intervals, the alarming symptoms appear. The frequency of the pulse is 27-31 beats in the minute; only every second contraction of the heart causes pulsation. All the physicians who saw the case diagnosed, quite correctly, myocarditic affection and treated him accordingly, but without success. The enormously distended belly of the patient had not been taken into consideration until Dr. Groddeck paid attention to it. The reduction of the size of the belly, although it did not cure the diseased myocardium, was followed by cessation of the attacks of vertigo and unconsciousness. The size, the weight of the belly, having been reduced the work of the heart was materially relieved, relieved to such an extent that even the imperfect contractions were sufficient to fill the brain with the necessary quantum of blood.

It is sometimes of more importance in cases of heart disease to examine the abdomen than to distinguish the fine points of the auscultatory symptoms.

Wherever we can elicit splashing sound we have before us atony of the stomach. In a normal condition we cannot, even at the height of digestion, elicit splashing sound, because the stomach closes concentrically about its contents, the organ is tightly adapted to the volume of the ingesta. This peristole exists as long as the reflexory tonus of the gastric muscles remains intact.

Gastroptosis is much oftener overlooked than diagnosed. Even in papers on diseases of the stomach we notice quite frequently that all attention is given to secretion, to the chemistry of the

*Read before the American Gastro-enterological Association in Washington, March 1, 1902.

stomach; the motor functions, which should be considered as the most important of all, come second; the position of the organ is seldom mentioned; of the relaxation of the stomach manifested by the presence of splashing sound on tapping on the abdomen, or of the absence of this important symptom, not a word is said, although this atony may be the cause of or be connected with the anomalies of secretion, with gastric disorders in general, with nervous symptoms, and in heart and lung affections it may be of not less importance than the size of the belly in the case described.

James Israel, of Berlin, at the International Congress in Moscow in the year 1897, said: "Careful observation made on a great number of cases has convinced me that the operation of nephropexy is very often superfluous and irrational, because the many symptoms which are attributed to movable kidney—a very common occurrence—are in only a very small number of cases really related to this displacement; these symptoms are caused mostly by general enteroptosis or neurasthenia or affections of the generative system." He speaks against the popularization of this affection, because many women who have heard of floating kidney and all the ghost stories about them, keep these horrors in their minds and have no peace until they are operated on.

If you will take the pains to read my modest little paper entitled *Floating Kidney Idolatry*, which I wrote before I had seen Israel's remarks, you will notice that my views correspond exactly with Israel's.

L. Bazet, in the *Transactions of the Medical Society of the State of California*, 1898, gives a résumé of the condition and advances of renal surgery up to that date. He says: "There are patients—they are mostly women—in whom the floating kidney is but a part of a complex condition, where enteroptosis and neurasthenia appear to play the principal rôle. Here all the viscera are altered in their suspension, and these patients are nervous in the proper meaning of the word. When in such cases nephropexy is performed there is absolutely no therapeutic benefit."

One cannot speak of floating kidney and nephropexy without naming Dr. Edebohls, because he has inseparably associated his name with this condition, which he considers absolutely pathological in every case, invariably requiring nephropexy. Bazet quotes Edebohls as maintaining that nephropexy should be performed in every case where the normal relations of the kidney have been disturbed. But Edebohls and his apostles find a movable kidney in almost every woman that presents herself for examination. He and his followers have perfected the method of examination for movable kidney to such a fine point

that indeed hardly any woman can escape being accused of having a movable or two movable kidneys if she happens to go to these virtuosos.

I attended a meeting devoted to the demonstration of the methods of examination for movable kidney, and there was one case in which none of those colleagues present could find a kidney out of place until the reader of the paper, by applying his latest method, found both kidneys movable. He is of the opinion that palliative measures are of no avail, and therefore useless, and unwise if the degree of prolapse is sufficient to produce symptoms—but according to the list of symptoms which were written on the blackboard as being caused by movable kidney, and which list included the whole clinic of internal medicine, every movable kidney must surely be guilty. Quite a number of women were demonstrated at that meeting—on the eve of their operation, and when they passed the stand to be let out they reminded me of the Roman gladiator's *Morituri te salutamus*.

We see here why there are so many cases of movable kidney while formerly and fortunately it was rarely heard of: modern diagnostic technics has discovered what the Gods formerly had covered with night's shadows.

Nephropexy in cases of floating kidney was one of the first methods employed in renal surgery. As always happens when a new operation springs up with the relative security of modern asepsis, the number of operators is increased, thoughtlessness creeps in, and the proper indications are not sufficiently studied to justify the reasonable propriety for surgical interference. Such was and is yet the case with nephropexy. Bazet, in the paper quoted already, says failures, observations, and experience, all carefully reported, threw a new light on the subject, and now such an authority as Israel has come to the determination systematically to refuse operation in nephroptosis. But all this does not apply to some of our New York operators; they seem to be more skillful than men like Israel; their published statistics are most brilliant. They have succeeded in making the operation fashionable, and we are reminded of the time of Louis XIV. This king suffered from rectal fistula and was operated on by the surgeon, Felix, who invented a new bistoury, which was named the royal bistoury. Dionis, who has reported all details of this operation, tells us that afterward many people, not only of the royal court, imagined themselves suffering from the same disease as their king, in order to have the honor of being cut with a knife which bore the royal name.

Let us quote from a paper of A. H. Cordier in the *American Journal of Obstetrics*, Vol. XXXIV, 1896:

1. A movable kidney often produces a dilated stomach, with all the accompanying symptoms of a disease of the latter.

2. It is a fruitful source of gall stones by the pedicle producing a partial obstruction of the common duct.

3. The bending of the ureter often gives rise to hydronephrosis.

4. It may produce death by a complete strangulation, by a torsion of the vessels and ureter.

5. By dragging on the abdominal aorta and kinking of the vena cava, a condition simulating an aneurysm of the vessels may be produced.

Do not temporize, but advise operation!

True enough, all these conditions may happen, but are they not due to enteroptosia, of which the displacement of the kidney forms only a part, and should not our first aims be to relieve the enteroptosia.

Now let us see how our operating colleagues really relieve enteroptosia while they imagine they have effected a cure by replacing and keeping in place the wandering kidney.

A. Ernest Gallant, in the *American Journal of Obstetrics*, Vol. XLIV, 1901, writes in rather sentimental style: "A woman suffering from an unrecognized movable kidney is truly an object for commiseration, who migrates from physician to physician, from one place to another, perhaps having had perineal and cervical lacerations repaired, ovaries, tubes, uterus and appendix removed, drugs *ad nauseam*, a veritable wandering Jew seeking relief and finding none. If by chance she runs across one who recognizes the source of her troubles, replaces and supports the movable kidney, she experiences such a sense of relief as to make of her a new woman." Gallant mentions that sometimes enteroptosia may be associated with movable kidney, but his conception of enteroptosia is *tohu wabohu*, although in reality, without being himself aware of it, he treats his patients, in a rather circumstantial way, however, for enteroptosia—by means of a corset, prolonged rest in bed, and a great many things too numerous to mention. An extract from the description of his method will demonstrate how complicated and expensive we can make things for a wealthy female patient. First of all, the physician in attendance must be a corset fitter, even a corset maker, and he must be a nurse besides. His corset is of very complicated construction, requiring a special study of the living anatomy of the individual case, and a first class corset maker to work according to anatomical principles. The corset, made and put on according to Dr. Gallant's directions, should mould the figure into graceful outlines. Whenever pain or tenderness, or both, are present along the loin or the hypochondrium, the patient must be put

in bed for a few days and kept on a fluid or light diet, the bowels moved twice daily, and eight or ten hours sleep assured, daily massage of the trunk and extremities, performed with especial attention to replacement of the dislodged kidney. All this before attempting to put on the corset. But this is not enough: Careful attention to building up the patient's general health is to be taken; among the many things aiding towards this end are lavage of the stomach, adjusting of glasses for defective vision, removal of care, noise, and excitement. Even the patient's vanity is to be considered, "*aid her in conforming to the dictates of fashion.*"

It appears to me that if a lady is not hysterical previously to such treatment, she cannot help becoming hysterical as a consequence of it. *Difficile est satyram non scribere.*

Boardman Reed, in the *Medical News* for September 28, 1901, in an article on Movable Kidneys, their Effect on Gastric and Intestinal Functions, has a similar system of treatment; he confines the patient to bed for from two to six weeks, recommends suspension apparatus, has the patient build up in every way. Stubborn cases he says often develop hyperchlorhydria, and intragastric faradization may be needed. If further trouble persist nephropexy may be done. We see again and again that these writers have only the kidney in view; of the enteroptosia in general they say nothing. Anomalies of gastric secretion in cases of nephroptosis this author has attributed to stubbornness; and he treats hyperchlorhydria with intragastric faradization. In gastroptosis we really find sometimes anomalies of secretion hyperchlorhydria as well as achylia gastrica. Dr. Reed is not aware that intragastric faradization is the best means to make things worse in hyperchlorhydria; in achylia gastrica it may be tried.

Augustin H. Goelet (*Medical Record*, June 1, 1901, The Diagnosis and Surgical Treatment of Prolapsed Kidney) is very sweeping in his decision. He does not believe in palliative measures, but insists on operation. After the operation he confines his patient to bed for three weeks, restricted to the recumbent position, does not allow him to sit up or rise up in bed, and gives details of many other measures that must be very severe on the patient. An abdominal support is to be worn for two or three months, and the patient is cautioned to avoid straining of all kinds for at least a year.

I am much more liberal with my gastroptosis and floating-kidney patients. Two of them are athletes who have to earn their living by all sorts of straining. From the first day and all through the treatment they were allowed to balance heavy weights and to perform all sorts of gymnastics, and they got well all the same. Now, Dr. Goelet in reality treats his patients for enteroptosis, adding only the unnec-

essary operation of nephropexy to the treatment as a complication.

Robert W. Johnson, in a paper on Nephrorrhaphy for Wandering Kidney, says "the ætiology of wandering kidney is very obscure." But this is by no means the case. I should advise those who speak like Dr. Johnson to read the publications of stillé, Buch, and others on the subject.

Edebohls says: "A kidney once movable, never again becomes firmly fastened in its normal position except by operative interference." First of all, there arises the question, Is a movable kidney in every case a pathological condition? Are there not cases described by Landau, in which some mobility appears to be of advantage? And in such a case Dr. Edebohls merits the reproach that Jean Jacques Rousseau makes in his *émile* to man who cannot leave good enough alone. Secondly, Dr. Edebohls is mistaken: In many cases treated for gastroptosis by means of strapping, in which there had been floating kidneys of all the four different degrees, I would convince myself that these kidneys had returned and remained in their normal position. Some of these cases I had under observation now for over two years. Dr. Edebohls says: "Bandages have proved inefficient." I insist, on the contrary, that they are very efficient, but I wish to say right here that though Dr. Edebohls seems to dislike the idea that they are, he has not tried the bandage which I have suggested, and which gives the best results so far as my experience goes.

It is easy to draw conclusion from the few quotations I have presented. Enteroptosis marks certain symptoms which are relieved when enteroptosis is relieved. Nephroptosis is included in enteroptosis, and it is impossible to see how the displaced kidney can be accused of causing the symptoms attributed to it exclusively.

All those papers describing cases of movable or floating kidney without mentioning the coexisting atony of the abdominal wall and the other manifestations of general enteroptosis, the possibility of producing a splashing sound for instance, are absolutely unscientific, and of no value whatever to decide the question.



Mucomembranous Colitis in Children.—Dr. John Zahorsky (*Inter State Medical Journal*, May), in an article on this subject, with a report of two cases, arrives at the following conclusions: 1. Mucomembranous colitis is a rare disease in children. 2. There is no evidence that a special disease exists in children excepting mucomembranous colitis, to which the name mucous disease may be applied. 3. The pathological process and clinical history are similar in children and adults. 4. The term mucous disease should be dropped.

PERMANENT RESULTS, FAILURES AND RELAPSES FOLLOWING BOTTINI'S OPERATION FOR THE RELIEF OF PROSTATIC OBSTRUCTION.*

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CASE I.—Patient, sixty-four years old. First symptoms noticed nine years ago. In 1892 complete retention for over twenty-four hours. When first seen, in November, 1898, had acute cystitis, bilateral epididymitis, temperature 103° F., urination ten to fourteen times during the night, every hour in the daytime, voiding a very small quantity at a time. Residual urine measured at various occasions between five and eight ounces. Patient has catheterized himself during the last two years. By the rectum, a considerably large median and right lateral lobe felt, which finding is corroborated by the subsequent cystoscopic inspection, the latter disclosing two distinct red projections in the viscus. Two small-sized ulcers in the trigone. Length of posterior urethra three inches and a half. Bougie à boule slightly caught for a distance of one inch from the viscus downward. Local treatment inefficient. Bottini operation performed December 28, 1898. Two incisions, each three centimetres long, in the right and median lobes. Nélaton catheter left in the bladder during the first three days.

February 3, 1899.—Continence for six hours day and night. Residual urine, 2 c.c.

May 1, 1899.—Urine clear. Length of posterior urethra two inches and a half. No residual urine. Through the cystoscope two deep furrows can be distinguished where the cautery blade struck the projecting tissues. The incision in the median lobe, intended to cut through the centre, enters to the right of the highest point of the elevation. Ulcers in trigone healed. The patient reported being well in intervals of six months.

In October, 1901, the urination began to be frequent and troublesome, and when he was seen, in January, 1902, he had four ounces of residual urine. He had used the catheter in the preceding four weeks, and apparently infected himself, the cystoscope showing a more recent general cystitis. The upper urethral outlet was obstructed by two grayish nodules, a deep depression between both indicating that one was the remnant of the right lobe, the other, larger one, belonging to the left one. The cautery depressions from the previous operation were still visible. Length of the posterior urethra five inches.

In this case the benefit derived from the operation lasted for nearly three years. The recurrence of the symptoms is due to the degeneration of the left lobe and of the remaining part of the right one. The distinct gray color of both protrusions demonstrates that, while originally the case was one of uniform hypertrophy of the glandular and muscular elements, the projections at present consist mostly of hypertrophied fibrous tissue.

* Read at the annual meeting of the American Urological Association, held in Saratoga, N. Y., June 13 and 14, 1902.

CASE II.—Patient, 76 years old. Distressing symptoms for the last four years. Calls to urinate every half hour to every two hours nights; two to four hours in the day. Residual urine, ten ounces, clear. Posterior urethra four inches long, narrowed portion one inch down from the neck. Cystoscopic examination shows a remarkably healthy bladder wall, free from any visible textural changes, right and median lobes protruding from a broad basis. Bottini operation, October 15, 1899. Four incisions, two in each lobe, three centimetres long. Hardly any blood in the urine for the next two days after the operation.

December 15th.—Two ounces of residual urine. He urinates twice during the night, voiding over a pint at a time. Length of posterior urethra, two inches.

February 10, 1900.—No residual urine. Calls to urinate the same as on December 15th. Patient admits drinking several cups of tea at bedtime, which explains the polyuria.

Through the cystoscope evidence of both incisions in the median lobes is visible; but of only one in the lateral lobe, and this one has a different direction, as originally intended, not striking the lobe vertically, but obliquely, converging toward the right median furrow.

October, 1900.—Condition the same as on February 10th.

May, 1901.—All the symptoms complained of before the Bottini operation have returned. Upon cystoscopic examination, a grayish-white, pedunculated protrusion is found to the right of the median line, which is apparently the remains of the upper portion of the incised right lobe. Patient refused perineal ablation.

No evidence of former operation visible. After a period of normal functions for over one year, apparently fibromatous degeneration has taken place in the remainder of the lobe, gradually producing the symptoms of obstruction at the vesical neck. The cystoscopic inspection on February 10th demonstrated that, notwithstanding making two incisions in the lateral lobe, the second one fell into the first groove, the cause of which I shall try to explain later.

CASE III.—Patient, sixty years old. Calls to urinate every two hours day and night. Occasionally chills, followed by high temperature, lasting several days. Urine turbid. Residual, five ounces. Stricture, 24 Fr. scale, in bulbomembranous junction. Posterior urethra two inches and three quarters, unobstructed. Obstacle at the vesical sphincter. Cystoscopic examination: Chronic cystitis, bladder slightly trabeculated, pyelitis dextra, slightly protruding red median and left lateral lobes. After a preparatory local treatment of the cystitis, perineal section for stricture and Bottini operation through the perineal incision, September 21, 1898. One incision in each lobe, two and one half centimetres long. Notwithstanding the facilitated placing of the beak in this case, the incisions were found by the examining finger in the depression separating both projections, which appeared to the touch rather soft and succulent. Repeating the operation with special care to steady the instrument, I incised the median lobe, but had to lower the handle of the in-

strument considerably to properly incise the lateral lobe.

Eight weeks afterward cystitis and pyelitis, under constant treatment, decidedly better. Urination at intervals of four hours. Residual urine, half an ounce.

December, 1900.—Patient returned, stating he had felt well until September, when the distressing bladder symptoms reappeared. Cystoscopy: Cystitis, left lobe in its upper portion projecting. Prostatic urethra obstructed by a protrusion which can also be felt by rectal palpation. Residual urine, five ounces.

The case illustrates the difficulty of maintaining the contact between beak and lobe in soft hypertrophied protrusions, even under very favorable conditions. This experience induced me over two years ago to use a specially constructed operating table, which permits me to steady my instrument by using the patient's right leg as a support for my left arm, and does not interfere with the free motions of the incisor in any direction desired. The protrusion in the urethra which has formed after the operation is circumscribed, and should be removed by enucleation through the perineal route.

CASE IV.—Patient, seventy years old. Intervals between urination, half an hour to an hour; about an ounce of clear urine voided; residual urine, from ten to fifteen ounces. By rectal palpation very little enlargement felt; length of posterior urethra two inches; obstruction at the vesical sphincter. Through the cystoscope a thumb-shaped, dark red growth is seen, which is about an inch and a quarter high and three quarters of an inch in the transverse diameter, arising from a broad base in the median lobe. Repeated attempts to incise the growth failed, because the beak of the instrument could not be steadied at the apex; although I felt the contact of the beak with the growth, I missed the sensation experienced in making the incision. The myoma was finally removed through a suprapubic opening.

It is evident that these cases are not fit for the Bottini operation, and that serious results are likely to follow if by miscalculation the beak of the incisor should be hooked on to the basis of the tumor.

CASE V.—Patient, sixty-seven years old. He has to urinate twelve to sixteen times nights, and every hour and half to two hours in the day. Troublesome urination commenced four years ago. Urine ammoniacal; half an ounce to an ounce voided; eight to ten ounces residual. Fibrous strictures of 16 French scale in prostatic urethra. The latter four inches long. After dilating the stricture and treating the cystitis for four weeks, cystoscopic examination. Three phosphatic stones, each of the size of a large walnut, in the bladder; right lateral lobe dark red and protruding. Trabeculated and sacculated bladder wall.

September, 1900.—Perineal urethrotomy. After dividing the strictures, no narrowing of the prostatic urethra found, notwithstanding a uniform enlargement of considerable size felt by rectal palpation. Extraction of one of the concretions; the others could not be seized. Incision, four centi-

metres long, of the right lateral lobe, had to be repeated three times before it went straight through the lobe. Twice the protrusion slipped away from under the beak, until the handle of the cauterizer was lowered much under the horizontal line. The remaining two stones were removed by litholapaxy under local antipyrine anæsthesia six weeks later. Three months after the operation the patient urinated at normal intervals of five to six hours, and has ever since, emptying his bladder to about half an ounce of residual urine, which had to be expected, considering the advanced structural changes in the bladder wall. In the last four months, a year and a half after the operation, the residual urine averages three ounces; the intervals between urination are getting shorter, and cystoscopic examination shows both lateral lobes enlarged, of a red color, the right one still carrying the cauterizing mark. The length of the posterior urethra is now five inches.

The cystoscopic examination preceding the litholapaxy showed a granulating surface on the edge of the lobe facing the cavity of the bladder.

I cannot say if this lesion was due to traumatism inflicted by the perineal extraction of the first concrement or to the fact that the incisor in the two futile attempts to cut through the lobe had only brushed over its surface. In this, as in the other cases, the galvanocautic incision has not in any way checked the tendency of the gland to hypertrophy.

CASE VI.—Patient, sixty-eight years old. Complete retention for a year. Posterior urethra, three inches and a quarter. Fibrous stricture, 25 French scale, in membranous portion. By cystoscopic examination, mild chronic cystitis; trabeculated bladder wall; large, red median and left lateral lobe are diagnosticated.

Bottini operation, September 22, 1900. The introduction of the incisor was rather difficult, on account of a pocket in the prostatic urethra. After I had made an incision, three centimetres long, in the median lobe, and engaging the lateral lobe, the patient became restless and the beak slipped into the urethra. I withdrew the instrument, and did not succeed in reentering the viscus, this time. There was no improvement in the following four days, and I operated again, September 26th, making an incision of three centimetres in the left lobe. Immediately upon my withdrawing the incisor, the patient expelled the 200 c.c. of sterile water which had been used to fill the bladder. During the following week the patient was kept in bed, and urinated at intervals of two to three hours. After he left his bed he had no control over his sphincter vesicæ. I had observed this incontinence in a few previous cases, attributing it to the reactive inflammation, and eventually, in very long incisions, to the severing of the sphincter. The patients usually regained full control in from three weeks to two months. This time having passed without any change in the condition of the patient, I made a cystoscopic examination, and found the cause of the trouble. The incision in the left lobe did not, as intended, split it through the centre, but went from its pole in an upward direction, producing a pear-shaped upper protrusion, attached to a very slender pedicle. This protrusion fell like a ballvalve in

the vesical neck, by which, under ordinary circumstances, the passage of the urine would become obstructed, but owing to the deep incision in the median line, and the sphincter being unable to close tight around it, the opposite took place. To test the correctness of this supposition, I filled his bladder with 500 c.c. of fluid, which he retained at will while he was in the recumbent posture, and passed spontaneously in a good full stream. After I had filled the bladder a second time, he was told to pass the water in the upright position. For a few moments it came in a good stream, but suddenly its character changed, and it ran out without any force, the protrusion evidently being forced down in the vesical neck. The patient remained in this condition for nearly a year, refusing an ablation of the obstruction.

When I saw him in October, 1901, he told me he had daily irrigated his bladder with a solution of peroxide of hydrogen. One day he used by mistake pure alcohol, causing a very painful inflammation, with the, for him, gratifying result that a few days afterward the incontinence ceased, but with it also the power of emptying the bladder. He is satisfied to be back again to his old catheter life.

This, like some of the other cases, illustrates that it is difficult, and occasionally impossible, to direct the incisions in the lateral lobes at will. These difficulties grow in proportion to the length of the deep urethra and the shape and consistence of the protrusion.

We can readily appreciate this fact by recollecting that we work with a straight, unyielding metal instrument in a curved canal, with the angle of the pubic arch as a pivot, limiting the excursions of the vesical end of the incisor to certain distances. In this way it could happen that the blade, instead of incising, may only graze over the surface of the protrusion or cut off a slice of it.

The ultimate complete retention, so satisfactory to the patient, is presumably due to extended cicatrization caused by the alcohol.

CASE VII.—Patient, seventy-one years old. Complete retention for eleven months. Four fibrous strictures, of 14 French scale, in the membranous urethra. Posterior urethra, two inches and three quarters long. Chronic cystitis.

September 22, 1901.—Perineal urethrotomy. Severing of the constricting fibres. Posterior urethra free from protrusions; at the vesical neck, projecting into the viscus, a collar-shaped elevation.

September 30th.—Cystoscopic examination shows a red collar all around the vesical outlet, with the exception of the upper margin, where the projection is distinctly grayish-white, and on its borders on both sides a depression separating it from the rest of the growth. Bottini operation. I made six incisions, each two centimetres, backward, right and left side. No result. In a cystoscopic examination a week later I found only one incision, a little to the left of the median line, and also but one on each side. Repeated the Bottini operation, November 30th. Incision, three centimetres in lower part, turning beak 45° to the right; incision three centimetres

long on each side turning the beak almost straight upward.

December 15th.—Patient voids about one third of his urine spontaneously, but has to strain. Cystoscopic examination shows that the incision, intended to strike in an angle of 45° , cut right through the centre of the collar: Of the two upper incisions, the right one went into the above-mentioned incisure, while the left one struck the left portion of the gray mass in the centre.

January 16, 1902.—Urination more free. Ninety c.c. of residual urine in twenty-four hours. Through the cystoscope the vesical contour of the posterior and lateral parts of the gland appears flat; the gray mass is divided by a penetrating gap.

In the third Bottini operation, on January 17th, I made three diverging incisions of two centimetres length through this lump.

January 25th.—Residual urine, 15 c.c. All three incisions through the cystoscope visible. Patient urinates every four hours.

From a report received in the latter part of February, urination is again difficult and the amount of residual urine 180 c.c.

This case illustrates the difficulties encountered in dealing with collar-shaped projections by the Bottini operation, even when making multiple incisions, and repeating the procedure at different times, as I suggested over two years ago.

And it is certainly not the height of a vesical protrusion nor its thickness which has the exclusive determining influence on the blocking of free urination and the complete evacuation of the viscus.

I have removed from the bladder tumors of the size of a man's fist, the base of which was near the vesical outlet; yet there was no retention at any time previous to the operation. I have seen patients with collar-shaped vesical projection so large that the posterior urethra was elongated to five inches, who had neither troublesome urination nor retention—so long as the detrusor and sphincter muscles were functionally unimpaired and the vesical outlet unobstructed. On the other hand, I have had cases in which the length of the posterior urethra was normal, but a nodule of the size of a bean blocked the internal orifice, causing the severest symptoms of retention. When we incise a collar-shaped protrusion or a sessile single lobe of large proportions, we have to make multiple incisions, which, when penetrating, leave a number of smaller, more or less pedunculated, nodules. The concentric pressure of the bladder and the force of the urine will occasionally push them toward the vesical outlet, which in this way becomes partly or entirely blocked. Often repeated cauterization will eventually remove all these nodules. Yet I admit the probability that subsequent cicatricial contraction following such extended burning of tissue might turn the immediate good result into complete failure.

CASE VIII.—In September, 1901, I operated on a gentleman, forty-four years old, who complained of

difficult, interrupted, and frequent urination, three to four times in the night, and from every hour to every two hours in the day. Posterior urethra, three inches long, unobstructed; at the vesical neck, constricting fibres. Cystoscopically, the median lobe was seen projecting into the cavity; in the trigone, to the right, a superficial ulcer of the size of a large bean. The presence of the latter explained why the capacity of the bladder was reduced to four ounces. Residual urine, one ounce.

September 24, 1901.—Bottini operation. I made one incision, four centimetres long, in the median lobe, with the intention of cutting through the constricting fibres at the vesical neck. Three weeks afterward, 10 c.c. of residual urine, and no straining before or during micturition, but the calls to urinate came just as frequently as before. After intravesical local treatment for two months, the ulcer is healed, the capacity of the bladder to rapid filling increased to 400 c.c., and the intervals between urination to four and five hours; no residual urine.

February 15th.—The patient returns for cystoscopic examination, stating that in the last two weeks he has had to strain again before the flow of urine commences. Both lateral lobes are found projecting into the bladder. The contour of the median lobe is a straight line, with a slight depression in the centre. The scar of the former ulceration is distinctly visible.

Remarkable in this case is the comparatively short time which it took the lateral lobes to grow, as in September, 1901, their vesical contour had a perfectly normal concave shape.

CASE IX.—Patient, seventy-three years old. Painful and interrupted urination commenced five years ago. He urinates eight to twelve times at night; every half hour to an hour in the day. Quantity voided under painful straining, 30 to 40 c.c.; residual urine, 45 c.c., turbid, acid. In the prostatic urethra three fibrous strictures admitting an acorn-shaped bougie, 14 French scale. Posterior urethra, three inches long. After dilatation of the strictures, cystoscopic examination June 27, 1900. The median lobe of dark red color, blocking the internal orifice; bladder wall multitrabeculated and to a great extent ulcerated. After preliminary local treatment for two weeks, Bottini operation, July 12th. One incision, three centimetres long, in the median lobe. Urotropin internally; local treatment discontinued.

July 29th.—Patient urinates every two to three hours at night; every hour in the day. Retention reduced to 6 c.c.

September 18th.—Residual urine varies between 10 and 30 c. c. Urine contains much pus. Tenesmus. Has to urinate every half-hour in the day and every hour during the night. Through the cystoscope a cleft in the median lobe running down to the trigone is seen. Condition of the bladder wall the same as on June 27th.

September 25th.—Perineal urethrotomy. In anaesthesia the capacity of the bladder is only 300 c.c. After dividing the strictures, the posterior urethra found unobstructed. Local treatment of the bladder through the perineal drainage tube.

Wound closed October 10th. Capacity of the

bladder for rapid filling, 150 c.c. Patient urinates at intervals of from two to four hours, and left the city November 21st. He returned February 17, 1901, in almost as bad a condition as he was in before the perineal operation. He had twice had complete retention of about 200 c.c. Patient refuses a suprapubic cystotomy and curettement, which, in all probability, would afford him much and more permanent relief.

Here is a case in which the concentric hypertrophy of the trabeculated bladder and the almost general ulcerative cystitis frustrated a satisfactory result of the Bottini operation. The wide-open cleft at the internal sphincter did not prevent the retention of 200 c.c. of urine. The increase in the quantity of residual urine over what it was previous to the two operations is explained in the increased capacity of the bladder, due to the local treatment between September 25th and November 21st.

These cases have been very instructive to me, inasmuch as they explain why sometimes satisfactory results are obtained and at other times but little improvement, complete failure, or relapse follows the galvanocautic incision. Many of the disappointing results can be explained by the variable structural changes taking place in so-called prostatic hypertrophy, by the variety in the size, shape, arrangement, and localization of the protrusions, and by the mechanical difficulties encountered when one works with an unyielding metallic instrument on more or less movable and yielding spherical or cylindrical tissues.

The effect of the cautery will be different if applied to a solitary lobe or to collar-shaped protrusions. It will be more pronounced and instantaneous in the former than in the latter. It will be more conspicuous and more lasting in smaller projections than in large and high ones. It will be followed by a complete failure or an early recurrence of the trouble in most of the cases in which the length of the prostatic urethra is four inches and more. Generally the result will be satisfactory in cases of diffuse, real hypertrophy, in which stroma and glandular tissue are equally affected. It will be less gratifying in the general or circumscribed form of fibromyomatous hypertrophy and in all cases in which protrusions obstruct the prostatic urethra. The latter may be divided into two groups. First, cases in which circumscribed nodules, either adenomata or myomata, embedded in the gland, grow toward the lumen of the urethra, while the vesical outlet is unobstructed, and its configuration normal or approximately normal. Here the galvanocautic incision will not establish a permanent groove, the intracapsular pressure of the surrounding tissues preventing a permanent depression of sufficient depth and width to insure the free flow of urine. The second group is represented by the cases of

true hypertrophy, which, as is known, almost without exception, has a tendency to first invade the cavity of the bladder as the place of the least resistance, and much later takes its course down into the prostatic urethra. At the time when in these cases the urethral obstruction has actually set in, the vesical nodules or protrusions have assumed such proportions as to contraindicate galvanocautic prostatotomy. It is also evident that when lateral vesical lobes alone have produced complete retention, they must have grown to such dimensions that the proper placing of the incisor will be difficult, if not impossible, for mechanical reasons given in Case V.

Some operators consider an incision penetrating the entire lobe as paramount for the success of the operation, and insist upon the necessity of minutely ascertaining the thickness of the respective lobes. I do not believe in the possibility of such an exact measurement, nor do I consider a penetrating incision as paramount, judging from the many cases in which I have obtained satisfactory results without splitting the lobe through and through. Those who work these theories out at the desk misunderstand the purpose and the mechanism of the operation, and know very little about the variable localization, size, and shape of the prostatic protrusions. There are nodules, hardly, one fourth of an inch thick; by properly placing and steadying the beak of the incisor you can easily establish a penetrating gap. But there are others of the thickness of one, two, and more inches where this is impossible. By raising the proximal end of the incisor, you might be able to carry the beak over the highest circumference of a median lobe, and place it nearer to its vesical base, but what will be the result? First of all, instead of being only in slight contact with the lobe, the beak and the adjoining shaft will press down on it, and in many cases the lobe will slip from under the convexity of the beak; or if you attempt to reduce the pressure and should succeed in doing so, there will be a space left between the lobe and the concavity of the beak, and the blade will either cut through the water in the bladder or hardly scratch the lobe. Secondly, the incision, instead of running in a parallel line with the prostatic urethra, will lie vertically or obliquely to the latter, and eventually not even cross the vesical outlet. In order to cut through these very thick lobes, a blade an inch and a half high has been recommended by Freudenberg. I should be afraid to use it. Since it is impossible to exactly estimate the thickness of the projection, irrespective of what cystoscopic wizards profess to be able to do, I am convinced that the employment of such a blade is the quickest and surest procedure for burning a penetrating hole

in the trigone or the urethra. In high lateral lobes it is, for mechanical reasons, impossible to reach the vesical base of the respective lobe.

What I have said here about the solitary lobes applies also to the collar and horseshoe-shaped projections. In some of the cases in which I had occasion to revise my incisions through a perineal incision, or through a suprapubic opening, I afterward found that the bladder emptied its contents completely, regardless of a penetrating or non-penetrating incision, while, as Case IX illustrates, partial retention on account of a trabeculated and ulcerated bladder persisted, notwithstanding a deep and wide open gap running down to the trigone.

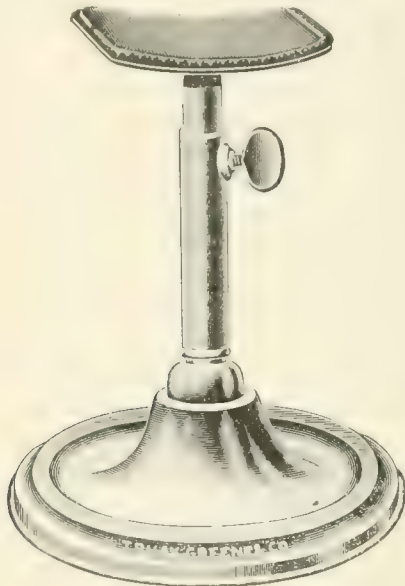
From my experience, which is not too limited, and from much thought I have given this subject, I believe that if a case is suited for the Bottini operation at all, the incisions in the longitudinal axis of the elongated portion of the posterior urethra are the only ones necessary and effective, and that it is sufficient to burn the groove deep enough to establish a lumen of the approximate calibre of the normal urethra. To accomplish this, the shaft of the incisor ought to rest in the axis of the elongated prostatic urethra, the blade vertical to the axis. The difficulty of obtaining this position, and of maintaining it during the operation is explained in the relations between the shaft of the unyielding metallic instrument and the more or less variable shape, size, and motility of the protrusions. The proper placing of the beak on the highest point of the convexity of the lateral lobe of larger proportions is, in many cases, impossible, because the pubic arch and the perineal structures limit the necessary excursions of the shaft. But it is not sufficient to place the beak properly. It is absolutely indispensable for the satisfactory result of the operation to maintain the slight contact between the beak and the lobe unaltered. Freudenberg has advised controlling the position of the beak with the forefinger of one hand in the rectum before the operation. Schlagintweit goes a step further, urging us to keep the finger in the rectum during the operation. Both methods are not reliable, and Schlagintweit's method is perhaps dangerous. Every surgeon upon whom nature has not lavished an ideal gynæcological index finger knows how difficult palpation is of a prostate, even of normal size, in a fleshy patient. The difficulty increases with the size of the gland, so much so that surgeons who are the lucky possessors of very long fingers are unable to reach the upper pole of the enlarged prostate. But let us think of a case in which the tip of the finger reaches this pole. If you wish to feel the beak, for instance, at the vesical base of a median lobe, you must elevate the proximal end of the incisor over the horizontal line, in order to depress the vesical end deep

enough to get it near to your finger. What the result will be I have explained previously, and it is also evident that the structures of the pubic arch will often entirely frustrate this result. When one wishes to operate according to Schlagintweit's advice, he has to leave the pulling of the cautery blade to an assistant, and he further cannot avoid pressing the gland toward the blade, a procedure which might give very deep grooves, sometimes so deep that an injury to the prostatic capsule would be very likely to occur, either during the operation or later on, when sloughing of the burnt tissue commenced. It is also evident that the pressure exerted by the finger in the rectum will enhance the possibility of bending the soft, heated blade, preventing its proper replacing in the protecting groove of the beak and producing serious injury to the urethra when the incisor is withdrawn.

I further do not believe that the location of the beak in the bladder can be superintended during the operation by the method of Freudenberg. He says in one of his publications (*Centr. d. Kr. d. H. u. Sex.-Org.*, xii., 6) that the shaft of his incisor carries at its proximal end a graduated scale, and that this permits him to read off the length of the urethra and to see that the external urethral orifice does not change its position from a certain mark of the scale. The latter incident would indicate that the beak had slipped into the posterior urethra. It is a well-known fact that the pendulous part of the penis frequently changes its length, and especially upon the introduction of instruments and manipulations in the urethra and bladder, and, therefore, the position of the external orifice is not available at all for the above-mentioned purpose. An elongation of it would make us believe the beak was high up in the bladder; a shortening of it would indicate it was in the urethra, while as a fact it might not have changed its position at any time. But these manipulations are not necessary at all. By properly placing the beak in a well distended bladder, trusting only to the very reliable sense of touch, it is impossible to hook the instrument in a vesical fold or on the ligamentum interuretericum, all statements to the contrary being fanciful exaggerations. I have always tried to hold the shaft in the so-called median position, that is, in nearly the same position in which the cystoscope introduced into the bladder balances without support.

Appreciating the importance of this position and the necessity of maintaining the contact between beak and lobe unaltered, I have operated sitting on a high chair between the legs of the patient, resting the elbow of my left arm on my own leg. For the last two years I have employed a portable table, three feet long, two feet wide, and ten inches high,

which is placed on top of the operating table. It is long enough to place the patient's trunk on the board. It is high enough to allow him to lie in a relaxed, comfortable position, his legs parted, his feet resting easily on the operating table proper, and it allows free excursions with the incisor. I have also changed my position to the right side of the patient, resting my left arm on his right leg. Recently I have employed a telescopic support, placed on the operating table between the patient's legs. It can be raised or lowered, and has on its top a concave rest. By placing my arm on the patient's leg and the wrist on the concave top, I maintain without any effort or difficulty the position of the shaft and the slight contact of its beak with the lobe which I desire to incise. Operating in this way,



Adjustable arm rest.

the beak cannot slide down the convexity of the lobe in a depression or into the prostatic urethra, unless the patient should shrink back, an incident which, though of rare occurrence, can be noticed and corrected, while the sliding of the instrument is frequently imperceptible; yet I admit that with all these precautions a lobe which, strictly taken, is not a pedunculated one, but whose base is narrower than its top, may slip away from under the knife; this can occasionally be avoided by moving the blade very slowly from its protecting groove toward the lobe, giving it time to sear a shallow depression in the tissue, the walls of which might, when the incision progressed, prevent deviation of the protrusion.

From my publications in 1898, 1899, and 1900, and from the cases reported in this paper, it will be noticed that the incisions which I made were always somewhat shorter than the abnormal length of the posterior urethra found in the preceding examinations, this being the advice of Freudenberg, and also being of the proper length, because the

effect of the cautery is not confined to the tissues which come directly in contact with the blade, but extends from a quarter to half an inch in all directions into the gland. It will also be found that I never considered the obstructions in the lowest two inches of the prostatic urethra an object for the Bottini operation.

The recurrence of the symptoms of prostatic obstruction, after a period of free and unobstructed urination, is not surprising. The statement of Albarran, Halle, and Genanowski that prostatic hypertrophy is the result of chronic prostatitis followed by progressive interstitial hyperplasia is unquestionably true in the vast majority of these cases, and we cannot expect of a limited galvanocautic incision the complete eradication of the pathological tendency of an hypertrophic organ. Where such lasting results are or may be observed, the cases were perhaps those of Fuller's encircling fibres at the vesical neck or a fibrous bar. This statement will be more appreciated the longer we are enabled to observe the cases after the operation. About a thousand cases are on record now, many of the patients having been operated on near the natural termination of human life; many have died from old age or intercurrent disease. But little, if anything, has become known concerning the maintaining of the functional capacity of the bladder and the condition of the prostate and the vesical outlet before they died. Quite a number of patients between sixty and seventy years old have also been subjected to the Bottini operation in the last five years. Many of them may be still alive. A close observation of these cases would, I believe, permit the conclusion that the so-called galvanocautic radical treatment is but a palliative operation, which, nevertheless, is the operation of choice on an enlarged prostate of small or medium size, in patients whose physical condition does not permit a prostatectomy or whose advanced age would preclude the probability of a recurrence of the obstruction, notwithstanding the possibility of repeating the operation for temporary relief in such an event. When the patients I had operated on as early as three and four years ago returned with a relapse, after having been apparently well for two years and over, I decided to watch them and study the subject before saying more about the Bottini operation as a procedure for permanent and radical relief. In the last two years the number of these cases is steadily increasing, and from the results of my observations, I am compelled to modify my statement made in a paper published previous to that time. I could not say now that the Bottini operation was indicated in the early stages of hypertrophy in middle-aged men. In the event of a recurrence, and the necessity of a prostatectomy,

the cicatrization produced by the cautery blade will seriously complicate the subsequent enucleation. A radical and permanent relief from prostatic obstruction can only be expected from prostatectomy. The recent improvements in the technique of this operation, first scientifically planned and performed by Belfield, have greatly reduced the post-operative mortality. Among the surgeons who more recently have done very creditable work to further this end, I mention Ferguson, whose new method of morcellement seems to simplify the perineal enucleation and extirpation, reducing the hæmorrhage to a minimum, and saving valuable time. By Murphy's, Andrews's, and Fuller's methods, and improved instruments, partial or complete prostatectomy through the perineal route is greatly facilitated. Other and reliable authors, like Guitéras and Nicoll, favor the superapubic route or the combined method of superapubic and perineal prostatectomy. Considering the still high mortality in total prostatectomy, and the fact that the prostatic obstruction is not always intravesical and intraurethral at the same time, it would seem the more rational procedure to attack the intravesical projections through the suprapubic route when the posterior urethra appears unobstructed, and to perform a perineal prostatectomy for the obstructions in the latter, yet experience teaches that prostate hypertrophy is a slow but progressive pathological process, and for this reason, if a radical operation is undertaken, it ought to be total prostatectomy. Excepted from the latter may be the relatively few cases of well defined, circumscribed tumors embedded in apparently normal prostatic tissue.

Whichever method of total prostatectomy is given preference, there is no doubt that as its technique becomes perfected it will be the operation of choice and the rational method for permanent relief from prostatic obstruction in the earlier stages and also in individuals free from advanced renal insufficiency and other complications which would not permit the administration of an anæsthetic.

STEWART BUILDING.

Death from Pressure of a Pregnant Uterus upon a Horseshoe Kidney.—Walsh (*British Medical Journal*, January 18, p. 142; *American Journal of the Medical Sciences*, May) describes an interesting case recently reported by the coroner of the city of London. A young married woman died suddenly upon the street. Upon autopsy she was found several months advanced in pregnancy, with the enlarged uterus pressing upon a horseshoe kidney situated low in the abdominal cavity. Pressure had practically disorganized the kidney, and the sudden death was due to a resulting uræmia.

THE HYGIENE OF PREGNANCY.*

By CHARLES E. PADDOCK, M. D.,

CHICAGO

In selecting this subject, I do so understanding that it is not new, nor are there any new ideas advanced. I do so, however, with a knowledge that the hygiene of pregnancy is being neglected. Because of this fact, I hope that the subject may be brought before you in a way that may stimulate you to better work in midwifery. I maintain that it is the younger men who are doing the good, careful work in obstetrics; that the older practitioner neglects details that are all-important to the welfare of the patient. The young man is fresh from his school, full of good ideas regarding the subject, is familiar with the teachings of his professors and his text-books. He is able to do good work until his other duties become so hard that he finally looks upon the obstetrical practice as a side issue, loses all interest in it, and takes it for the remuneration which it brings.

There is no branch of medicine so thoroughly neglected as that of obstetrics. Why is it that the general practitioner gives so little time to it? Why is it that this subject is so little thought of that midwives who cannot speak a word of English, can hardly speak their own language, and, worse than all, who know nothing of asepsis and antisepsis, are allowed to practise? What does the State Board of Health mean by licensing these women for practice in any branch of medicine, and especially the obstetrical one? Would we, as physicians, countenance the giving of diplomas to such to practise any other branch of medicine? And, while you may ask what this has to do with the subject of hygiene of pregnancy, my answer would be, everything, because these women as a rule know scarcely anything about the treatment of cases during pregnancy. They go out into the world practising their vocation, unfitting the women, and leaving them in a deplorable state. Just so long as we look upon obstetrics so lightly, just so long will women have to suffer from neglect.

Notwithstanding all this, I believe that we are advancing in the art of midwifery, and I believe that is due to the condition of specialism. Obstetrical cases are now referred to the obstetricians, who are giving their best energies to the advancement of this subject. It is not these men, nor those of you who do good, conscientious work, that I am addressing, but the busy practitioner who has no time for obstetrical work, but at the same time takes every case, never seeing a case during pregnancy, hurries the labor with instruments, and pays no at-

*Read before the Tri-State Medical Society of Iowa, Illinois, and Missouri.

tention to the puerperium. To such I appeal, not only in the interest of the mother, but in that of the child. That many children are brought into the world poorly nourished, and finally succumb, is due entirely to the careless way of handling the case in pregnancy. We have clinical evidence which warrants us in making this statement.

Pregnancy was normally intended to be a physiological process, but custom has changed this, and we rarely see a case that does not require the physician's attention. The nervous system shows unmistakable changes. There is a disposition to melancholia, and the digestive system is more or less disturbed. These conditions are occurring at a time when it is all-important that the woman be in as healthy a state as possible. Knowing these things to be so, we are guilty of culpable negligence if we neglect them. Unfortunately, in the class of cases where treatment would have done the greatest good, we do not see the patients until they have gone into labor. In the better class of cases the physician is engaged early, but in the country and in the poorer city districts the reverse is the rule. That the city patients require more attention, and are not so fit for maternity, is evident when we consider their surroundings. In the country the women are more active, they breathe purer air, eat plainer food, and drink purer water, and their habits are more regular. At night they breathe the same pure air, and their rest is not broken by the continual noises which make either the night or the day in the city wearing upon the strongest constitution. The city woman breathes the same foul air night and morning, drinks impure water, and has as a rule irregular habits, and most girls, of whatever class of society, are physical wrecks by the time they have reached the pregnant state. These are the women we must help.

In presenting this subject to post-graduate students, I am often met with the statement, "there is not enough remuneration in an obstetrical case." I maintain that if the case is worth taking at all, it is worth treating well, and the physician will find his remuneration in the consciousness of work well done and the plaudits of his patients and friends.

The hygiene of pregnancy begins as early as you see the case. Make a thorough examination and determine whether or not the woman is in a healthy condition and is able to give birth at term to a living child. It is a sad reflection upon a physician who has been engaged since the first few months of pregnancy to find at labor that the patient cannot, owing to tumors or some pathological condition which might have been corrected, give birth *via naturale* to a living child, or that the mother has some disease which pregnancy has increased. When you have determined that the woman is in a fit condition, then give specific rules which she must live

up to. Circumstances are, of course, to be taken into consideration. The kind and amount of exercise, strict attention to the excretory organs, regular habits of diet, attention to the breasts are among the numerous things to which a physician's attention must be directed in his case during pregnancy. I do not intend to go into details or to enumerate all that should be done for the patient, but to mention two important factors in the hygiene which seem to be so often neglected and are so absolutely indicated. I refer to the bathing of the patient and the examination of the urine.

It is a popular belief that too much bathing is positively injurious, and it is our duty to correct this error. A daily full bath should be advised; not necessarily a hot one, but tepid or agreeable to the patient. This is a prophylactic treatment of nephritis and is all-important. Next comes the examination of the urine. Frequent examination, say every two weeks, and the last month every week, and an occasional twenty-four hours' specimen, is positively indicated, and strict adherence to this rule has saved many a woman from eclamptic seizures. Physicians doing much obstetrical work, and carrying out this routine treatment, often encounter patients with acute nephritis whom, by prompt treatment, they are enabled to carry through safely to full term.

Select the lightest and most pleasant room, which has been thoroughly cleaned and aired, for the confinement and puerperium. Aside from the sanitary point of view, there is nothing which adds so much to the comfort of the patient as a light room with pleasant surroundings.

When the patient arrives at the time of labor, the physician's duty is to take every care against the infection of the mother. When Semmelweis, in 1848, made known to the world his studies of puerperal infection, he opened up a new field in midwifery which has been the means of saving thousands and thousands of lives. The usual mode of infection is through the vaginal tract, by contact of the fingers of the accoucheur. The late Professor Jaggard, in his lectures upon the prophylactic treatment of puerperal infection, said: "Limit to the minimum the number of digital examinations." That advice is as good to-day as it was ten years ago. In a normal case, one examination *per vaginam* is sufficient, and that should be made under strict asepsis. All other examinations can and should be made externally, and by practice a skill will be acquired which will enable one to determine the position and presentation without running the risk of infection by repeated vaginal examinations. The labor being over, all lacerations of the vagina and perinæum should be repaired. Physicians who do not meet with lacerations, or, at least, say they do

not, do not look for them, because they are present in a proportion of the cases of every physician. My attention has recently been called to a number of cases of confinement where little if any attention was given to the puerperal woman. How a physician can conduct a case of this kind through labor, and then forget that he has such a patient, is more than I can tell. So many little things come up daily, following a labor, that a physician's duty is to give the same strict attention to the case following as he did before. Catheterism is often necessary, and unless there is a skilled nurse present, the physician must attend to this himself. The diet should be attended to and regulated—absolute rules given as to what the mother should eat and also rules regarding the nursing of the baby. Absolute quiet is indicated, the mother being kept from her well-meaning but misguided friends.

A prominent text-book advises that a patient be kept upon her back for a week. Why the author considers this necessary, is more than I can say. I believe the patient should be kept as quiet as possible, but after the first twelve or twenty-four hours to lie constantly upon the back becomes so irksome that I advise her being turned by the nurse from one side to the other. The same author advises that the patient be confined to her bed for at least fourteen days, then shifted from the bed to a lounge, and at the end of three weeks be allowed to take a few steps, and at the end of four weeks allowed to leave her room. Such arbitrary rules are unnecessary, and cannot be made to fit every case. There are patients who may be able to be about in a week, while another patient will not be in the same condition for three or four weeks, and my rule is to depend upon the amount of involution that has taken place, and I gauge that involution by the character of the lochia. The lochia rubra may be present four, five to seven days, sometimes longer, depending, of course, upon the amount of involution of the uterus. If the uterus has contracted and the whole involution has rapidly taken place, the lochia cease, and then I allow my patient to be about. Great care should be taken before discharging our patient to make an examination *per vaginam* to determine the exact position of the uterus, to determine whether there is a marked retroversion or a retroflexion. But our duty to our patient does not cease here. Even after the third or fourth week we are often called, the patient complaining of a great deal of backache, of a feeling of weight in the pelvis, and an examination will determine that the uterus has finally been misplaced. Therefore I would advise that two examinations be made—one at the time the patient gets up and another at the end of about six weeks.

There are numerous details which might be enum-

erated in the treatment of the puerperium, but these are found in the text-books, and it is my desire to only call your attention to the fact that these cases should be given more attention than it is the custom of the general practitioner to allot to his cases. The physician who does all this, who looks to the welfare of his patient during pregnancy, and gives the same watchful attention following labor, will have the lowest mortality and the fewest conditions of morbidity.

CEREBRAL LOCALIZATION AND BRAIN FUNCTION.

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(Continued from page 1044.)

In 1880 Luciani, who, like Seppilli, found that the effects of a circumscribed lesion within the motor zone of the cortex were not only paralysis or paresis, but also a more or less pronounced alteration of the muscular and cutaneous sensibility, wrote that "the motor centres and the sensory centres, which together perform a very complex function, are intermingled or lie in the closest proximity (*in gran vicinanza*) within the cerebral cortex." He verified the phenomena described by Munk, but he did not look upon the paralysis as psychical in character; that is, as the result of the loss of mere sensation of mental images or psychic representations. It was purely organic and depended directly upon the injury to the motor cells, just as the disturbed sensibility depended upon the injury to the neighboring sensory elements. The motor centres, therefore, like the centres for sight and hearing, were of a complex nature and in reality were sensorymotor. Luciani says, "the motor centres are not localized within the cortical area, called up to the present time 'the motor zone,' a name which we must hereafter abandon, since this zone is not exclusively motor. All the various regions of the cortex are more or less strewn with special motor centres. In order to be positive of having destroyed all the motor centres, one must remove the entire cerebral cortex." This is a remarkable statement of a singularly comprehensive theory, and leads us back once more to the vigorous contentions of the school of Goltz.

Danillo has demonstrated that when the occipital

lobe, which is supposed to be entirely sensory in function, is stimulated, the movements of the eyes are not simply reflex, as Ferrier believed, because they are still observed when after the ablation of the entire cortex of the occipital lobe the underlying white substance is electrically excited. In this white substance, therefore, there must be motor fibres springing directly from the cortex of the occipital lobe, unless we imagine that these same fibres go to the central lobules and through them, rather than directly, transmit the motor impulse to the muscles of the eye. Even such an hypothesis, however, would represent the process within the occipital lobe cortex as reflective, but the outgoing impulse in such a case would be transmitted into an ordinary motor one before it finally reached the eye muscles. This difficulty might have been solved by removing, as Goltz has done, the entire cerebral cortex except that of the occipital lobe; then exciting the latter and noting whether there were any movements of the eyes. I do not know whether such an experiment has been performed, but it is one which if possible is greatly to be desired. In fact, each of the sensory areas should be thus isolated, excited, and the effects closely studied in regard to the production of any motor phenomena. Since the distinguished physiologist of Strassburg has succeeded in removing vast amounts of brain substance from dogs without destroying their lives it would seem that such experiments as suggested would be quite feasible. Bechterew has accomplished it to a certain extent and finds that when the so-called motor areas of the central lobules are separated from the occipital centres, stimulation of the latter still gives rise to the same muscular response. He argues, furthermore, that the movements of these muscles cannot possibly be of the nature of a simple reflex, because they are always uniform and localized within the same group. Stimulation of the occipital cortex excites motor points therefore that do not belong to the so-called motor zone whose fibres pass only through the pyramidal fasciculi of the cord. These mixed centres being thus situated outside of the cortical areas to which the pyramidal fasciculi run require for their excitation a much stronger and longer current; their destruction does not involve manifest disturbances of motion; and the movements which they give rise to are not very clearly differentiated from those caused by excitation of the true motor zone. Bechterew reasons that the sensory areas do contain motor centres, or at least motor elements, and he accounts for the fact of their stimulation requiring a stronger current and one longer in duration on the ground that they do not connect with their corresponding muscles through the intermediation of the anterior roots of the spinal cord, but through

certain masses of gray matter situated deeply within the cerebral hemispheres, probably the optic thalami. According to Bechterew, then, there are two sorts of motor centres within the cerebral cortex. One variety is easily excitable and is found in the central convolutions; the other is not so easily excited and is scattered in among the sensory centres. This author bases his views chiefly upon his experiments on new-born animals, in which the movements of the ear and the conjugate movements of the eyes can only be produced by direct stimulation of the corresponding areas of the cortex one week and one month respectively after the movements of the limbs have been elicited by excitation of the central convolutions. It is not to be doubted, therefore, that the sensory areas of the cortex contain some motor elements and exercise some special influence over the associated muscular apparatus. From this rapid review of the modern theories current among the English and Continental physiologists, we note clearly that there is a growing tendency to believe that the motor centres of the central convolutions have sensory elements more or less intermingled with them.

Thus far I have discussed only the localizations, so far as they are known, in the cerebral cortex; but these do not by any means include all of the localizations in the brain. The functions of the basal ganglia, the arrangement of the projection tracts especially as they course through the internal capsule and the functions of the cerebellum are all sufficiently known to afford some clue as to the location of lesions in these parts.

As the white matter of the hemispheres consists of *association*, *commissural*, and *projection* tracts, a lesion within it can not be sharply diagnosticated and distinguished from a lesion of the cortical areas with which they are connected. From the standpoint of surgery, it is extremely desirable to be able to distinguish a cortical from a subcortical lesion and even if possible the depth of the subcortical. Not many lesions are entirely and completely cortical, and many of those which are often supposed to be cortical are discovered upon post mortem to be subcortical. Tumors of the centrum ovale usually give rise to more extensive symptoms than do those of equal size in the cortex. In other words, the nearer the lesion is to the cortex the more likely it is to produce spasm and paralysis or paræsthesia and anæsthesia in, for instance, the arm, the leg, or a part of the face, while on the other hand the farther it is away from the cortex, as, for instance, in the internal capsule, the more likely it is to provoke a hemiplegia or a hemianæsthesia. The spreading out of the tracts above the capsule explains clearly enough the reason why cortical lesions tend to produce monoplegias and subcorti-

cal more extensive paralyses. Though not absolutely reliable, this distinction is an important and valuable one. Seguin made a careful study of the differential signs between the cortical and subcortical tumors, and in a general way concluded that cortical lesions produced "localized clonic spasm, epileptic attacks beginning with local spasm, followed by paralysis; early appearance of local cranial pain and tenderness; increased local cranial temperature"; whereas subcortical lesions gave rise to "local or hemiparesis followed by spasm; predominance of tonic spasm; absence, small degree or very late appearance of local headache and of tenderness to percussion; normal cranial temperature."

Among the subcortical lesions those of the *internal capsule* are of special significance. On account of the course of the middle cerebral artery, hæmorrhage into the internal capsule or its immediate neighborhood, the corpora striata and optic thalami, occurs more frequently than it does into the centrum semiovale or on to the cortex. Usually the extravasation of blood causes such an extensive destruction of tissue that a localization diagnosis is quite out of the question; and even were the focal lesion in the internal capsule to be so small as to confine its deleterious influence to only certain of the tracts passing through it, a diagnosis *intra vitam* between capsular and cortical disturbance would be often impossible and always extremely difficult. To attempt a localization diagnosis of a diminutive lesion within the capsule, one must know clearly the relative positions of the various tracts that run through it. The anterior two thirds of the posterior limb of the capsule are occupied by the projection tracts from the motor areas of the cortex. These fibres hold approximately the same relative position to each other that the areas of the cortex do among themselves; that is, beginning at the knee of the capsule and passing backward, we meet the face, arm and leg tracts, which, however, are not sharply defined, but blend with each other at the line of separation. Horsley, Beever, and others have located the bundles of fibres for the glossal, masticatory, and laryngeal muscles in the knee of the capsule. Von Monakow says that the speech path positively passes through the capsular knee. When this part of the capsule only is involved in a lesion, there occurs paralysis of the inferior branch of the facial nerve and of the hypoglossal of the opposite side. If the disease is upon the left side disturbance of the speech will also occur. In the posterior third of the posterior limb of the capsule course the sensory projection tracts that terminate in the cortex, those from the visual areas of the occipital lobe being the farthest be-

hind. In the anterior limb of the capsule is to be found the frontopontile tract of Brissaud, about which, however, there is still much diversity of opinion. Injury to this anterior limb causes no definite localizing symptoms. With this picture of the internal capsule in the mind, the diagnostician might attempt a localization of a small lesion, but, as I have indicated above, he could not feel sure of the correctness of his diagnosis. Usually a lesion of the capsule is so large and destructive that the accompanying paralysis assumes the form of a total hemiplegia, the well-known facio-hypoglossal-brachio-cural type, of the opposite half of the body. With this hemiplegia is associated more or less of a hemianæsthesia.

The following symptoms are supposed to indicate tumor of the *corpus callosum*: General symptoms of brain tumor such as headache, etc.; gradual hemiplegia followed by paraplegia; great mental dulness; sleepiness; stupidity; indifference to the external world and a low, inanimate condition generally; absence of anæsthesia and of all signs of involvement of the cranial nerves; terminal coma and death. There is much doubt about all this, however, as the symptomatology is so general and includes so much that is indicative of tumor of the ventricles. A definite localization of the lesion is therefore extremely difficult if not quite impossible. The bilaterality of the paralysis and its irregular type, when taken in conjunction with the mental deterioration and general signs of intracerebral tumor, are highly suggestive, but hardly much more. In Schäffer's collected twenty-five cases of tumor of the corpus callosum, ten exhibited optic neuritis, while in seven it was absent. Headache was wanting in eleven and there was absence of vomiting in fifteen. In all of the cases there was a change in the mentality, including weakness of the intellect and memory, somnolence, etc. Convulsions occurred in eleven. Disturbances of sensibility were exceedingly rare. Mental changes are more constant with tumors of the corpus callosum, that with tumors in other parts of the brain. When such mental changes are unaccompanied by any definite localizing symptoms, a tumor of the corpus callosum ought always to be thought of.

Complete destruction of and focal lesions within the *corpora striata* do not give rise to any definite localizing symptoms. The old idea that the caudate nucleus has something to do with the automatic movements of running, walking, etc., and that the lenticular nucleus (globulus pallidus) is associated with the sensory paths is not yet well established.

(To be continued.)

Correspondence.

LETTER FROM TORONTO

*Ontario Medical Association**Toronto, June 17, 1907*

One of the most successful meetings of the Ontario Medical Association was that held in the city of Toronto on the 4th and 5th of June, under the presidency of Dr. N. A. Powell, of Toronto, Dr. H. C. Parsons, of Toronto, discharging the duties of secretary. The committee on papers and business was under the charge of Dr. John T. Fotheringham, of Toronto, while Dr. J. Milton Cotton, of the same city, looked after the committee of arrangements. Dr. Roswell Park, of Buffalo, was the guest of the association, and in addition two other eminent Americans paid the association a visit, Dr. A. R. Robinson and Dr. S. A. Knopf, of New York.

The following papers were contributed to the morning session of the first day, most of them exciting interesting and valuable discussions: Deformities Consequent upon Injury, either Traumatic or Pathological, to the Epiphysial Cartilages in Long Bones, by Dr. B. E. McKenzie, of Toronto; Some Points in Life Insurance, by Dr. John L. Davison, of Toronto; Transplantation of the Omentum into the Abdominal Wall for the Relief of Ascites due to Cirrhosis of the Liver, by Dr. George A. Peters, of Toronto; The Cure of Chronic Bright's Disease by Operation, by Dr. A. Primrose, of Toronto; Tonsillar Hypertrophy, its Operative Treatment and the Comparative Value of the Different Methods, by Dr. Perry G. Goldsmith, of Belleville; Some Comparative Results of the Medical and Surgical Treatment of Appendicitis, by Dr. J. P. Armour, of St. Catherine's.

Dr. Powell delivered the annual presidential address at the opening of the afternoon session. He referred particularly to the medical legislation which had been before the Ontario Legislature and the Dominion Parliament during their past sessions. Regarding the proposed reform of the Ontario Medical Council by the elimination of the homœopathic and college representatives, he had opposed that measure before the committee of the legislature because he did not consider it fair dealing with the homœopathic body, which years ago had resigned certain rights and privileges which should not now be wantonly abrogated wholly against their wishes. As to the measure which had been so successfully carried through the Dominion Parliament by Dr. Roddick, M. P., for a Dominion Medical Council, he considered that it had been amended so much and to such a degree that it was now a measure practically almost useless. Following upon this Dr. J.

Algernon Temple, professor of obstetrics and gynecology in Trinity Medical College, Toronto, read a well prepared paper on Ventrofixation, its Value and Results, an operation which Dr. Temple wholly condemns. The afternoon session then divided into sections. In the Obstetrical Section the following were the papers presented and under discussion: Placenta Prævia, by Dr. H. D. Livingston, of Rockwood; How Best to Meet Obstetric Emergencies, by Dr. C. J. C. O. Hastings, of Toronto; Notes on Five Cases of Ectopic Gestation, by Dr. R. E. Webster, of Ottawa; and The Treatment of Septic Abortion, by Dr. Kennedy McIlwraith, of Toronto. In the Medical Section Dr. David Hoig, of Oshawa, read a practical paper on Pneumonia; and Dr. J. C. Mitchell, of Enniskillen, read one on The Treatment of Pneumonia. Other papers were A Recent Epidemic of Cerebrospinal Meningitis, by Dr. Alexander McPhedran, of Toronto; Primary Tracheal Diphtheria, by Dr. R. D. Rudolf, of Toronto; Where can our Consumptives Best be Treated? by Dr. J. H. Elliott, superintendent of the Gravenhurst Sanatorium; and Pleurisy with Effusion, by Dr. D. Gilbert Gordon, of Toronto.

On the opening of the evening session, the president introduced His Honor Judge Macdougall, of Toronto County Court, who read a paper which was timely and well received, and had for its title Medical Testimony in Courts of Law. He contended for a change in the present system of employing experts, favoring their appointment by the court and their being considered as assistants or advisers to the court; their compensation to be arranged for by the State. He also made a reference to the change in the Canada Evidence Act, which now limits experts to three, or five if asked for before the commencement of a trial. In discussing this paper, Mr. I. H. Cameron, M. B., of Toronto, a medicolegal expert of prominence and wide experience in Ontario, stated that the profession of medicine would favor such a change in the system of calling medical experts as had been set forth in the paper of Judge Macdougall. One of the members of the house staff of the Toronto General Hospital, H. S. Hutchison, read a paper on the hospital interne in Ontario, favoring a change from a twelve to an eighteen months' term, appointments to be made every six months instead of annually as at present. Dry Labor was the title of an exceedingly able and interesting paper contributed by Dr. Adam H. Wright, professor of obstetrics in the Medical Department of Toronto University. Following upon these papers were two lantern demonstrations, the former conducted by H. A. McCallum, of London, On Certain Functional and Organic Diseases of the Nervous System; the latter, by C. A. Hodgetts, inspec-

tor for the Ontario Board of Health, Toronto, On Anomalous Forms of Small-pox.

The morning session of the second day was very largely given over to the presentation of clinical cases. There were related A Case of Situs Inversus in a Child; Leontiasis Ossea; Scleroderma; Charcot's Disease of the Hip; Pseudo-hypertrophic Muscular Paralysis; Muscular Dystrophy; Lateral Sclerosis; Adenoma Sebaceum; An Unusual Case of Varicose Veins; Extensive Necrosis of the Skull; Chronic Hereditary Trophœdema of the Lower Extremities; Fracture of the Pelvis in a Child with Complete Laceration of the Perinæum by the Ramus of the Pubic Bone, Subsequent Repair of the Perinæum and Bowel, Recovery; Removal of Stones from the Common Bile Duct; Notes of a Patient whose Abdomen has been Opened Eight Times; Three Cases of Transplantation of the Ureters into the Rectum for Exstrophy of the Bladder, one in a baby girl, one in a boy of six years, and the third in a lad of twelve years; An Unusual Case of Multiple Peripheral Neuritis; Urticaria Pigmentosa; Marked Disability Arising from Fracture of the Coccyx; Recovery by Amputation of the Coccyx; Chronic Intestinal Obstruction Cured by Operation; Three Cases of Pyothorax; and A Case of Splenic Leucæmia. After the presentation of these cases the meeting divided into sections:— In the Surgical Section the following papers were read and discussed, and patients shown: The Uses of the X Ray other than Diagnostic, by Dr. C. R. Dickson, of Toronto; The Use of the X Ray in Cancer, Lupus, and Hodgkin's Disease, by Dr. J. E. Hett, of Berlin; Results that are being Obtained by the Use of the X Ray, with Exhibition of Patients, by Dr. John McMaster, of Toronto; Stricture of the Œsophagus, by Dr. Beverley Welford, of Woodstock; Hydrobromic Ether, Notes on its Use as an Anæsthetic in Adenoid and Tonsil Operations, by Dr. D. J. Gibb-Wishart, of Toronto; and The Use of India Rubber Splints in the Treatment of Deflected Nasal Sæpta, by Dr. J. Price Brown, of Toronto. In the Medical Section the following papers were presented: Climate and Health Resorts of the Southwestern States, being a personal experience of Dr. Charles D. Parfitt, medical superintendent of the Gravenhurst Free Hospital for Consumptives; Some Unusual Cases of Syphilis of the Lungs and Brain, by Dr. Graham Chambers, of Toronto; Cerebral Embolism, by Dr. John Gillies, of Teeswater; How Much Ophthalmology Should the General Practitioner Know, with Special Reference to the Discovery of the Cause of Headaches, by Dr. J. T. Duncan, of Toronto; Tabes Dorsalis with Involvement of the Cranial Nerves, by Dr. H. B. Anderson, of Toronto; A Case of Brain Tumor with Interesting Localizing Symptoms, by Dr. W. B. Thistle, of

Toronto; and A Case of Acute Nephritis, by Dr. John Hunter, of Toronto.

At the afternoon session, Dr. Roswell Park read a short paper on the surgery of the gall bladder, which was discussed by Dr. Ingersoll Olmsted, of Hamilton, who has performed extirpation three times with distinct success. Other papers contributed to this session were: Fractures of the Shaft of the Femur, by Dr. Hadley Williams, of London; Removal of the Gasserian Ganglion for Trigeminal Neuralgia, with Presentation of the Patient, by Dr. H. A. Bruce, of Toronto; Cancer of the Breast, by Dr. T. K. Holmes, of Chatham; the Technique of the Removal of Tuberculous Glands (Cervical), by Dr. L. W. Cockburn, of Hamilton; Abdominal Neuroses, by Dr. D. Campbell Meyers, of Toronto; and Remarks upon Some Eye Cases, by Dr. George H. Burnham, of Toronto.

The following officers were elected for the ensuing year: President, Dr. J. C. Mitchell, of Enniskillen; vice-president, Dr. George A. Bingham, of Toronto; general secretary, Dr. H. C. Parsons, of Toronto; treasurer, Dr. Andrew R. Gordon, of Toronto.

Therapeutical Notes.

The Treatment of Benign Facial Neuralgia.—

According to the *Nord médical* for March 15th, the therapeutics advised by M. Plicque in his recent work, *Traitement des névralgies et névrites*, is as follows: Internally, aconite takes first place, but it must be attentively watched and its administration stopped on the first sign of intolerance, as numbness of the face and tongue.

Medclaff has proposed this formula:

℞	Tincture of aconite root.	} . . . equal parts
	Tincture of colchicum seeds	
	Tincture of belladonna.	

M. Six drops (in water) to be taken every six hours.

Veratrine seems to have a special applicability for neuralgias accompanied by headache, vertigo, and cerebral troubles. It is given in 1/60 of a grain granules, two or three in the day. In this class of cases, syphilis should be sought for.

The following formulæ are by Weill and Worms:

℞	Croton chloral.	} of each. 15 grains
	Licorice powder.	
	Confection of roses }	

M. For twenty pills, one every hour.

Or

℞	Croton chloral 15 grains
	Pure glycerin
	Water.
	Essence of peppermint. 3 drops
	Syrup 6 drachms

M. To be taken in coffeespoonful doses every two hours.

For Grippe.—The following prescriptions are from an article translated into Greek from the French by Dr. Bulgarides (Γατρικὴ Πράσις), February, 1902). Cough may be combated with the following:

℞ Tilia water
Lettuce water
Cherry-laurel water }equal parts.
Syrup of codeine }

M. From three to four tablespoonfuls to be taken in the course of the day.

Or this:

℞ Crystallized codeine 15/100 of a grain
Extract of belladonna..... 3/100 " "

M. for one pill.

From three to four may be taken daily.

Or this

℞ Morphine hydrochloride 1½ grain
Extract of hyosciamus... } of each... 1/3 grain
Extract of belladonna.. }
Balsam of Tolu 45 grains

M. For fifty pills. One may be taken every three hours.

Or this

℞ Alcoholate of aconite root..... 30 drops
Tincture of belladonna. } of each. 15 "
Tincture of hyosciamus }
Cherry-laurel water..... 5 drachms
Syrup of diacodium..... 3 ounces

M. One tablespoonful every two hours.

When there is much adynamia with cardiac feebleness the following hypodermic injections may be used:

℞ Sodium benzoate.. } of each... 45 grains 3.00
Caffeine..... }
Distilled water 150 minims 10 c.c.

M. One hypodermic injection (15 minims) in the morning and another in the evening.

℞ Sparteine sulphate 15 grains
Distilled water 750 minims

M. From five to six injections within the twenty-four hours.

Manganese in Anæmia.—Huchard, according to Γατρικὴ Πράσις for January 21st, has had very good results with the chloride, the carbonate, the dioxide, or the lactate, the latter in the following combination:

℞ Manganese lactate. } of each... 150 grains
Extract of cinchona }

M. To make 100 pills. One or two to be taken before each meal.

He also gives the following prescription as suitable in chlorosis with atonic flatulent dyspepsia:

℞ Manganese dioxide } of each... 75 grains
Poplar charcoal... }
Powdered calumba.. } of each... 7½ grains
Powdered nux vomica }

M. Divide into 20 powders, of which one may be taken with each meal.

The Treatment of Ozæna by Electric Light.—

Ign. Dionisio (*Gazzetta Medica Italiana*, February 6th; *British Medical Journal*, May 10th) directs the electric light (incandescent) by reflectors into the nose, or actually introduces a lamp with a water-jacket into the nostril, or uses a larger lamp in the mouth, illuminating the nose through the transparent facial bones. In every one of six cases there has been a noteworthy decrease of the crusts and secretion, and a disappearance of the characteristic fœtor. Two patients previously treated by the best means known, who had returned with the usual odor in spite of nasal douches several times a day are now free of the odor and use no irrigation at all. Dionisio cannot yet say whether the cure is lasting, but believes that it is a valuable addition to the therapeutics of ozæna.

Uterine Congestion of Menstrual Origin.—

Dalchi (*Revue pratique d'obstétrique et de gynécologie*, December, 1901; *Medical Review of Reviews*, February) speaks of two kinds of uterine congestion; one accidental amenorrhœa, the other due to violence.

Accidental amenorrhœa occurs at the moment of its establishment, or better, after the flow has begun, and is often due to such causes as fear, vivid emotions, falls, etc.

But, apart from this, the most immediate and inevitable accident is the congestion of the uterus, which as a rule arrests the flow; and it is this complication alone, this form of accidental amenorrhœa, which he considers here. The congestion presents itself suddenly, indisputably, and quickly. The attack will be lessened by absolute rest in bed. Anything that induces fatigue especially favors congestion of the uterus, salpingitis, ovaritis, perimetrosalpingitis, etc. A large cataplasm of laudanum should be placed upon the patient's abdomen low down, but, if she complains of uterine colic, the cataplasm should be replaced with an ointment:

℞ Extract of belladonna } of each 30 grains.
Extract of hyosciamus. }
Petrolatum 450 "

M. et Sig: Apply on a flannel to abdomen.

A very warm douche of a quart of water should be given in the evening, followed by an ounce of castor oil or a glass of mineral water.

Prolonged baths have a marked sedative effect. Trousseau and Peter have observed that the "bath" taken with the idea of bringing on the flow is capable of increasing the pain, while others think that it is always favorable for bringing on the flow of blood. After the application of counter irritation to the abdomen the flow generally begins in one or two hours. If the pain and congestion persist it is necessary to raise the hips higher than the head, and the congestion quickly subsides. That the sexual organs are not the actual site of the malady is generally admitted. While the patient is at rest the utero-ovarian congestion subsides, and then the actual cause of the trouble can be ascertained

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THE UNITED STATES PHARMACOPŒIA.

Mr. M. I. Wilbert, the apothecary to the German Hospital, Philadelphia, has made an interesting study of the various issues of the United States Pharmacopœia, to some extent from points of view not often taken, and his account of his impressions is given in the June number of the *American Journal of Pharmacy*. One of the features that seem calculated to prove of considerable interest in Mr. Wilbert's article, if only from considerations of curiosity, is his tabular statement of the numbers of preparations of the various classes that have been admitted into the past decennial volumes. Among the classes that have grown in popularity, according to the figures given, are extracts, which have gradually risen in number from sixteen in the issue of 1820 to thirty-four in those of 1870 and 1890; fluid extracts, which, seven in number, were first recognized in 1850, and had increased to eighty-seven in 1890; plasters, of which there were eight in 1820, sixteen in 1860; seventeen in 1870 and 1880, and thirteen in 1890; spirits, of which there were seven in 1820 and twenty-five in 1890; syrups—fifteen in 1820 and thirty-two in 1890; tinctures—fifty-one in 1820 and seventy-two in 1890; troches—three in 1820 and fifteen in 1890; and waters—ten in 1820 and nineteen in 1890.

Among the preparations that have diminished in number are abstracts, which, eleven in all, figured in only one issue, that of 1880; cerates, which, though in 1860 they had risen from eleven to sixteen, had fallen to six in 1890; confections, which have dropped from six in 1820 to two in 1880 and 1890, though there were seven in 1830; decoctions, which have gradually fallen from fourteen to two; infusions, which, starting as twenty-three in 1820,

rose to thirty-two in 1850, but have since declined to four; pills, which have, with slight fluctuations, fallen from twenty-three to fifteen; and washes, of which there were four in 1820, but none since. The preparations that have about held their own are the honeys, the liniments, the mixtures, the mucilages, the ointments, the powders, the resins (which first appeared in 1860), the solutions (which also first made their appearance in 1860), the vinegars, and the wines. The collodions were first recognized in 1850, and they have gradually risen in number from one to four. One elixir was admitted in 1880, and in 1890 there were two. Emulsions, four in number, first appeared in 1890. The glycerites were five in 1870, two in 1880, and six in 1890. Juices figure only once, two in number, in 1870. There were two oleates in 1880, and three in 1890. The oleoresins were five in 1860, the year of their first recognition, and have since been six. Three pulps were recognized in 1840 and in 1850, but none have figured since then. There were nine suppositories in 1870, none in 1880, and one in 1890. Two triturations were admitted in 1880, and one in 1890.

In some instances it looks as if nothing but caprice had governed the fluctuations shown, but in most cases, we think, classes of preparations have become more numerous because their excellence has met with wider recognition, or have passed into disuse on account of their being generally deemed superfluous. It will be interesting to observe what the revision of 1900 will shown in this regard.

THE NEW PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

The association is greatly to be congratulated upon its choice of a president for the ensuing year. We would by no means debar specialists from the presidency; indeed, many of them have filled the office gracefully and efficiently; but we cannot avoid the thought that a representative of general medicine is as a rule the proper person to preside over an organization that embraces all branches of medicine. And surely there is no member of the American profession who would be more widely recognized as embodying what we expect to find in the general physician than Dr. Frank Billings, of Chicago. When to his attainments as a practitioner we add his personal

dignity and serenity, we have an ideal presiding officer for the American Medical Association.

Hardly less requisite in the president of such an organization than the qualifications that we have mentioned is catholicity of thought—freedom from that narrowness that keeps a man continually plodding in the strict field of professional practice. Such breadth of thought was clearly shown by Dr. Billings in the address in medicine which he delivered before the Saratoga meeting, as those of our readers who have read last week's issue must have recognized. The relation of medical science to commerce, which was the subject of Dr. Billings's address, is a matter that demands for its adequate consideration a wide range of information and ample reflection. The fact that it was satisfactorily handled by Dr. Billings is gratifying evidence of his broad-mindedness. We repeat that the American Medical Association is to be congratulated on having chosen such a man for its president.

MENSTRUATION AND LACTATION.

It is well to have popular belief as regards medical matters submitted occasionally to review founded on precise observation. The *Journal des praticiens*, in its issue for April 26th, gives such a review of the common impression that a woman whose menses return should cease to nurse her child. The author of the article bases it largely upon the observations of Dr. C. Roche, who has written a thesis on the subject, and those of Professor Budin. As is generally the case under like circumstances, these researches seem to show that the popular conviction, while it represents a certain amount of truth, is too absolute. According to these investigations, menstruation is reestablished in about forty-two per cent. of women at some time during the ordinary period of lactation.

The effects upon the child, when there are any, pertain for the most part to its nutrition. There may be any one of the four following consequences: 1. The child loses weight to the extent of a few drachms during each menstruation. 2. Its increase in weight is arrested, the curve of ascent being replaced by a horizontal line. 3. It still gains in weight, but less than at other times. 4. It gains in weight more than usual, but this is rather rare, and such an abnormal augmentation of the gain in weight is

often the prelude of digestive derangements and of a subsequent and more considerable diminution. It is thought that the suddenness with which these digestive troubles make their appearance, whereby they resemble a sort of poisoning, has given rise to the popular belief in the noxiousness of continued lactation. Sometimes, in M. Roche's opinion, attacks of eczema in the child are due to menstruation on the part of the nurse. All these disorders are generally quite transitory, lasting only during the menstrual period.

It is thought that during menstruation the milk becomes less abundant, and that this fact accounts for the lessening of the child's nutrition that commonly occurs. Consequently it is recommended that the nursing be supplemented by the use of cow's milk, but this is hardly necessary if the mother's milk is abundant in the intervals between menstruations. In case of digestive disturbances the child's feeding should be reduced, either by prolonging the periods between nursings or by shortening each nursing, whereby the nursling no longer gets the last milk of a nursing, which is richer in fatty matter than the earlier portion. From all this it may safely be deduced, we think, that the reappearance of the menses should not be considered as an absolute bar to the continuance of lactation.

A HARBINGER OF UNIFICATION.

Dr. De Lancey Rochester, of Buffalo, justly expresses in the June number of the *Buffalo Medical Journal* gratification at the unanimous election to membership in the Erie County Medical Association of a physician who had before been regarded as a homœopathist. His election followed close upon his protest against the use of the words "homœopathic physicians" in a resolution presented before a general meeting of the physicians of Buffalo. He is reported to have said that it was time to drop such qualifying adjectives, for sectarianism in medicine was really dead and it was wrong to keep up the semblance of it by the use of such misleading terms, and that, so far as he knew, no physician limited himself in his practice in such manner as the word homœopathic implied, and it was the manly and honest thing to come out openly and say so. It was Dr. F. Park Lewis who made this protest, and he was joined by Dr. A. T. Bull. We trust the day is not far off when their example will be widely followed by those whom the community looks upon as homœopathists.

THE DETERMINATION OF VALUE FOR
"SPOONFUL" DOSES.

Mr. M. I. Wilbert, apothecary to the German Hospital, Philadelphia, has a very suggestive article on spoonful doses, in the *American Journal of Pharmacy* for May. A series of painstaking investigations shows that, contrary certainly to what we should have expected, the variation between spoons of the same nominal capacity, is very small. The seeming difference between two given teaspoons, for instance, he finds to be largely illusory, and dependent upon the shape of the spoon, for "a wide round bowl is usually quite shallow, while a narrow pointed spoon is generally quite deep." A difference does occur, however, due to the fact that "a wide shallow spoon will hold more above the rim than one that is narrow and deep, though the actual capacity of the bowl may not differ materially."

Another difficulty arises when it is attempted to correlate the "spoonful" measurements with the slowly but surely increasing employment of the metric system. In apothecaries' measure, the equivalents of a teaspoonful, a dessertspoonful, and a table-spoonful, are one, two, and four drachms, respectively. In the metric system, the nearest approach to equivalence with the spoons actually in use in this country is five, ten, and fifteen cubic centimetres, respectively. The French equivalents, however, are five, ten, and twenty cubic centimetres, preserving more closely the ratio of one, two, and four, which we at present allow when computing the value of spoonfuls in drachms. The author caused a series of questions to be addressed to physicians and pharmacists, and, as a result of the answers received, he suggests that (1). It is desirable that a definition should be arrived at as to when a spoon is "full," and the definition preferred is that of the French codex, viz., that "a spoon is full when the liquid it contains comes up to, but does not show a curve above the upper edge or rim of the bowl." (2) As to an equivalent of capacity, he discards the rule of four, eight, and sixteen cubic centimetres, suggested by some as preserving the ration of one, two, and four drachms, as being inconsistent with decimal principles. Both five, ten, and fifteen cubic centimetres and the French five, ten, and twenty cubic centimetres, correspond with those principles. The latter preserves the present ratio of one, two, and four, but the former has the practical advantage of corresponding more exactly with the actual capacities of the spoons in use, and it seems to us that, all things considered, he is right in suggesting that it be adopted.

AMERICAN MEDICAL BOOKS IN ITALIAN.

Under the titles of *Patologia e cura della funzione sessuale nell'uomo e nella donna* and *Malattie degli organi genito-urinarii veneree e sifilitiche*, two of the well known works of Dr. Robert W. Taylor, of New York, are announced as having appeared in Italian. We are sure that our Italian colleagues will esteem these works as most valuable additions to their resources.

A FASTIDIOUS CORONER.

A Long Island coroner has recently been reported as having omitted to make autopsies on two bodies recovered from the water, remarking that they had been in the water so long that it would be very disagreeable to conduct such examinations. It is understood that that coroner is a physician. If that is the case, we decline to credit the report, for no physician flinches in the face of disagreeable work simply because it is disagreeable.

THE COMPARATIVE HUMANITY OF WAR-
FARE AND STRIKES.

We have heard a great deal in these later years, what with the British-Boer war and our own Spanish and Philippine campaigns, about the inhumanity of warfare, but we doubt if any war of modern times can show such a spirit of brutal inhumanity as was recently displayed, if press reports are to be credited, by the striking miners at Hazleton, Penn. To their other measures of intimidation, we are told, a band of fifty masked ruffians visited a local physician, presumably one officially connected with the mine, and ordered him not to attend professionally any sick or injured non-unionists. We attend the wounded of our enemy in warfare—even when they are savages who would make no like return to any of our wounded should they fall into their hands, but would rather torture or kill them; we attend even malefactors in injuries resulting from the commission of their crime; but we are bidden at the dictation of a band of lawless agitators, forsooth, to abjure the greatest principle of our profession which calls upon us to render our services to humanity without regard to any discriminating circumstances of creed, caste, color, outlawry or what not. We hope that the statement to which we have referred is a misapprehension; but if not, the labor unions must promptly disavow such measures and endeavor to prevent their recurrence if they wish to retain the respect or sympathy in any degree of any right minded person.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 23.—Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, June 24.—Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond Academy of Medicine and Surgery.

WEDNESDAY, June 25.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, June 26.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Society for Neurology; Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Virginia.

FRIDAY, June 27.—New York Society of German Physicians; Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, June 28.—New York Medical and Surgical Society (private).

Erratum.—The paper of Dr. D. Bryson Delavan, on The Prophylaxis of Sinus Disease, published in our issue for June 14th, p. 1069, was read before the Section in Laryngology of the American Medical Association, and not the Section in Physiology and Pathology as there stated.

The Wisconsin Medical Society at its recent annual meeting at Milwaukee elected the following officers: President, Dr. John R. Lyman, of Eau Claire; first vice-president, Dr. L. H. Pelton, of Waupaca; second vice-president, Dr. F. E. Walbridge, of Milwaukee; secretary, Dr. Charles S. Sheldon, of Madison; treasurer, Dr. Sidney S. Hall, of Ripon; delegate to the American Medical Association, Dr. Herman Reineking, of Sheboygan.

The Association of American Medical Editors held two sessions at Saratoga Springs during the meeting of the American Medical Association, last week. The following officers were elected: President, Dr. Winslow Anderson, of San Francisco; vice-president, Dr. Otho F. Ball, of St. Louis; secretary and treasurer, Joseph MacDonald, Jr., of New York. The association will meet at the same time and place as the American Medical Association.

The Association of Surgeons of the Southern Railway held its annual session in Washington during the week ending June 7th, electing the following officers for the ensuing year: President, Dr. Rhett Garde, Mobile, Ala.; first vice-president, Dr. T. P. MacMahon, of Illinois; second vice-president, Dr. M. W. O'Brien, of Alexandria, Va.; secretary and treasurer, Dr. J. J. Harrison, of London, Tenn. The Association will meet next year at Old Point Comfort, Va.

The American Surgical Association at the annual meeting which was held at Albany during the week ending June 7th elected the following officers for the coming year: President, Dr. Maurice H. Richardson, of Boston; vice-presidents, Dr. M. B. Carson, of St. Louis, and Dr. William

J. Mayo, of Rochester, Minn.; secretary, Dr. Dudley P. Allen, of Cleveland; treasurer, Dr. G. R. Fowler, of Brooklyn; recorder, Dr. R. H. Hart, of Philadelphia. The following were elected to fellowship in the association: Dr. Edward W. Andrews, of Chicago; Dr. Joseph Augustus Blake, of New York; Dr. John B. Murphy, of Chicago; Dr. Francis John Shepherd, of Montreal; and Dr. George Tully Vaughan, of Washington. Mr. Mayo Robson, London, Eng., was elected an honorary fellow.

The Association of Military Surgeons of the United States held its eleventh annual meeting at Washington on June 6, 7, and 8. The following officers were elected for the ensuing year: President, Gen. Robert A. Blood, Massachusetts; first vice-president, Medical Director J. C. Wise, U. S. N.; second vice-president, Surgeon General Walter Wyman, U. S. M. H.-S.; secretary, Maj. James Evelyn Pilcher, of Pennsylvania; treasurer, Lieut. Herbert A. Arnold, of Pennsylvania. Boston was selected as the next place of meeting.

The Rocky Mountain Inter-State Medical Association will hold its next meeting at Cheyenne, Wyoming, on September 9th and 10th. The officers of the Association are: President, Dr. R. Harvey Reed, Rock Springs, Wyoming; first vice-president, Dr. Donald Campbell, Butte, Montana; second vice-president, Dr. Walter R. Pike, Provo, Montana; treasurer, Dr. E. S. Wright, Salt Lake City, Utah; recording secretary, Dr. George P. Johnston, Cheyenne, Wyoming; corresponding secretary, S. D. Hopkins, Denver, Colorado.

A Hospital Ceiling Collapses.—Thirteen patients were lying in the female ward on the first floor of Harlem Hospital on the morning of June 15 when the whole ceiling dropped on them. One woman became unconscious, though a subsequent examination proved that she was not injured by the falling plaster. In fact, none of the patients was hurt. The hospital is the former Weidenfeldt mansion, for many years a Harlem landmark. It has been used as a hospital for some time, and once it was condemned as unfit for hospital purposes. The building has been the subject of much unfavorable comment, particularly in regard to ventilation and sanitary arrangements.

Board of Health Appointments.—The Board of Health has appointed 77 physicians who will make up the Summer Corps. Of these physicians 46 are from this borough; 24 from Brooklyn, 3 from the Bronx and 2 each from Richmond and Queens. The following are the physicians appointed: Manhattan: Sarah Baker, W. J. Bedell, W. N. Berkeley, E. W. Bill, H. J. Blumenfeld, S. K. Bremner, F. E. Butler, Isabel Church, B. G. Cooke, J. J. Cronin, Louise Eaton, F. B. Ennist, H. Finkelstone, A. Coltman, Catherine L. Guy, C. Herman, H. P. Hirsch, E. P. Hitchcock, W. R. Hitchcock, R. Hochlerner, M. Huhner, O. A. Jahn, C. S. Josephs, T. F. Joyce, T. F. Kelly, E. Kober, S. J. Kopetzky, A. F. Lesler, J. Leshure,

C. A. McWilliams, H. G. MacAdam, W. A. Mahnken, L. Marcus, E. F. Marscheider, F. Murray, V. Neeson, R. Opdyke, W. S. Reynolds, W. M. Richards, E. E. Schierge, G. M. Schweig, W. E. Weber, T. Wildes, A. Wolfe, J. Waterman, Sidonia Weiss. Brooklyn: S. R. Blatteis, T. C. Craig, Florence C. Emerson, C. Ermentraut, E. R. Fiske, C. A. Gardiner, E. P. Harman, Grace D. Ives, J. F. Kent, C. D. Kevin, B. F. Knause, J. McManus, T. R. Maxfield, F. J. Munson, J. H. O'Neill, W. J. Pennington, M. Purvin, T. D. Regan, F. C. Skinner, J. S. Slavin, W. E. Sullivan, T. H. Wheatley, J. Woolley, E. E. Woolworth. Bronx: G. A. Elliott, G. B. Ferguson, F. C. Hargrave. Richmond: E. J. Callahan, E. D. Wisely. Queens: M. S. Caldwell, F. A. Lehmann.

The American Congress of Tuberculosis.—At a meeting held in New York on June 3rd, 4th, and 5th, a reorganization was effected, and the following officers were elected for the ensuing year: Honorary president, Dr. Henry D. Holton, of Brattleboro, Vt.; president, Dr. Daniel Lewis, of New York; vice-presidents, Dr. J. A. Egan, of Illinois, Dr. Frank Paschal, of San Antonio, Texas, Dr. E. J. Barrack, of Toronto, Canada, Dr. I. A. Watson, of Concord, N. H., Dr. Romola, of Guatemala; Secretary, Dr. George Brown, of Atlanta, Ga.; treasurer, Dr. P. H. Bryce, of Toronto, Canada.

The suggestion to hold a World's Congress of Tuberculosis in St. Louis in 1904 met with approval and steps are being taken to advertise this fact and secure the aid of medical journals, societies, physicians, and scientists in making the movement a success.

The Dinner to Dr. Sternberg.—A commentary dinner was given to Dr. George M. Sternberg, the retiring Surgeon General of the United States Army, at Delmonico's on the evening of June 13th, to give the physicians and surgeons an opportunity of expressing their appreciation of the work which that officer has done during his term of office. About 100 well-known physicians and surgeons from various portions of the country were present, several of them making speeches explaining the progress which has been made toward alleviating the sufferings of sick or wounded soldiers during Dr. Sternberg's incumbency of the office of surgeon general. The banquet was presided over by Dr. E. G. Janeway of this city. Among those present were P. M. Rixey, Surgeon General of the U. S. Navy; Dr. William Osler, of Baltimore; Dr. Abraham Jacobi, Dr. Frank Billings, of Chicago; Assistant Surgeon General Henry Lippencott, U. S. A.; Dr. J. D. Bryant, Assistant Surgeon General A. H. Smith, U. S. A.; Dr. Robert F. Weir, Dr. I. N. Love, and Dr. Herman M. Biggs.

The American Laryngological, Rhinological and Otological Society.—The eighth annual meeting of the American Laryngological, Rhinological, and Otological Society met in Washington on June 5, 6 and 7. Dr. J. A. Stucky, of Lexington, Ky., was chosen president, to succeed

Dr. Charles W. Richardson, of Washington, and Lexington was selected as the location for the next annual convention of the society. Dr. Wendell C. Phillips, of New York, was reelected secretary, and Dr. Ewing W. Day, of Philadelphia, was reelected treasurer. The following vice-presidents and chairmen of sections were named: Eastern section, Dr. M. R. Ward, Pittsburg; Middle division, Dr. L. C. Cline, Indianapolis; Southern, Dr. Dunbar Roy, Atlanta, Ga.; Western, Dr. P. F. Goldea, Colorado Springs, Col. The library committee named is as follows: Dr. H. Holbrook Curtis, New York; Dr. G. Hudson McKuen, Philadelphia; Dr. Thomas J. Harris, New York; Dr. George L. Richards, Fall River, Mass. Dr. Thomas J. Davis and Dr. C. G. Coakley, of New York, and Dr. George L. Richards, of Fall River, Mass., compose the publication committee, and the council is made up of the following members: Dr. Charles W. Richardson, Washington; Dr. Robert C. Myles, New York; Dr. D. Braden Kyle, Philadelphia; Dr. S. MacCuen Smith, Philadelphia; Dr. F. C. Cobb, Boston; Dr. Norval H. Pierce, Chicago; Dr. T. Passmore Berens, New York; Dr. C. R. Holmes, Cincinnati.

Salaries of the Fire Department Physicians.—In suits against the city by the three physicians in the Fire Department, to establish their right to receive salaries at the yearly rate of \$3,000 since consolidation, Justice Scott of the Supreme Court recently gave a decision in favor of the defendant. The main contention of the plaintiffs was that the salary of each was fixed, when both the Fire Department and the Board of Estimate and Assessment provided for three medical officers and set aside \$9,000 as their compensation for the year 1898. Justice Scott decides that whether or not this concurrent action on the part of the two departments of the City Government fixed the salaries at \$3,000 each, the plaintiffs were not entitled to such salary because by the Greater New York charter their compensation after consolidation was to be what it had been up to that time. Justice Scott says: "Until the first day of January, 1898, while they were in the employ of the former City of New York, they were concededly receiving and entitled to receive only \$2,000 per annum. Whatever effect might otherwise be claimed for the action of the Fire Commissioners and the Board of Assessment and Apportionment respecting the salaries of these officers, those boards had no power to fix any salary for them after the taking effect of the new charter other or different from that which they were receiving or entitled to receive from the former City of New York at the moment the new charter went into effect. The departmental estimate submitted by the Fire Commissioners and the final estimate adopted by the Board of Estimate and Apportionment had to do not with the year 1897, but with the year 1898, and did not become effective until Jan. 1, 1898." The conclusion reached by Justice Scott is that at the very instant the new charter went into effect the plaintiffs' salaries became fixed at the amounts they were receiving from the old municipal corporation.

The Cincinnati College of Medicine and Surgery.—Dr. Edwin S. Ricketts has been appointed to the chair of abdominal and gynecological surgery.

The University of Maryland Faculty of Physics.—The following changes have occurred in the faculty: Dr. L. McLane Tiffany has resigned the chair of surgery and Dr. Randolph Winslow has been appointed to fill the vacancy. Dr. John Holmes Smith has been elected professor of anatomy, Dr. D. M. R. Culbreth professor of materia medica, Dr. Frank Martin and Dr. St. Clair Spruill professors of clinical surgery, and Dr. Joseph W. Holland demonstrator of anatomy.

Changes of Address.—Dr. Robert G. Gamble, to Montgomery Avenue and Cassatt Lane, Haverford, Pennsylvania; Dr. M. Jackson, to No. 180 East Seventy-ninth Street, New York; Dr. J. H. Pryor, to No. 475 Franklin Street, Buffalo; Dr. Roig, to No. 249 West One Hundred and Thirty-fifth Street, New York.

A Vacancy in the Office of Coroner's Physician.—An open competitive examination will be held by the Municipal Civil Service Commission at 346 Broadway on Monday, July 7th, at 10 A. M. for the position of coroner's physician. Applications must be in the hands of the commission not later than four o'clock on Wednesday afternoon, July 7th. Candidates must be duly authorized to practice medicine in the State of New York, and must present their diplomas as evidence thereof. The examination will embrace technical subjects to which a weight of 6 will be given, and experience to which a weight of 4 will be accorded.

State Manufacture of Vaccine Virus in Massachusetts.—The Massachusetts Board of Health has reported to the legislature its investigation of the feasibility of manufacturing pure vaccine lymph. The board recommends extending to the manufacture and free distribution of free vaccine lymph the system which has been in vogue in regard to diphtheria antitoxine since 1895. It recommends the construction of a building for the housing of animals. Future demands should be based, not upon population, but upon the birth-rate. If the vaccination is thoroughly carried out by local sanitary officials it is estimated that 150,000 persons will be vaccinated annually, of whom 60,000 will be infants, 50,000 revaccinations and 40,000 immigrants. It is estimated that the buildings necessary will cost \$20,500 and the annual expenditure for salaries, etc., \$6,500. The report was ordered printed.

The Prevention of Venereal Disease.—The following resolution, introduced by Dr. Ludwig Weiss, of New York, and seconded by Dr. L. D. Bulkley, of the same place, was unanimously adopted by the Section in Cutaneous Medicine and Surgery of the American Medical Association at its meeting, June 12, 1902; and a committee consisting of Dr. Weiss and Dr. Bulkley, of New York, and Dr. Frank H. Montgomery, of Chicago, was appointed to present the same to the Section in Hygiene and Sanitary Science of the

American Medical Association, for cooperation:

Whereas, There is a burning necessity to check the spread of venereal diseases, and assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State legislatures and municipalities means—not regulamentative, but social, economic, educative, and sanitary in their character—to diminish the danger from venereal diseases.

Resolved, That the Section in Cutaneous Medicine and Surgery of the American Medical Association invite the Section in Hygiene and Sanitary Science to cooperate with the Section in Cutaneous Medicine and Surgery in bringing about a propaganda in the different States looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year under the authority of the Belgian government, at Brussels.

The House of Delegates of the American Medical Association, at its meeting of June 13, 1902, acted favorably upon this resolution, and appointed a committee of six to study the matter and to report to the association at its next year's meeting. These are the members of the committee appointed by the chair: Dr. Henry D. Holton, of Brattleboro, Vt., Dr. George M. Kober, of Washington, D. C., Dr. W. H. Sanders, of Alabama (from the Section in Hygiene and Sanitary Science), and Dr. Ludwig Weiss, of New York, Dr. L. Duncan Bulkley, of New York, and Dr. Frank H. Montgomery, of Chicago (from the Section in Cutaneous Medicine and Surgery).

Hospital Buildings and Endowments.—Plans are being prepared for a six-story addition, 110 by 130 feet, to the Augustana Hospital, at Chicago. The cost will be about \$100,000. The building is to be equipped with every modern hospital appurtenance.—The directors of the Wabash Hospital Association have voted to accept the offer of the citizens of Decatur, Ill., of a site for the Middle Division Hospital. The building will cost \$50,000, and will be the finest hospital on the system.—The will of Ernest von Pape, the founder of the New York O. K. Model Bakery, made on December 15, 1900, has been filed for probate. He bequeaths \$5,000 to the German Hospital of New York.—Ex-Senator and Mrs. Henry G. Davis, of Cleveland, O., are preparing plans for a hospital which they will erect to the memory of their son, H. G. Davis, jr., who was drowned several years ago while on a cruise around South Africa. The hospital will be called the H. G. Davis, jr., Memorial Hospital, and will be erected on Harrison Avenue at a cost of \$50,000. Work will begin as soon as the plans are completed.—Mrs. Myers, of Albany, has anticipated the bequest from the John G. Myers estate, and Rev. Dr. Spensley has received the \$5,000 left for Albany's Hospital for Incurables. This, together with \$1,000 from Miss Jermain, and \$6,000 received in sums ranging from \$500 to

\$1, have been applied to the building fund.—Thirty thousand dollars has been subscribed toward the erection of a Jewish hospital in Brooklyn. The sum of \$100,000 is required before building operations can be entered upon and a fair is to be held in the autumn to raise additional funds.—The Secretary of the Interior has forwarded to Congress an estimate of \$6,000 for repairs to the Columbia Hospital for Women. This is to cover the cost of a new elevator, \$2,500, and \$3,500 for an additional operating room.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 14, 1902:

DISEASES	Week ending June 7		Week ending June 14	
	Cases	Deaths	Cases	Deaths
Typhoid fever.....	23	12	39	13
Scarlet fever.....	310	22	291	20
Cerebro-spinal meningitis.....	0	3	0	5
Measles.....	532	21	430	12
Diphtheria and Croup.....	300	43	291	48
Small-pox.....	63	19	42	13
Tuberculosis.....	310	148	288	154

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending June 14, 1902:

Smallpox—United States.			
California.....	San Francisco.....	May 18-June 1.....	6 cases.
Colorado.....	Denver.....	May 24-June 7.....	1 case.
Florida.....	Oakhill.....	June 7.....	4 cases.
.....	Palmetto.....	June 4.....	1 case.
.....	Belle ville.....	May 31-June 7.....	1 case.
.....	Chicago.....	May 31-June 7.....	21 cases.
.....	Freeport.....	May 24-June 7.....	1 case.
.....	Indianapolis.....	May 24-June 7.....	1 case.
.....	Muncie.....	May 24-June 7.....	1 case.
.....	South Bend.....	May 24-June 7.....	1 case.
.....	Terr. H. etc.....	May 24-June 7.....	1 case.
Iowa.....	Ottumwa.....	May 31-June 7.....	7 cases.
Kansas.....	Wichita.....	May 24-June 7.....	4 cases.
Kentucky.....	Covington.....	May 31-June 7.....	16 cases.
Maryland.....	Baltimore.....	May 31-June 7.....	1 death.
.....	Cumtland.....	May 1-31.....	1 case.
Massachusetts.....	Boston.....	May 31-June 7.....	16 cases.
.....	Cambridge.....	May 31-June 7.....	3 cases.
.....	Chelsea.....	May 31-June 7.....	1 case.
.....	Everett.....	May 31-June 7.....	2 cases.
.....	Lowell.....	May 31-June 7.....	5 cases.
.....	Malden.....	May 31-June 7.....	1 case.
.....	Sonerville.....	May 31-June 7.....	4 cases.
Michigan.....	Detroit.....	May 31-June 7.....	9 cases.
.....	Grand Rapids.....	May 24-June 7.....	2 cases.
.....	Ludington.....	May 17-June 7.....	28 cases.
Nebraska.....	Omaha.....	June 1-8.....	23 cases.
.....	South Omaha.....	May 25-June 7.....	33 cases.
N. Hampshire.....	Nashua.....	May 31-June 7.....	7 cases.
New Jersey.....	Hudson County		
.....	Jersey City		
.....	Included.....	May 25-June 7.....	38 cases.
.....	Newark.....	May 31-June 7.....	33 cases.
.....	Passaic.....	May 25-June 7.....	1 case.
New York.....	New York.....	May 31-June 7.....	63 cases.
.....	Yonkers.....	May 30-June 6.....	1 case.
Ohio.....	Hamilton.....	May 31-June 6.....	5 cases.
.....	Cincinnati.....	May 30-June 6.....	1 case.
.....	Cleveland.....	May 31-June 7.....	61 cases.
.....	Toledo.....	May 25-June 7.....	3 cases.
Pennsylvania.....	Johnstown.....	May 31-June 7.....	2 cases.
.....	McKeesport.....	May 31-June 7.....	1 case.
.....	Philadelphia.....	May 31-June 7.....	16 cases.
.....	Pittsburg.....	May 24-June 7.....	48 cases.
Rhode Island.....	Providence.....	May 31-June 7.....	1 case.
South Dakota.....	Sioux Falls.....	May 24-June 7.....	1 case.
Utah.....	Ogden.....	May 1-31.....	8 cases.
.....	Salt Lake City.....	May 25-31.....	3 cases.
Wisconsin.....	Green Bay.....	June 1-8.....	3 cases.
.....	Jamesville.....	May 25-June 7.....	3 cases.
.....	Milwaukee.....	May 31-June 7.....	4 cases.

Smallpox—Insular.			
Philippines.....	Manila.....	Apr. 19-June 7.....	4 cases.
Smallpox—Foreign.			
Belgium.....	Antwerp.....	May 17-21.....	7 cases.
Brazil.....	Rio de Janeiro.....	Apr. 20-May 4.....	1 death.
Canada.....	Quebec.....	May 24-June 7.....	10 cases.
.....	St. John.....	May 1-3.....	1 case.
.....	Winnipeg.....	May 31-June 7.....	1 case.
China.....	Hongkong.....	Apr. 12-26.....	7 cases.
Colombia.....	Bocas del Toro.....	May 12-19.....	1 death.
France.....	Rhones.....	May 18-25.....	1 case.
Gt. Britain.....	Birmingham.....	May 19-24.....	6 cases.
.....	Glasgow.....	May 22-29.....	1 death.
.....	Liverpool.....	May 19-24.....	1 case.
.....	London.....	May 17-21.....	307 cases.
India.....	Bombay.....	Apr. 29-May 13.....	24 deaths.
.....	Calcutta.....	Apr. 26-May 10.....	16 deaths.
.....	Karachi.....	Apr. 20-May 11.....	8 deaths.
.....	Madras.....	Apr. 26-May 2.....	5 deaths.
Italy.....	Palermo.....	May 19-24.....	2 deaths.
Japan.....	Formosa.....	Feb. 1-28.....	9 deaths.
.....	Mar. 1-31.....	91 cases.	
Mexico.....	Vera Cruz.....	May 24-31.....	1 death.
Russia.....	Moscow.....	May 10-17.....	1 death.
.....	Odessa.....	May 17-21.....	1 death.
.....	St. Petersburg.....	May 31.....	3 deaths.
.....	Yokohama.....	Apr. 19-May 1.....	4 deaths.

Yellow Fever.			
.....	Rio de Janeiro.....	Apr. 19-May 4.....	1 case.
.....	Veracruz.....	May 1-4.....	1 case.

Cholera—Insular.			
Philippines.....	Manila.....	Mar. 20-Apr. 27.....	496 cases.
.....	Albay Prov.....	Mar. 30-Apr. 7.....	400 deaths.
.....	Bataan Prov.....	Mar. 30-Apr. 7.....	3 cases.
.....	Bulacan Prov.....	Mar. 30-Apr. 7.....	694 cases.
.....	Camarines		
.....	Province.....	Mar. 30-Apr. 7.....	231 deaths.
.....	Cavite		
.....	Province.....	Mar. 30-Apr. 7.....	696 cases.
.....	Ilocos Norte		
.....	Province.....	Mar. 30-Apr. 7.....	488 deaths.
.....	Laguna		
.....	Province.....	Mar. 30-Apr. 7.....	10 cases.
.....	Pampanga		
.....	Province.....	Mar. 30-Apr. 7.....	8 deaths.
.....	Pangasinan		
.....	Province.....	Mar. 30-Apr. 7.....	2 cases.
.....	Rizal Prov.....	Mar. 30-Apr. 7.....	2 deaths.
.....	Province.....	Mar. 30-Apr. 7.....	292 cases.
.....	Province.....	Mar. 30-Apr. 7.....	202 deaths.
.....	Province.....	Mar. 30-Apr. 7.....	3 cases.
.....	Province.....	Mar. 30-Apr. 7.....	3 deaths.
.....	Rizal Prov.....	Mar. 30-Apr. 7.....	163 cases.
.....	Province.....	Mar. 30-Apr. 7.....	111 deaths.

Cholera—Foreign.			
China.....	Hongkong.....	Apr. 12-26.....	10 cases.
.....	Bombay.....	Apr. 12-26.....	45 deaths.
.....	Calcutta.....	Apr. 12-26.....	3 deaths.
.....	Chennai.....	Apr. 12-26.....	156 deaths.
.....	Colon.....	Apr. 12-26.....	1 case.
.....	Formosa.....	Apr. 12-26.....	1 case.
.....	Manila.....	Apr. 12-26.....	1 case.
.....	San Francisco.....	Apr. 12-26.....	52 deaths.

Plague.			
China.....	Hongkong.....	Apr. 12-26.....	10 cases.
India.....	Bombay.....	Apr. 26-May 13.....	11 deaths.
.....	Calcutta.....	Apr. 26-May 10.....	791 deaths.
.....	Karachi.....	Apr. 20-May 11.....	721 deaths.
.....	Madras.....	Apr. 20-May 11.....	393 cases.
Japan.....	Formosa.....	Feb. 1-28.....	342 deaths.
.....	Mar. 1-31.....	142 cases.	113 deaths.
.....	Nagasaki.....	May 14.....	233 cases.
.....	Province.....	Mar. 30-Apr. 7.....	164 deaths.
.....	Province.....	Mar. 30-Apr. 7.....	1 death.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending June 14, 1902.

- BEEL, HARRY D., Contract Surgeon, will proceed to Fort Keogh, Montana.
- COLLINS, CHRISTOPHER C., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month, with permission to apply for an extension of two months.
- DEAN, ELMER A., First Lieutenant and Assistant Surgeon, will proceed to the Army General Hospital, Presidio of San Francisco, for duty.
- HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon, is granted leave of absence for two months, with permission to go beyond sea.
- MCCORD, DONALD P., Captain and Assistant Surgeon, will report for duty as transport surgeon on the Warren.
- PIERSON, ROBERT H., Contract Surgeon, will proceed to Fort Columbus, N. Y., for duty.
- STERNBERG, GEORGE M., Brigadier General and Surgeon General. His retirement from active service is announced.
- WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon, will proceed to San Francisco.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending June 14, 1902:

BROWN, E. M., Assistant Surgeon. Ordered to duty at the Naval Hospital, Mare Island, California.

ROSS, JOHN W., Surgeon, retired. Detached from duty with the War Department at the Hospital Las Animas, Havana, Cuba.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending June 12, 1902:

BANKS, C. E., Surgeon. Granted leave of absence for three days from June 9th.

BREADY, J. E., Acting Assistant Surgeon. Granted leave of absence for one day.

GARDNER, C. H., Passed Assistant Surgeon. Granted leave of absence for one month from July 1st.

IRWIN, FAIRFAX, Surgeon. Granted leave of absence for three days, under paragraph 179 of the *Regulations*.

KEYES, J. M., Acting Assistant Surgeon. Granted leave of absence for twenty days.

MASON, W. R., Acting Assistant Surgeon. Granted leave of absence for six days, from June 22d.

MCCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for three days.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for seven days.

SMITH, A. C., Passed Assistant Surgeon. Granted leave of absence for thirty days from July 10th.

SWEETING, C. B., Acting Assistant Surgeon. Granted leave of absence for thirty days on account of sickness.

THOMAS, A. R., Passed Assistant Surgeon. Granted leave of absence for one month.

ULRICH, C. F., Acting Assistant Surgeon. Granted leave of absence for twenty-nine days.

WERTENBAKER, C. P., Passed Assistant Surgeon. Granted leave of absence for ten days.

WILLIAMS, L. L., Surgeon. Granted leave of absence for ten days.

Promotions.

JOHN McMULLEN, Assistant Surgeon. Promoted and appointed passed assistant surgeon, and to rank as such from May 17, 1902.

S. B. GRUBBS, Assistant Surgeon. Promoted and appointed passed assistant surgeon, and to rank as such from May 19, 1902.

Board Convened.

Board convened to meet in Washington, June 7, 1902, for the physical examination of candidates for admission to the Revenue Cutter Service. Detail for the Board: Surgeon R. M. WOODWARD, chairman; Assistant Surgeon A. J. McLAUGHLIN, recorder.

Births, Marriages, and Deaths.*Born.*

RICHARDSON.—In Reedy Island, Delaware, on Friday, June 13th, to Dr. T. F. Richardson, United States Marine-Hospital Service, and Mrs. Richardson, a daughter.

Married.

BARKER—WOOLLEY.—In Brooklyn, on Wednesday, June 11th, Mr. James R. Barker and Miss Margaret May Wolley, daughter of Dr. Charlotte Woolley.

BRADLEY—MAY.—In St. Louis, on Thursday, June 5th, Dr. A. H. Bradley and Miss Gertrude M. May.

COOK—HUNT.—In Brooklyn, on Tuesday, June 10th, Dr. Frederick A. Cook and Mrs. Mary F. Hunt.

FOSTER—LEE.—In Washington, on Tuesday, June 3d, Dr. Benjamin Oliver Foster, of Palo Alto, California, and Miss Anna Lee.

HAMLET—WILLIS.—In Hempstead, Long Island, on Wednesday, June 11th, Dr. William Henry Moore Hamlet and Miss Aletta R. Willis.

HUNT—BIXBY.—In Easton, California, on Thursday, June 5th, Dr. Archibald J. Hunt and Miss Blanche R. Bixby.

KINNER—CRAMPTON.—In Belleville, Illinois, on Tuesday, June 10th, Dr. Helmuth M. Kinner, of St. Louis, and Mrs. Minnie Crampton.

PALMER—WHITE.—In Takoma Park, D. C., on Wednesday, June 11th, Dr. William Croxall Palmer and Miss Olive Fanny White.

WELCH—GARSDIE.—In Colorado Springs, on Thursday, June 5th, Dr. William Welch, of Lafayette, Arkansas, and Miss Julia Garsdie.

YOUNG—BALDWIN.—In Washington, on Monday, June 16th, Dr. Hulbert Young and Miss Ada Baldwin.

Died.

EASTMAN.—In Indianapolis, on Thursday, June 5th, Dr. Joseph Eastman.

HALL.—In Louisville, on Monday, June 9th, Dr. John R. Hall, in the eighty-third year of his age.

HOLDEN.—In Detroit, on Sunday, June 8th, Dr. Newton P. Holden, formerly of Chicago, in the eighty-second year of his age.

JOHNSON.—In Mount Vernon, N. Y., on Tuesday, June 10th, Dr. Samuel J. Johnson, in the fifty-second year of his age.

KING.—In England, on Thursday, June 5th, Dr. Stephen Henry King, of Baltimore, in the fifty-fourth year of his age.

MAINE.—In Brooklyn, on Friday, June 13th, Dr. Hallock Rathbone Maine, in the thirty-eighth year of his age.

MUNN.—In Topeka, Kansas, on Sunday, June 8th, Dr. Curtis E. Munn, United States Army, retired.

SCHOLL.—In Washington, on Friday, June 6th, Dr. Joseph Scholl, in the eightieth year of his age.

WHITTIER.—In Boston, on Saturday, June 14th, Dr. Edward N. Whittier, in the sixty-first year of his age.

WILSON.—In New Orleans, on Sunday, June 8th, Dr. William Christy Wilson, in the seventy-eighth year of his age.

WOODS.—In San Francisco, on Monday, June 9th, Dr. George W. Woods, United States Navy, retired.

OBITUARY NOTES.

DR. ADOLF KUSSMAUL, professor of clinical medicine at the University of Heidelberg, whose eightieth birthday was recently celebrated by a gathering of distinguished medical men, died a few days since at Heidelberg.

DR. OTIS FREEMAN, who is believed to have been the oldest practising physician in America, died at Freehold, N. J., on June 8th. Dr. Freeman was born in New Hampshire on December 30, 1809. He continued practising to within five days of his death, although he had been confined to the house for several weeks past as the result of a fall. Dr. Freeman was appointed a surgeon in the civil war by Governor Olden, of New Jersey, in April, 1862.

Pith of Current Literature.

American Medicine, June 7, 1902.

On Heredity in Bilateral Cystic Kidney. By Dr. William Osler.—The author reports another case in addition to the two reported by him in March. In this case, the bilateral tumors, the cardiovascular changes, the recurring hæmaturia, and the condition of the urine make the diagnosis quite clear. The unusual feature is the fact that the patient's mother died of the same disease. So far as he knew, no other members of the family had been attacked. The author quotes Dr. Morris to the effect that there cannot be said to be more than a slight hereditary tendency to polycystic kidney.

Prognosis of Pleurisy with Serous Effusion. By Dr. Richard C. Cabot.

A Preliminary Report on Sterilization of Rubber Gloves, Etc., by Formaldehyde Gas, and on the Use of Mild Antiseptics Inside the Gloves. By Dr. A. Goldspohn.—The author points out that, the impermeability of rubber gloves cannot be trusted in so serious a matter as surgical asepsis. Therefore, not only should the gloves be sterilized, but the skin of the hands, with its appendages and excretions, must be looked out for quite as much with, as without, the use of any kind of gloves. He suggests the use of boric acid powder, in place of the insoluble talcum powder, to preserve the rubber and to facilitate their application. After they are applied, half an ounce of fifty-per-cent. alcohol is poured into the palm of each hand, "milked" into the fingers of the gloves and allowed to remain for five or ten minutes.

A Case of Meningomyelitis Occurring During Convalescence from Typhoid Fever. By Dr. Theodore Diller.—In the presence of paraplegia, paralysis of bladder and bowels, contractures of the leg, bedsores, intense hyperæsthesia strictly limited to the portion of the body below the waist girdle, and exaggerated knee-jerks, the diagnosis of meningomyelitis seems quite plain. The symptoms developed very rapidly, attaining their height in the space of three days. The evidence indicates that the inflammatory process confined itself pretty closely to the lower cord region, its upper boundary being about the eleventh thoracic segment.

Notes on the Tests for Gastric Acidity: The Tungstate Method for Combined Chlorides. By Dr. A. L. Benedict.—The author reports a typical titration to illustrate the view that proteid tungstate is not strictly neutral to phenolphthalein, but that the diminution of acidity after adding sodium tungstate is merely due to the insoluble state of proteid tungstate, and that, if time enough is given, the sodium tungstate does not diminish the total acidity at all. He does not believe that the method is available for clinical purposes.

Dermatitis Medicamentosa: Report of a Case. By Dr. J. B. Shelmire.

The Work of Jenner and His Most Faithful Disciple, Waterhouse. By Dr. William M. Welch.

Medical Paris. By Dr. Nicholas Senn.

Asiatic Cholera in Manila. By Dr. Richard P. Strong.

Philadelphia Medical Journal, June 7, 1902.

The Proposed National Examining Board. A Second Paper. By Dr. William L. Rodman.—The author removes a slight misconception as to the proposed Voluntary National Board of Examiners. Such a board is not proposed for the benefit of recent graduates alone, and the author points out that it is much better, and was really more intended to aid and benefit practitioners, who, from ill health, on account of consultation practice, professional calls, or any cause whatsoever, might wish for a license in another State. The author suggests that such a board could have discretionary power and give the kind of examination necessary to ascertain if the applicant is competent to practise general medicine and surgery, or even a specialty if one is recognized as a specialist. The author asks if it is fair to expect an ophthalmologist, for instance, to submit to an examination in obstetrics.

Operations Upon the "Green Groin." By Dr. Joseph Price.—The author discusses those cases in which, though prompt surgical procedures have been wrought, we find the appendix gangrenous and sloughing with one or more perforations and free leakage, a large section of the right groin full of lemon-colored or septic fluids, a puddle of filth under the cæcum and ileum, the omentum fixed with a cluster of bowel adhesions beneath, varying in extent from six to many inches. The author insists that if the clinician would only see these operations and smell these cases more often, he would realize the very great importance of the earliest possible intervention and be impressed with the absolute hopelessness of delay in therapeutics.

A Case of Severed Spinal Cord in Which Myelorrhaphy Was Followed by Partial Return of Function. By Dr. Francis T. Stewart.—The author believes that the operation of myelorrhaphy will be specially indicated in those cases in which the cord has been cut by a sharp instrument or severed by a projectile. In cases in which the cord is crushed we have, at present, no infallible method of determining whether or not all the tracts have been destroyed. The axiom of spinal surgery is that compression, and compression only without injury to the cord, can be benefited by operation, but sufficient compression to produce anæsthesia or paralysis must be accompanied by the cutting, crushing, or tearing of thousands of axis cylinders, and if axis cylinders once injured never recover, the removal of pressure or of a spicule of bone sticking into the cord can do no good and all operations are contra-indicated except to control hæmorrhage or combat sepsis.

Avulsion of the Scalp. With Report of a Case. By Dr. W. Troy Bivings.—The points the author emphasizes are: 1 The benefit of shaving and thorough asepsis at the first dressing. 2 The superiority of the Thiersch method of skin-grafting over all other methods tried. 3 The fact that skin-grafts taken from the body of the patient grow far better than grafts from the skin of other people. 4 The error of always attributing in surgical work a rise

of temperature to wound infection, and the advisability of a thorough physical examination for some existing complication.

Two Cases of Progressive Muscular Dystrophy in Brother and Sister. By Dr. Augustus A. Fisher.

Directions to Patients Suffering from Venereal Diseases. Used in Dr. Guit  ras's Genito-Urinary Clinic at the Post-Graduate Medical School, New York. By Dr. Colin Luke Beggs.

The Boston Medical and Surgical Journal,
June 5, 1902.

Cystoscopic Appearances in Non-Tubercular Cystitis and Pyelonephritis in Women. By Dr. Edgar Garceau.

Some Problems Concerning Venereal Diseases. By Dr. Marshall H. Bailey.—The author points out that the great majority of girls are driven to prostitution through want. How can a woman support herself on the three or four dollars a week paid to hundreds of girls in our department stores? The author asserts upon direct information that some such stores do not hesitate to suggest how these girls may increase their income, and he asks if we have not any duty to perform in this direction. He refers to the ridiculously inadequate facilities offered by hospitals for the treatment of venereal diseases, and he lays stress upon the great responsibility of parents to instruct their children properly upon sexual affairs.

Clinical Notes and Comments. A Case of Meningeal H  morrhage and Nephritis Supervening upon a Purpuric Diathesis of Twenty-five Years Duration. By Dr. Robert T. Edes.

A Case of Thrombosis of the Central Vein of the Retina Complicating Carcinoma of the Uterus. By Dr. Charles J. Aldrich.

A Case Mistaken for Phthisis Produced by Half of a Small Dental Plate Lodged in the Right Primary Bronchus. By Dr. George F. Pope.

Medical News, June 7, 1902.

The Advantages of Early Surgical Intervention in Border-Land Cases. By Dr. Roswell Park.—Among other things, the author asserts that a well-founded suspicion of cancer justifies an operation for its determination and relief. The surgeon should not be made to assume the responsibility for a delay which has been counselled by others. Lumbar puncture is not sufficiently practised. By its availability, not only for producing surgical an  sthesia, but for exploration and determination of cerebrospinal fluid, or for recognition of bacteria, and for therapeutics, as well by injection as by tapping, it deserves a more frequent resort than it enjoys. When a source of reflex disturbances within the upper respiratory tract can be traced, it should be promptly removed, even though this requires a somewhat formidable surgical operation. In tuberculosis of the cervical lymph-nodes delay is too often counselled. The author's rule, which applies to every collection of pus, whether circumscribed or diffuse, is this: "Pus allowed to remain will do

more harm than the surgeon's knife judiciously used. When the pericardium is distended with serous fluid it should be aspirated, and when this fluid is pus, a thoracotomy should be done and the pericardium actually opened and drained by gauze or by tubing.

A Review of the Progress of Therapeutics for the Last Twelve Months. By Dr. Reynold Webb Wilcox.

The Renal Complications of the Acute Diarrh  as of Infancy. By Dr. John Lovett Morse.—Acute degenerative changes may occur as in other acute infectious and febrile diseases. There is nothing characteristic about these changes. In rare instances proliferative and interstitial changes may develop. The   tiology of these conditions includes not only micro-organisms and their toxic products, but also the products of intestinal fermentation and alimentary poisons. The urine shows the changes usually found with such pathological conditions in the kidneys. It is doubtful if these renal complications cause any symptoms distinguishable from those due to the general tox  mia. Restlessness, persistent vomiting, unexplainable dyspnoea,   dema, and mycosis, are considered characteristic. They are of no prognostic importance and are to be regarded merely as an index of the degree of tox  mia. Recovery from these lesions is usually complete. In rare instances they may lead to chronic nephritis in later years. Pyelitis, pyelonephritis, and cystitis, may also develop as complications. They are usually of a mild type and their symptoms are generally masked by those of the primary disease. They affect the prognosis but little. The treatment of these renal complications is that of such conditions in general.

The Use and Abuse of Digestive Ferments. By Dr. John C. Hemmeter.—The author regrets that there is much irrational prescribing of digestive ferments at present. For instance, instead of spoiling the stomach and making it indolent through lack of exercise by pouring pepsine and hydrochloric acid into it, it should receive a gradual physiological training to an improved secretion by our physical methods of treatment and by the application of physiological dietetics. The author points out that wherever free hydrochloric acid is present in a test meal, pepsine in sufficient quantities must, of necessity be present also. He does not see the advantage of the use of pepsine. The introduction of the ferment might be of utility in a case in which the last vestige of even pepsinogen secretion had been lost, but the enormous quantities of hydrochloric acid necessary to bring about the proper action of this pepsine could not be tolerated by any diseased stomach. Pancreatine in the majority of cases is ineffective. The one distinct indication for its use is permanent deficiency or complete absence of hydrochloric acid and enzyme-formation of the stomach.

A New Method of Treating the Morphine and Alcohol Habits. By Dr. H. A. Hare.

The Comparative Physiology of Faith Cures. By Dr. Pearce Bailey.

Medical Record, June 7, 1902.

The R  le of Inhibition in the Normal and in Some of the Pathological Phenomena of Life. By

Dr. S. J. Meltzer.—Assuming it to be granted that inhibition is present in and essential to each and every mechanism of animal life, the author asserts that, as disease is a disturbance of some or many life mechanisms, we may well expect to find that inhibition is also an essential factor in many forms of disease. The purposeful studies of the relations between excitation and inhibition will lead to the recognition of conditions and substances which are capable of influencing these forces and their mutual relations. This knowledge will ultimately help us in our struggles to meet the deviations. The author believes that there is some sort of specific relation between sodium phosphate and inhibition, at least in the muscle tissue.

The Merits of the Various Incisions for Appendicitis. By Dr. John A. Wyeth.—The author employs but two incisions: the "gridiron," or McBurney incision, and the "clean cut" through all the tissues from the skin into the peritoneal cavity. The former should be selected whenever the conditions justify it. When such a condition of sepsis prevails as to require a careful operation to prevent widespread infection and peritonitis the "clean cut" incision is preferable. When the "gridiron" incision is used it may not be necessary to keep a patient in bed as long as when the "through-and-through" incision is employed, but, since it takes five or six weeks for the new connective tissue bundles to become fibrillated and fairly well hardened, it is well to keep these patients in bed in the recumbent posture to prevent ventral hernia.

Report of a Case of Cæsarean Section Followed by Hysterectomy for Impacted Cervical Fibroid and Prolapse of Gangrenous Umbilical Cord in a Septic Woman; Recovery. By Dr. Abram Brothers.—This case is of interest from the fact that the woman had spontaneously given birth to three living children, although the disease must have been of some years growth, and because of the recovery of the mother after the cord and uterine contents had undergone decomposition with resulting maternal sepsis. It illustrates the desirability in sepsis preceding delivery (in cases requiring Cæsarean section) of immediately combining abdominal hysterectomy with Cæsarean section.

External Speech-Physiology, or So-Called Lip-Reading. By Cora D. Gorton.—The author believes that an external speech-physiology may now be placed in the category of descriptive sciences, and when one considers how deaf people are handicapped in all walks of life, how hindered in business and social advancement, and how the defect destroys ambition, and often leads to melancholia, the importance of a system which will reduce the evil influence cannot be overestimated.

A New Method of Operating for Obstinate Cases of Recto-Vaginal Fistulæ. By Dr. Hiram N. Vineberg.

The Journal of the American Medical Association,
June 7, 1902.

Notes on Aneurysm. By Dr. William Osler.—The author records the characters of the humming-top murmur in thoracic aneurysm. It is continuous, occupying both the systole and diastole. There is

systolic reinforcement, often of great intensity. The venous quality of the murmur resembles the characteristic venous hum in the jugular and the murmur over the thyroid in Graves's disease. As to the value of the fluoroscope in the diagnosis of obscure cases of thoracic aneurysm, the author believes that, in these cases with symptoms and no physical signs, the x-ray examination is of great service. A bare chest, a good light and good eyes are the essentials to a careful inspection of the chest. Routine is important and the inspection of the back should not be overlooked.

A Brief Summary of the Clinical, Pathologic, and Bacteriologic Features of Cutaneous Blastomycosis (Blastomycetic Dermatitis, of Gilchrist), From the Observations of Dr. James Nevins Hyde and the Writer, with Illustrations from Thirteen Cases, Three of them Hitherto Unpublished. By Dr. Frank Hugh Montgomery.—Under the term "cutaneous blastomycosis" have been collected a series of cases presenting a clinical picture differing from that of all other recognized dermatoses. The disorder has also a characteristic histopathology. The organisms in tissue have been in every case of the budding variety. In cultures they have appeared as budding or as mycelium-forming fungi, of which there are probably several varieties. While the disorder occurs independently of all other diseases, it has been followed in at least one instance by tuberculosis. Secondary pus infection of the lesions is common. Practically all cases of the disease in which potassium iodide has been employed in large doses have improved decidedly under its administration, but only a small percentage of patients recovered under that treatment alone. Cutaneous blastomycosis and protozoic dermatitis are undoubtedly closely related disorders, if not varieties of the same process. It is possible, however, that the blastomycetes and other fungi are capable of producing in man a series of disorders of different clinical types.

A Case of Systemic Infection by a Paracolon Bacillus Probably Secondary to Typhoid Fever. With the Clinical Picture of Acute Cholecystitis. By Dr. A. A. Berg, and Dr. E. Libman.

Clinical Manifestations of the Early Stages of Cirrhosis of the Liver. By Dr. Frank Billings.—The author asserts in the light of a considerable experience that an improved hygiene, with the use of a saline purgative when it is necessary, will give results as good without as with the use of other drugs.

Hæmostasis of the Broad Ligament. By Dr. Henry P. Newman.

Value of Methylene Blue in Operating on Fistulous Tracts. By Dr. Theo. G. Davis.

British Medical Journal, May 31, 1902

Remarks on the Removal of Prostatic Adenomata. By Sir W. Thomson, M. D.—In this communication the author discusses Freyer's operation for the removal of prostatic obstruction, and the vexed question as to whether it is possible to remove the enlarged prostate as an encapsulated whole, or whether some of the atrophied gland is left behind. The testimony is very conflicting, but to the patient

it is not of much moment whether a prostatectomy is performed or only adenomata removed. His mechanical obstruction is relieved. So that Freyer has established this operation upon a stronger and wider basis, and his advocacy of it marks a distinct advance in the surgery of the prostate.

Chronic Hypertrophy of the Prostate: Freyer's Operation: Recovery. By Dr. J. Smyth.—The author reports a case of chronic hypertrophy of the prostate occurring in a Hindu, aged sixty years, in which Freyer's operation was performed with the most beneficial results, the patient making a rapid recovery and being freed from all his previous troubles due to obstruction.

Further Remarks on Myasthenia. By Sir W. R. Gowers, M. D.—The author reports the case of a girl, aged fourteen years, which is of interest as presenting, like those reported last week, ophthalmoplegia in addition to fairly typical symptoms myasthenia, and in fact that the peculiar "nasal smile" was not present. It is also of interest as one of those in which there is a marked difference between the two sides, especially in the face and hands, and in the association of slight atrophy of the muscles, and a diminution of electrical excitability, with the greater weakness of the left hand. The patient has had two attacks of epilepsy which is very unusual in a subject of myasthenia.

Further Remarks on Finsen's Light and X-Ray Treatment in Lupus and Rodent Ulcer. By Malcolm Morris, F. R. C. S., and S. E. Dore, M. B.—The authors report further as to their experience of Finsen's light and x-ray treatment in lupus and rodent ulcer. They do not hold it to be the only method of treatment, nor do they advocate it to the exclusion of all others. But it certainly stands first as regards cosmetic effects, and as to reliability, practically all the cases under treatment have made a steady improvement. They question the permanency of its results however; relapses have been common where the disease has not been entirely eradicated. Constant supervision and repetition of the treatment are necessary to prevent the disease from regaining its hold. It also makes evident hitherto unsuspected disease. The disadvantages of Finsen's method are the tediousness and length of time, the small area that can be treated at a time, the elaborate and expensive apparatus, and the large staff of attendants required. Although the authors have found the x rays useful as an adjunct to the light rays, they do not regard them as an adequate substitute. They may cause acute dermatitis and necrosing ulcerations, and their dosage is very difficult to estimate. In conclusion, the authors report nine cases of lupus and rodent ulcer, which illustrate the various points mentioned above.

The Therapeutic Employment of X Rays. By G. H. Lancashire, M. R. C. S.—In this article the author mentions some varieties of skin troubles in which the x rays have proved beneficial. In hypertrichosis and exaggerated forms of hirsuties, the x-rays often act very well, the hairs coming out and the skin remaining smooth and soft. Coccogenic sycosis often clears up remarkably well after exposures to the tube. Where good has been done there has always been a mild dermatitis set up.

Most cases of ulcerated lupus call for x-ray treatment at once. Those suitable are: (1) Cases of disease in prominent parts, such as the face, where the mischief is too extensive for Finsen's method; (2) some ulcerated cases; (3) cases associated with unsightly scars; (4) some cases of disease of mucous membrane. In rodent ulcer the results of x-ray treatment are most gratifying. The author has seen only one case—a very long-standing and extensive ulcer—which showed no apparent response whatever to the treatment.

The Curative Effect of the X-Rays on Callous Sinuses of the Abdominal Wall. By Dr. D. Berry Hart.—The author found that two cases of persistent sinuses of the abdominal wall, following operation, healed with marvellous rapidity after a few exposures to the x rays.

Case of Sarcoma of the Face. By Dr. R. J. Gladstone.

A Plea for the Adoption of a More Accurate and Scientific Method in the Investigation and Treatment of Lateral Curvature of the Spine. By H. Young, M. B.

Lancet, May 31, 1902.

The Powers of Natural Resistance or the Personal Factor in Disease of Microbic Origin. By Dr. S. Mackenzie.

A Case of Supposed Intestinal Obstruction, Due to a Vascular Lesion, Rapidly Fatal From Incipient Gangrene of the Stomach and the Duodenum. By H. W. Page, M. C.—The author reports the case of a man, aged fifty years, who three years and a half previously had had thrombosis in the right leg, following typhoid fever. About a year later he had thrombosis in the left leg following a bicycle accident, and again, in 1901, he was laid up for a month with thrombosis of the left femoral vein. In February, 1902, he had a sudden attack of pain above the umbilicus with diarrhoea. The epigastric pain continued, there was vomiting of coffee-colored fluid, and he presented all the symptoms of intestinal obstruction. On opening the abdomen the stomach was seen to be enormously tense and distended, dark purple in color, and with flakes of lymph upon its surface. The large and small bowel were both empty, the latter being completely collapsed. On tracing it upwards no cause of obstruction was anywhere to be found, but as the stomach was approached the bowel became distended and discolored. Nothing could be done, and the patient died three hours after the operation. At the autopsy, which was incomplete and unsatisfactory, the stomach was found to contain fluid blood. The author holds that a vascular lesion was the cause of the symptoms and of the state of the stomach and duodenum, which opinion is based upon the similarity between this case and one reported by Bradford under the head of A Case of Thrombosis of the Superior Mesenteric Vein Causing Intestinal Obstruction. In this latter case the mesenteric vein contained coagulum and reddish puriform material. In the case here reported the patient was subject to venous thrombosis and the coronary and pyloric veins were probably the vessels affected.

The Congenital Factor in Hernia. By R. H. Russell, F. R. C. S.—In this article the author repeats the conclusions which he has arrived at as to hernia being due to the presence of a congenital sac, and not to congenital weakness of the abdominal wall. (His original article, appearing in the *Lancet* for November 18th, 1899, was abstracted in this *Journal*.) In the present article he endeavors to show that there is no difference ætiologically between the inguinal hernia of children and that of older people, and that the management of the affection in either case will be the same in principle, differing only by reason of certain factors imported into the case of adults, from which the child is free. Complete removal of the sac, when performed before the abdominal wall has sustained damage, will not be followed by recurrence. The causes of recurrence after operation are three in number—viz., (1) acquired weakness of the wall; (2) incomplete removal of the sac; and (3) traumatism, the result of faulty operating.

Complete Relaxation of the Abdominal Wall Under Anæsthetics. By Dr. J. Blumfeld.—In cases of abdominal operation the anæsthetist can usually obtain a satisfactorily relaxed condition of the abdominal wall by maintaining unimpeded breathing, complete absence of cyanosis, and sufficiently deep anæsthesia. These desiderata are obtained by proper selection of the anæsthetic, by giving it freely with a liberal air supply, by keeping the air-passages free, and by holding the lower jaw well forward. When this is not enough the mouth must be slightly opened and the tongue drawn out. It is a good plan in abdominal cases, to let the anæsthetist get to work at the earliest possible moment.

Urethral Hæmorrhage in Gonorrhœa. By J. F. Dobson, F. R. C. S.—The author reports three cases of urethral hæmorrhage in gonorrhœa. It may occur either in the acute or chronic stage of the disease. In the acute stage it is usually very slight. In the chronic stage profuse hæmorrhage may occur after any extra exertion or coitus. The bleeding usually arises from a granular or papillary patch in the anterior urethra. In treatment the best results are obtained by the use of the urethroscope; the source of the hæmorrhage may be detected and the bleeding controlled by direct applications of a solution of perchloride of iron to the diseased area. The effect of this treatment is to increase the amount and purity of the discharge, which may be checked by the use of protargol.

Remarks on Certain Methods of Physical Diagnosis in Diseases of the Chest. With Illustrative Cases. By Dr. A. G. Auld.

Case of Arthritis Accompanying Ophthalmia Neonatorum. By Dr. C. O. Hawthorne.—The author reports the case of a child in which a purulent discharge from the eyes began two days after birth, and continued for fully three weeks. When the child was two weeks old the right shoulder joint and the right wrist became swollen, the swelling subsiding within a fortnight. Four weeks later, while there was still a slight discharge from the eyes and a small corneal abrasion, the left elbow-joint became enlarged, the swelling extending a considerable distance down the arm. The limb was

fixed and the ophthalmia treated locally, the patient making a rapid recovery.

The Advisability of Preliminary Tracheotomy and Ligature of the External Carotid in Severe Operations About the Face. By C. R. Keyser, F. R. C. S.—In operations involving excision of the upper jaw, excision of the lower jaw, and extensive removal of the tongue, the author strongly advocates preliminary tracheotomy and ligature of the external carotid artery. His main reasons are as follows. The almost complete absence of bleeding after the external carotid has been ligatured. The operator is much more at his ease and need not be in a hurry. A sponge being kept in the pharynx no blood enters the larynx and air-passages and thus the danger of broncho-pneumonia is avoided. It is of great importance to ligature the external and not the common carotid artery, as, if the latter proceeding is done, the hæmorrhage is very inefficiently controlled, owing to the exceedingly free anastomosis through the circle of Willis. The most convenient position for the ligature is between the superior thyreoid and lingual branches. The author reports eight cases in which the triple operation was performed; there was practically no hæmorrhage, not any cause for anxiety, and all the patients made a rapid recovery. On the other hand he has seen two fatal cases from hæmorrhage where the carotid was not ligatured.

Note on Two Cases of "Ulcerated Sore-Throat." By E. C. Bousfield, L. R. C. P.—The author reports two cases of diphtheria in which the mistaken diagnosis of "ulcerative sore-throat" was persisted in. In one case paralysis of nearly all the chief motor centres supervened, while in the other the patient succumbed on the fifth day to suffocation caused by extension of the disease to the larynx and trachea. The presence of a slough upon the tonsils or pharynx can only be due to diphtheria or to syphilis. In quinsy a membrane never occurs on the surface of the tonsil. There is no justification in a doubtful case for postponing the use of antitoxine.

Radical Cure of Inguinal Hernia. By Dr. J. O'Connor.

A Case of Appendicitis with General Peritonitis; Recovery After Removal of Appendix, Followed by Secondary Incision into the Cæcum for Extreme Paralytic Distension. By F. C. Madden, M. B.

Münchener medicinische Wochenschrift,
April 8, 1902.

Spinal Marrow and the Infectious Diseases.—Dr. Eugen Fränkel gives a preliminary report on some investigations he has made as to the invasion of the marrow of the spine by bacteria, in the acute infectious diseases. He has found them in erysipelas, peritonitis, in diphtheria, in phlegmons, in septic phlebitis, in empyema, in scarlatina, and in tuberculosis. The bacteria may be more abundant in the blood than in the red marrow of the spine, or *vice versa*. In the cord, the germs may give rise to anatomical changes, such as hæmorrhages, collections of pigment, fibrinous exudates, myelitic and necrotic foci.

Combinations of Rhodanic Acid.—By Professor G. Treupel and Professor Edinger.

Subluxations of Congenital Hip Dislocations.
By Dr. W. Walther.

Gastric Lavage with Nitrate of Silver Solutions.—By Dr. Franz Ehrlich.

Curious Positions in Hysteria.—By Dr. J. Riedinger.

Color Changes in the Hair.—By Dr. W. G. Weinberg.

Gazzetta Degli Ospedali e Delle Cliniche, March 16, 1902.

Basophile Granules in the Red Blood Corpuscles in a Case of Paroxysmal Hæmoglobinuria Due to Exposure to Cold. By Dr. G. Guyot. —Two years ago the author called attention to the occurrence of basophile granulations which the red corpuscles presented in certain diseases, particularly in lead poisoning, in pernicious anæmia, etc. He now reports a case of paroxysmal hæmoglobinuria due to exposure to cold in a man aged twenty-two years, in which such granulations occurred in the red cells. Within a period of twenty days this man had ten attacks of hæmoglobinuria, in each of which the blood, after fixation with chloroform and staining with Löffler's solution or with Ziemann's solution of methyl blue and borax, showed the presence of basophile granules in the red cells. These granules were seen with a magnification of 400 diameters, but were observed more distinctly with a homogeneous immersion-lens magnifying to 600 diameter. They were uniformly distributed throughout the cell-body or were arranged eccentrically, and appeared as shining points or short lines of a blue color against the background of the cell which was tinted pale green. The number of these granulations was directly in proportion to the intensity of the attacks as regarded the height of the temperature and the amount of abnormal constituent eliminated in the urine. Before the attacks these granules were always found in small numbers and they increased in proportion as the attack drew nearer. The author reserves the interpretation of this phenomenon for later communications.

A Clinical Note Concerning Tropical Heat Stroke. By Dr. Salvatore Micela.—Observations on the clinical aspects of heat-stroke as it occurred in Italian soldiers in Africa. The symptoms observed were a sudden sense of oppression in the region of the heart, or of a constriction in the epigastrium; a very high temperature, a dry hot skin, a weak rapid compressible pulse, a weak or absent apex beat, somnolence or coma, a pale face with semidilated pupils showing a slow reflex to light. In some soldiers there occurred bilious vomiting, trismus, convulsions, hallucinations, and delirium. The patients were all stripped and surrounded with ice, especially on the chest and the back along the vertebral column, and in addition received injections of caffeine. During a night-march across a hot and sandy plain such cases were not observed, while in other marches under the burning sun, sunstroke occurred in a large number of soldiers. The hyperpyrexia came on insidiously and seized the patient suddenly. The soldier, if not saved in time,

strayed behind his file and suddenly fell on the ground, in some cases dead. In speaking of the pathological mechanism of this accident the author sums up by saying that the excessive heat of the body paralyzes the heart and the sensorium. Physiology teaches us that in mammals the heart beats cease when the body temperature reaches 44.5° C. It is possible however that the tropical region in which these heat strokes occurred was particularly favorable to such accidents on account of the great amount of decomposing vegetation capable of producing toxins that would be inhaled by the soldiers, or it is possible that the malarial parasite may have something to do with the intoxication of sunstroke. The author distinguishes heatstroke from sunstroke, and says that these conditions are frequently confused. Sunstroke occurs, even during repose, as the result of the direct action of the rays of the sun upon the head and neck. It consists in a congestion of the cerebral centres and is accompanied by asphyxia and not by any increase in the temperature. On the other hand, heatstroke occurs when there is added to the exposure to heat an excessive amount of muscular activity. It consists chiefly in a toxæmia, which results from the disturbance of the compensating mechanism of heat regulation and is accompanied by cardiac distress, a rise of temperature, and a lack of secretion of sweat.

An Erythematous Eruption in the Course of a Lobar Pneumonia. By Dr. Gino Recchi.—A case of pneumonia in a young woman, aged nineteen years, in which there was an erythematous eruption on the fifth day. Circular patches of a bluish red color appeared on the external surfaces of the forearms and the legs. The spots were slightly painful to the touch and were disposed in groups of three or four arranged in lines. The appearance of the eruption was coincident with a marked improvement in all the other symptoms. The spots gradually disappeared toward the end of convalescence. Calomel, salol, and sodium salicylate, were given internally, and boric acid was applied externally during the continuance of the eruption.

A Contribution to the Prevention of Whooping Cough. By Dr. G. Poschi.—The efficiency of vaccination as a preventive against whooping cough was noted by Jenner, but no attention was paid to this until 1854, when Rasi restored this method. Recently it has again come into prominence. The author does not attempt to explain the mode of action of this treatment but he noted its efficiency in an epidemic of whooping cough which occurred in May, 1901. He vaccinated forty-seven children affected with the disease and repeated the vaccination in those cases in which the first operation was not successful. In fifteen of these, the vaccination did not "take." The average duration of the disease in those who had been successfully vaccinated was from three to four weeks after the appearance of the pustules. In five cases only did the disease last longer on account of complications. One patient, an infant two months old, who had not been vaccinated, died. In two cases vaccination was attempted as a preventive, but, although the vaccination was successful, one of these patients was taken with whooping cough eight days, the other twelve days later, though the attacks were

mild and lasted only two weeks. What convinced him of the value of vaccination, however, was the fact that he had successfully vaccinated thirty-one children between the ages of two months and one year, most of whom lived with infected children, and among these not one was taken with the disease, except one girl who was seized with a cough which lasted two weeks and was not convulsive in character. The author concludes that vaccination with a preventive intent should be performed during the initial stages of an epidemic of whooping cough, and that when practised during the stage of incubation it cannot be said to prevent but to cure.

Bilateral Nephrotomy for Very Large Renal Calculi. By Dr. Adolfo Tassoni.—The size of the stone found in this case was above the average. The stone found in the left kidney weighed 220 grammes, that found in the right kidney 100 grammes, and both were composed of triple phosphates.

A Contribution to the Treatment of Puerperal Infection. By Dr. G. Burzi.—Ricard, in a recent article, showed that in 2640 cases of infection the mortality was scarcely 10 per cent. He does not find that in the present state of surgery this is a sufficient indication for an operative intervention, and, as surgical statistics are even more grave than obstetrical ones, he votes against hysterectomy in puerperal infection. Terrier stated that he had seen only one woman in whom hysterectomy had been performed for sepsis recover her health after an operation, and in her the uterus was removed after the first symptoms of the disease had appeared. The author agrees with these observers and advocates medical treatment in these cases. He recommends particularly, in addition to uterine irrigations, the injection of solutions of mercuric chloride into the muscular tissue. He believes that in this way he furnishes the organism with a means of resistance to infection. The coagulating effects of the mercurial preparation need not be feared, for, according to Baccelli, the albuminate of mercury dissolves in an excess of albumin and thus emboli do not occur. The exact mode of action of corrosive mercuric chloride after it enters into the circulation is not known, but we know its power against microbes.

Antitoxine Treatment of Pulmonary Tuberculosis Producing a Rapid Cure. By Dr. A. Cambiaso.—The case reported here is that of a girl, twelve years of age, with a tuberculous family history, who presented since 1899 the symptoms of pulmonary tuberculosis. Her sputum contained numerous tubercle bacilli and there were dulness, bronchial breathing, and râles over both apices. She was treated with antituberculous serum (presumably Maragliano's) and the results, both subjective and objective, were excellent. She gained considerable weight. The physical signs almost disappeared and the cough had ceased. The author considers this a demonstration of the efficiency of this treatment in a young organism affected with tuberculosis.

Two Cases of Tetanus Cured by Baccelli's Method. By Dr. Girolamo Copetti.—A report of two cases treated successfully with injections of carbolic acid.

On the Treatment of Blennorrhagic Epididym-

itis, and Orchitis, by Means of Guaiacol. By Dr. Alfredo Bocchi.—The author has used the following treatment in ten cases: The patient was put to bed, the local treatment of the blennorrhagia was suspended, and the parts were covered with an ointment composed of guaiacol, 5 parts, petrolatum, 50 parts, surrounded with cotton, suspended by means of a bag, and held elevated upon a pillow. The application was repeated once daily, so as to avoid irritation of the skin. Internally, salol or sodium salicylate was administered four times daily. When the acute phenomena ceased, the absorption of the exudate was favored by the use of mercurial ointment or the following application:

R Extract of belladonna.. from 7½ to 15 grains
Diachylon ointment }of each 6 drachms.
Simple ointment }
M.

Roussky Patch, April 27, 1902.

On Typhoid Abscess and the Gruber-Widal Reaction. By Dr. A. B. Arapoff.—A rare complication of typhoid fever is the presence of degenerative changes in the muscles, with the development of suppurative foci or abscesses due to the lodgment of the typhoid bacillus in the muscular tissues. The author reports two such cases, and two other instances of abscess-formation in the spleen of typhoid-fever patients. In all these four cases the pus presented macroscopical differences when compared to pus formed by the streptococcus or staphylococcus. It was of a reddish-brown, almost chocolate-colored tint, and contained particles of dead tissue and blood-clots. On microscopical examination it presented few pus-cells, disintegrated red cells, detritus, and crystals of tyrosin (in splenic abscesses) and of hæmatoidin (in abscesses of the rectus muscle). In all cases cultures showed the presence of the typhoid bacillus. Typhoid abscesses without secondary infection do not give inflammatory signs on the surrounding skin, and the author believes that they are not true abscesses, but merely foci of necrosed tissue which is undergoing rapid disintegration. Pfeiffer and Kolle have noted that in animals that have been immunized against typhoid fever, the injection of typhoid bacilli is followed by the development of local abscesses at the site of the puncture, and it is possible that this is the explanation of the appearance of typhoid abscesses in man. The probabilities are that typhoid abscesses develop on a soil of degenerated muscular fibres, after the typhoid bacillus has penetrated into hæmorrhagic foci in the muscle. The bacillus of Eberth evidently possesses the property of negative chemotaxis, as regards the leucocytes, and it is this quality that accounts for the peculiarities of the type of supuration met with in typhoid fever. Typhoid bacilli obtained from the bodies of the patients in most cases gave the Widal reaction with the serum of the same patients. In the treatment of typhoid fever, the chief measures to be employed are those which raise the leucocytosis and the resistance of the organism (alkaline enemata, baths, quinine, saline injections, and the serum treatment of Tavel).

The Causes of the Variations in Properties of the Pancreatic Juice as Regards the Proteid Ferment. By Dr. A. B. Popelsky.—According to Pavloff and his pupils, the properties of pancreatic juice vary as the quality of the food consumed. If we

suppose an endless variety of food to be possible, then an endless variety of pancreatic juices may be obtained. The explanation of this variation occupies the author, who studied in animals the effects upon the pancreatic juice following the administration of various foods. He found that, on comparing the digestive power of the pancreatic juice of a dog fed on meat with that of one fed on milk, there was a considerable difference in the proportion of proteid ferment between the two juices, and also a variation in this proportion at different times within a number of hours after the administration of the food. As variations in the concentration of pancreatic juice depend upon variations in the stimulation to which the nerve endings in the small intestines are subjected, these variations depend upon differences in the intensity of the stimulus. The variations in the composition of the pancreatic juice are, therefore, dependent upon the quality of the stimulant and the quantity thereof, whence we can judge of the intensity of the stimulus according to the digestive power of a pancreatic juice obtained after the stimulation. As regards the question as to why an energetic stimulant produces the secretion of a weak pancreatic juice, and a weak stimulant a secretion of strong pancreatic juice, it may be said that a juice that is weak as regards ferments is strong in proferments, that is substances from which ferments are formed. Such a juice acquires very powerful fermentative properties within from seven to ten hours. It is probable that during the action of an energetic stimulant the proferment has not time to change into a ferment. According to the author, therefore, the variations in the composition of the pancreatic juice occasioned by differences in the quality of the food, are due to variations in the quality and intensity of the stimulus sent to the pancreas through the nerve endings in the small intestines. He believes that there is only one set of these nerve endings and does not agree with Pavloff, who thinks that there exist an infinite number of different sets of nerve endings in the intestines each of which corresponds to a variety of foods.

On Penetrating Incised and Lacerated Wounds of the Abdomen. By Dr. B. K. Finkelstein, (*continued*).—In this instalment the author deals with wounds of the intestine, and reports fifteen cases. In speaking of the diagnosis he sums up by saying that there is no symptom which would enable us to diagnose a wound of the pancreas within a few hours after the injury. The method advocated by Senn, namely the inflation of the colon with hydrogen, has no practical value. The diagnosis is, of course, easy when the wounded intestine projects through the wound in the abdominal wall, but such cases occur only in 53 per cent. of intestinal wounds, while in the rest the diagnosis is made either solely from the clinical history or after a prompt enlargement of the incision followed by exploration. In one case out of fifteen there were no signs of peritonitis after the operation. In all the others there were either signs of peritoneal irritation or true peritonitis. In seven cases the cause of death was peritonitis; in one, acute anæmia as the result of hæmorrhage from a wounded radial artery; and in one, lobar pneumonia. Wounds of the large intestine are more favorable from a prognostic viewpoint than wounds of the small intestine, for rea-

sons which are difficult to determine. The thin walls of the colon do not contract so readily and do not close so easily with a plug of mucous membrane; on the other hand the peristaltic movements are less marked in the large intestine, the contents are more solid, and the intestine less movable, so that adhesions are more apt to form, and fæces are less apt to pass into the peritonæum. With a few exceptions, all surgeons agree upon early operative treatment. The usual operation is closure of the wound with Lembert sutures, irrigation of the peritonæum, and drainage. In rare cases, when the intestine is torn and contused, it may be necessary to resect a portion of the intestine. Shock is not a contra-indication, but rather an indication for operative treatment. In all cases the external wound should be kept open and drainage established. Of six cases, only one was characterized by the absence of suppuration in the wound. Isolated cases of recovery after complete closure of the abdominal wound are simply exceptions that prove the rule. (*To be continued.*)

On the Pharmacology of Pyramidon. By Dr. G. S. Sadkovsky.—Pyramidon is one of the newer antipyretics and is a derivative of phenyl-dimethyl-pyrazolon, and has a formula of $C_{13}H_{17}N_3O$. It is a white powder, soluble in twenty-five parts of water. Its action is said to correspond to that of antipyrine, but, pyramidon is said to act more strongly and for longer periods. According to a number of clinicians, this remedy does not act upon the heart, and in view of this evidence, endorsed by Kobert in 1899, it has received a wide application. Unfortunately, no experiments on animals have been made to test its action, and of late several articles have appeared in which the virtues claimed for pyramidon have been denied. The author finds, as a result of a large series of experiments, that pyramidon, when injected into the blood, excites the cerebral centres, particularly those of the motor region of the cortex, and also the vasomotor nerves and the accelerators of the heart. It therefore increases the blood-pressure and the frequency of the heart beats. The respiration is, however, rendered slower on account of the inhibition which takes place during the convulsive movement. But the respiration increases in frequency after tracheotomy. The antipyretic action of pyramidon may therefore be explained as follows: it diminishes the calibre of the internal arteries of the body, and therefore diminishes the amount of heat generated; at the same time it considerably decreases the blood pressure, thus increasing the radiation of heat. The contra-indications of pyramidon, as a remedy which acts powerfully upon the blood vessels and the heart, are therefore self-evident. It is unconditionally contra-indicated in febrile diseases accompanied by a rapid, tense pulse; in diseases of the heart and arteries; in diseases of the kidney, and in tuberculosis of the lungs, inasmuch as, by decreasing the blood-pressure, it is apt to give rise to pulmonary hæmorrhages. Several articles that have appeared of late contained suggestions as to possible combination of pyramidon with camphor. The author thinks that a better combination may be obtained by the administration of pyramidon simultaneously with muscarine and such heart stimulants as digitalis, which would counteract its depressing action upon the heart.

American Medical Association.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

Second Session.

The second session of the House of Delegates was held on Wednesday afternoon, June 11th, in the United States Hotel, the President, Dr. Wyeth, in the chair.

Professor O. Haab, of Zurich, Switzerland, who had been elected to honorary membership in the association, at the request of the delegates from the Section in Ophthalmology, was introduced to the House of Delegates by the President, and thanked the members for the honor conferred upon him.

Dr. E. Eliot Harris, of New York, offered a resolution that a committee be appointed for the revision of the code of medical ethics. Upon the adoption of this resolution, the following committee was named by the President: Dr. E. Eliot Harris, of New York; Dr. Wm. H. Welch, of Baltimore; Dr. Nicholas Senn, of Chicago; Dr. T. J. Happel, of Tennessee; Dr. Joseph D. Bryant, of New York, and Dr. J. N. McCormack, of Kentucky.

Dr. McCormack, the chairman of the business committee, which had been appointed at the previous session of the House of Delegates, recommended that this committee be discharged, and the following committees named to take its place:

A committee on sections and section work.

A committee on revision of the list of members.

A committee on finance.

A committee on the relation of dentists and pharmacists.

A committee on organization.

A committee on place of meeting.

The report of the Committee on National Legislation was submitted by its chairman, Dr. H. L. E. Johnson, of Washington, D. C.

The report of the Committee on Organization was presented by Dr. P. Maxwell Foshay, of Ohio.

Dr. Foshay presented a memorial from the Cleveland Academy of Medicine calling attention to the dangers of impure or inert vaccine virus, and requesting the House of Delegates to petition the Congress of the United States to pass such laws as would place the production of vaccine virus directly under the control of the United States government, under the jurisdiction of either the Department of Agriculture or the Marine Hospital Service. This memorial was referred to the business committee.

A resolution was presented calling attention to the long and distinguished public services rendered by Surgeon-General Sternberg, of the U. S. Army, who has just been retired, and asking the association to petition Congress to take appropriate action, that his work might receive the official recognition which it deserves.

A vote of thanks was tendered to Dr. Reed and to Dr. Agramonte and their associates in Cuba, whose brilliant work, with the able cooperation of the late governor, Dr. Leonard Wood, had resulted in ridding that island of yellow fever.

SECTION IN PRACTICE OF MEDICINE.

Second Day, Wednesday, June 11th.

Ætiology of Chronic Nephritis.—Dr. ARTHUR R. ELLIOTT, of Chicago, read this paper. He said that under the name chronic nephritis, were described slow inflammatory processes affecting both kidneys, due to a pathological condition of the blood, and leading to destruction of the parenchyma, with eventual shrinking of the organs. The most characteristic phenomenon of this affection was not its termination in atrophy, but its casual relationship with hæmatic dyscrasia. As the purification of the blood devolved principally upon the kidneys, an abnormal condition of that fluid was liable to cause renal affections. It was plain that the morbid agent or combination of agents was not always the same. In rare instances, where chronic nephritis developed as a result of acute nephritis, the chronic lesion must be due to the same common cause as its acute precursor. This was the case in chronic nephritis resulting from scarlatinal or puerperal nephritis. It seemed probable that the remaining amount of healthy parenchyma was not sufficient to cleanse the blood, and the products of this integration might be in such excess as to exert a deleterious effect upon the remaining structure. For acute nephritis, nephritis of infectious origin, to eventuate in chronic nephritis was comparatively rare. The form thus originated was usually tubal nephritis. Interstitial nephritis was essentially a chronic malady from the start. In the majority of the cases no signs of dropsy were present in interstitial nephritis, nor, indeed, was there any other grave disturbance of health until the development of retention symptoms or evidence of cardiovascular embarrassment. It was possible that if acute nephritis lasted long enough, it might lead secondarily to a form of interstitial nephritis, but whether the disease known as chronic nephritis could result was another question. Even if acute nephritis could be established as an event in the early clinical history of the case, it did not necessarily follow that prior to the attack the kidneys were sound. Simple acute nephritis occurred so rarely in adults that it might be regarded as presumptive evidence that the kidney had been diseased beforehand. In cases of renal cirrhosis apparently related to scarlatina or pregnancy, it was possible that these factors determined the renal lesion only in conjunction with accessory causes of a toxic character. Renal sclerosis subsequent to arterial sclerosis was exceptional in comparison to the cases in which the vascular changes were secondary to genuine chronic nephritis. It was probable that only in rare cases of chronic indurative nephritis associated with advanced senile arteriosclerosis were we warranted in attributing a purely ætiological influence to the arterial changes, the association of arteriofibrosis with renal atrophy in other cases being incidental. The gland was primarily affected in any true nephritis. Toxic irritation of the kidney was the common cause of all forms of nephritis, but in the chronic form it acted more slowly, or by successive attacks. Examined in the light of our present knowledge in regard to the action of organic poisons, the mode of action of the various determining causes of nephritis seemed to be satisfactorily defined. Among these causes were the disturb-

ances of nutrition, such as gout, chlorosis, diabetes, syphilis, the various cachexiæ, overwork, and diseases involving certain excretory organs, such as chronic skin diseases, hepatic, and intestinal affections. The uniformity of the action of these factors might be recognized at a glance. The abnormalities of the urine under such circumstances were but symptoms of an underlying toxæmia produced by an antecedent malady. Primary interstitial nephritis was extremely insidious in its development; the same was true of glandular atrophy of the kidney; they seemed to depend upon the operation of some cause which was very gradual and persistent in character. Certain alterations in the vascular system were almost a constant feature of the syndrome of this disease, and seemed to be produced by the action of the same irritant. The speaker regarded no cause as so frequent and important as autotoxæmia of digestive origin. Many authors had referred to other forms of toxæmia as a possible source of renal damage, but the full extent of the relationship had perhaps never been stated. The success of the dietetic treatment of nephritis, the importance of Dickinson's "morning purge," the effect of colonic irrigation upon renal elimination, the influence of gastro-intestinal accidents in aggravating renal symptoms, etc., spoke for the importance of a clean digestive tract. Where there was chronic gastro-intestinal trouble, an increased amount of work was imposed upon the liver, with the result that the liver cells became gradually and progressively affected and eventually yielded to irritation and prolonged overfunctioning, permitting the poisons which reached them from the bowel, together with the products of disturbed hepatic function, to pass into the general circulation. The presence of these bodies in the blood disturbed vascular tension, and a high degree of renal irritation resulted from their elimination. He called special attention to the insidious action of gastro-intestinal conditions resulting from chronic constipation and to the effects of the toxins thus produced upon the kidneys, the disease being often far advanced before it was even suspected. The main purpose of the speaker was to emphasize the overwhelming importance of the toxic element in the causation of all forms of nephritis, and the uniformity of action of the toxic factors, whatever special form they might assume.

Malarial Nephritis, with Report of a Case.—Dr. W. BRITT BURNS, of Memphis, Tenn., read this paper, based on some of the findings of urinalyses, and made special reference to nephritis occurring in malarial cases in which large doses of quinine cleared up the urinary symptoms. He reported a necropsy where the gross pathology showed a large and small white kidney, a beginning hypertrophic cirrhosis of the liver, splenitis, and fatty heart. The minute pathology revealed pigmentation of cells and the blocking of vessels by pigment in the liver and spleen. He agreed with Dr. Moore, of Galveston, Texas, who stated that nephritis was not likely to occur in a single tertian infection for a short interval, say of five days, and that a doubtful tertian infection would produce a nephritis in a large proportion of cases if it ran only for a short time. The more chronic in character any infection became, the more likely it was to produce a nephritis. Malaria of long

duration, or often repeated attacks, would produce chronic renal disease, as shown by the continuous presence of albumin and casts. The greatest percentage of cases of nephritis resulted from æstivo-autumnal malaria—68.7 per cent. The age of the patient, the temperature or specific gravity of the urine evidently bore no relation to the presence of albumin and casts in the cases reported by Dr. Moore.

The Classification of Chronic Nephritis.—Dr. JAMES B. HERRICK, of Chicago, said that there was no classification that was entirely satisfactory from the standpoint either of the clinician or of the pathologist. Yet a working classification was desirable, even though it was somewhat artificial and not free from faults. Eliminating amyloid kidney and the kidney of congestion, there remained two fairly distinct clinical types of nephritis, the one characterized by œdema, albuminuria and cylindruria, the other by the marked cardiovascular changes and uræmia. These clinical types corresponded, on the one hand, to the large kidney with predominance of parenchymal changes, and on the other to the small contracted kidney with the chief change in the interstitial tissue. Hence there was warrant for the time-honored division into chronic parenchymatous and chronic interstitial nephritis. Yet these names represented but a part of the truth, for in every case of chronic nephritis the process was more or less diffuse, involving both parenchyma and stroma.

It was also important to recognize and frankly admit the inability to force all cases of chronic nephritis to fit a classification that was largely artificial. The mixed type must, therefore, be recognized where the disease and the kidney showed characteristics of both the parenchymatous and interstitial forms of nephritis. Many writers expressed this opinion, though it was not so prevalent as it should be. Under the head of chronic interstitial nephritis could be classed the secondary contracted kidney and the arteriosclerotic kidney.

The classification that would seem to suit clinicians and pathologists was that of Senator, though his terms "chronic diffuse nephritis without induration," etc., were altered:

1. Chronic parenchymatous nephritis.
2. Chronic interstitial nephritis.
 - (a) Primary interstitial nephritis.
 - (b) Secondary interstitial nephritis.
 - (c) Arteriosclerotic kidney.
3. Chronic nephritis of the mixed type.

The Diagnosis of Chronic Nephritis.—Dr. ALOYSIUS O. J. KELLY read this paper. He said that he had nothing new to advance, but would call attention to certain pathological and clinical features of the disease. There was little more known to-day in regard to it than was known in the time of Bright. In the diagnosis of albuminuria, he distinguished the following forms: (1.) Extrarenal, spurious, accidental, or factitious albuminuria; (2.) So-called functional, physiological, or cyclic albuminuria; (3.) Albuminuria without noteworthy alterations in the kidney; (4.) Albuminuria with noteworthy alterations in the kidney. Under (1) he placed those cases in which the albumin in the urine was but a subsidiary factor, usually not exceeding one-tenth by bulk, and pro-

portionate to the amount of blood and pus. There should always be a suspicion of nephritis if there was a disproportionate amount of albumin in the urine. The presence of casts was of great importance, their presence being clear evidence of nephritis. (2) So-called *functional albuminuria* usually occurred in young persons, and was generally detected only by accident in examinations for life insurance, etc. Great circumspection must be exercised in diagnosing this variety of albuminuria. The albumin should never exceed more than 0.1 per cent., the urine should contain no other abnormal constituents; every bodily organ should be examined and found to be in perfect health. A diagnosis should not be made until the patient had been long under observation and many examinations of the urine had been made. Albumin might be temporarily absent, for long periods in certain cases and at certain stages of chronic interstitial nephritis. (3) To this class belonged cases of active and passive congestion of the kidney, of toxic degeneration of the kidney, the kidney of pregnancy, amyloid degeneration of the kidney, acute and chronic suppurative and non-suppurative inflammations of the kidney, and tumors of the kidney. In these cases the albuminuria acquired its importance from the attendant phenomena. Hence we must make a diagnosis upon this basis, and not upon the amount of albumin. (4) The cardiovascular changes in chronic nephritis were of extreme interest and importance; they dominated the clinical picture of the disease, and assumed a commanding position in the prognosis and in the treatment. The lesions were wide-spread, involving the heart, the large and small arteries, the capillaries, and sometimes even the veins. The left ventricle alone was affected in the majority of cases: in the remainder of cases both ventricles were affected; the right ventricle alone was never affected. Predominating dilatation of either or both ventricles was an unusual event until toward the termination of life. This hypertrophy of the heart occurred in all forms of nephritis, but not in all cases. It dominated the picture in interstitial nephritis. The changes in the arteries were more complicated than those in the heart. In many cases the arteries showed a loss of elasticity, while, in other cases, there was more or less arteriosclerosis and atheroma, but neither was a constant feature. The medium-sized and smaller arteries almost invariably had thickened walls. In some cases both muscular hypertrophy and fibroid alteration might be observed side by side. The changes in the arteries were not distributed uniformly throughout the body. It seemed that the cardiovascular alterations resulted from obstruction to the flow of blood in the arterioles and capillaries, and that this obstruction was provoked by the presence of some irritative metabolic products in the blood, which in health should be eliminated by the kidney. As chronic interstitial nephritis revealed itself in different ways, the diagnosis depended upon the results of examination of the urine and of the cardiovascular apparatus. The urine was increased in amount and specific gravity. The amount of albumin was usually slight; at times none might be found. Great diagnostic value was placed upon changes in the pulse. During the early stages the arteries were contracted and the pulse small; the internal pressure was in-

creased and the pulse hard and resistant, the pulse waves small, and the artery remained persistently full between the beats. Later, there was added evidence of arteriosclerosis, and, still later, the changes of atheroma. A diagnosis based upon increased arterial tension, accentuated aortic second sound, and the physical signs of hypertrophy of the left ventricle, would rarely be wrong. They might be detected even in the absence of positive signs of kidney disease in the urine.

The Early Circulatory Indications of Chronic Bright's Disease.—Dr. LOUIS FAUGERES BISHOP said that in the early circulatory indications of chronic Bright's disease, the term "Bright's disease" was used because it could cover the conception of a general condition, involving the whole body, while its association with disease of the kidneys indicated the most common termination of the condition under discussion. Nephritis, endarteritis, cardiac hypertrophy and degeneration, cerebral degeneration, and atrophy of the senile type, all stood for definite lesions of a general disease. This disease, in its later development, was so familiar that its early recognition must be a matter of great interest. The earliest element was commencing arterial degeneration. This, in the small arteries, soon gave the signs of disordered function when they offered an unhealthy resistance to the circulation of the blood. The early recognition of this tension, or of a tendency to it, was the earliest circulatory indication of chronic Bright's disease. The tension might at first only be present at times, or it might be only indicated by an irregular action of the blood vessels involving irregularities of blood supply to various parts of the body. The brain being most sensitive gave temporary loss of consciousness, attacks of dizziness, temporary affections of the motor areas causing a clumsiness of an arm or a leg, or there might be for the same cause a slight evanescent aphasia. These symptoms were but the shadows of Bright's disease in its complete development, and occurred long before the appearance of albumin in the urine.

In connection with these early circulatory changes occurred disturbances of other functions in the brain. There might be indigestion; there might be a failure of nutrition in various directions. The great fact to be emphasized was that the earliest signs of this important condition were to be found in a careful study of the circulation.

Uræmic Aphasia.—Dr. DAVID RIESMAN, of Philadelphia, read this paper. He said there could be no doubt that this condition was a form of self-intoxication. Like the majority of poisons originating in the body, that of uræmia acted chiefly upon the nervous system, although it was possible that no organ or tissue escaped its influence. The nervous manifestations of uræmia were comparable to those of hysteria, and often resembled the latter in that they were focal and suggest the existence of a gross organic lesion. Among these focal symptoms, the most interesting were hemiplegia, monoplegia, monospasm, and aphasia. As the sole expression of uræmia, aphasia was rare. He reported a number of cases and drew the following conclusions: 1. That aphasia may occur in uræmia, and is at times the sole expression of that state. 2. It is frequently associated with right-sided motor paralysis, hemi-

plegic or monoplegic in character. 3. It may be the precursor of uræmic convulsions or coma. 4. The aphasia is usually of the motor type, but may be sensory. There may be word blindness and word deafness. 5. It may be associated with agraphia, even when there is no paralysis of the limbs. 6. It is comparatively frequent in children, particularly in cases of post-scarlatinal nephritis. In adults it may occur in any form of Bright's disease. 7. It is generally transient, disappearing completely. It is intermittent and has a marked tendency to recur. 8. When paralysis is present, the two may disappear simultaneously, usually the aphasia first. 9. The features of uræmic aphasia are, *per se*, not characteristic of the causal condition. 10. The most important diagnostic features are the transitory character of the aphasia, and the presence of other signs and symptoms of nephritis. 11. In every case of sudden aphasia, the possibility of its being renal in origin should be considered, and careful studies of the urine and of the system at large should be made with this thought in mind.

Endocarditis as a Complication of Pneumonia.

—Dr. E. F. WELLS, of Chicago, read this paper and offered the following conclusions: 1. Endocarditis is of infrequent occurrence in pneumonia, and ulcerative endocarditis is a rare event. 2. When endocarditis occurs, it does so comparatively early in the pneumonic attack and ulceration may occur any time within the period of (probably) several weeks, the time being possibly coincident with some unusual valvular strain. 3. The symptoms and signs, previous to ulceration, or in those cases in which this does not occur, are equivocal. 4. Any of the valves may be affected, but the preference is for the aortic. The vegetations are quickly formed and massive and they have a marked tendency to ulcerate. Pneumococci are present early, and, should ulceration occur, the blood becomes infected. Later, the pneumococci die and embolic showerings are sterile. 5. In simple endocarditis the diagnosis is always difficult and often impossible. The murmurs and embolic showerings of ulcerative endocarditis render the diagnosis of this condition easy. 6. The prognosis of simple endocarditis is not well established, but that of the ulcerative form is extremely grave, although not absolutely hopeless. 7. The treatment of pneumococcal endocarditis, both simple and ulcerative, should embrace, as a cardinal and the most important principle, absolute rest in the recumbent posture so as to throw the least possible strain on the heart. 8. There is but little tendency toward cicatricial contraction, and when recovery ensues, even in cases with ulceration, the integrity of the valve may be unimpaired and health completely restored.

Venesection.—Dr. H. B. FAVILL, of Chicago, read this paper. He said that during the last few years there was a tendency to place greater value on bleeding than formerly. The indications for its employment, as now defined by literature, were vague and indefinite. It was important that this procedure of recognized value should not be indiscriminately used, and thus again fall into disfavor. Venesection might be of great value in certain well chosen cases, when the heart, for various reasons, seemed incapable of disposing of the blood which it was called upon to circulate. The important point

was, What conditions were to any extent amenable to correction by the withdrawal of blood? It seemed, from the mechanical standpoint, that the condition of the heart muscle, rather than the intensity of the provoking cause, would determine the issue. He postulated that whenever we found great pulmonary embarrassment, due to vascular engorgement, bleeding was indicated. This measure afforded symptomatic relief in a variety of conditions; radical relief in a very limited group. Venesection had a distinctly life-saving power in a small number of appropriate cases. It might be indicated in plethora. There was small danger even in abstracting considerable blood.

The Employment of Digitalis and Aconite in the Treatment of Cardiac Diseases.—Dr. H. A. HARE, of Philadelphia, considered the importance of studying the state of the cardiac muscle in the various conditions in which evidences of circulatory failure were manifest. He emphasized the fact that, while physicians very frequently regarded the valvular lesion as the important factor in the case, the condition of the heart muscle, after all, was the most important matter to be studied by physicians, since valvular lesions in themselves were of little importance if compensatory hypertrophy existed. He also emphasized the fact that after many acute diseases the physician was wont to neglect the consideration of the heart as the important factor in the recovery of the patient. An examination of this organ might fail to reveal any signs of valvular difficulty, yet it might be so feeble in its action as to be incapable of supplying all portions of the body. It also might be enfeebled by an impoverished condition of the blood, for the heart could not be strong when poor blood was circulating through its coronary arteries. Dr. Hare also advocated the administration of small, rather than large, doses of digitalis in the treatment of most cases in which this drug was indicated, and thought that the best results were usually obtained by the continued administration of these small doses, rather than by the use of the large ones which were commonly employed. He also spoke of conditions in which aconite could be employed, alone or in conjunction with digitalis, with very excellent results, and pointed out how these two drugs, which were in one sense physiologically antagonistic, might be linked together in such a way as to produce useful results.

Tuberculosis of the Myocardium.—Dr. J. M. ANDERS read an exhaustive paper on this subject. He said that, in 1825, Laennec first affirmed the existence of cardiac tuberculosis, but it remained for Townsend, of Dublin, to report the first case of this affection, and this he did in 1832. The work of Pollak, Mendez, Sangalli, Kaufman, Eisenmeyer, Moser, Crawford, Fuchs, and others was briefly referred to, and it was shown that a total of fifty-nine cases had been previously reported. A careful search of all available sources enabled Dr. Anders to add twelve cases (one his own) with a total of seventy-one cases. He then gave a comprehensive review of the subject.

The existence of a primary cardiac localization of the tuberculous process in the heart remained to be proved. On the other hand, secondary myocardial tuberculosis was also rare. Valentin, in

3,203 autopsied cases by different authors, found seven instances of this condition. Conversely, Weigert stated that, in his experience, the majority of victims of acute general miliary tuberculosis showed small discrete tubercles in different portions of the heart. It was less common in the chronic forms of tuberculosis. Formerly, the condition was confused with syphilis of the myocardium. The influence of age, sex, trauma, and preexisting cardiac disease in the causation of tuberculosis in the heart-muscle was briefly considered. The author quoted Heineman to show that the type of the lesions exerted an influence on the incidence. Again, the small nodules were found usually in the ventricles, and the large tubercles in the auricles, chiefly the right. Three varieties of tuberculosis of the myocardium were met with: (a) large tubercles, (b) miliary forms, (c) the diffuse variety.

The rarity of ulceration in myocardial tuberculosis was emphasized. The relation of myocardial tuberculosis to tuberculosis of other organs was pointed out. The view was expressed that the bacillus reached the cardiac muscle most commonly by way of the lymphatic system. In the careful review of the seventy-one reported cases, the author found mention of enlarged and calcified bronchial glands in 29, or 41.4 per cent. Infection through the agency of the pericardium was quite common, the mode of transmission being the same as for the heart directly. In the 71 cases he found adherent pericardium, total or partial, in 31, or 34.3 per cent. Infection by the blood had been urged by many observers. This might often obtain in the miliary variety. Finally, direct extension from surrounding parts was seen at times. The diagnosis had never been suggested, still less made, during life. He urged all to be on the look-out for exact clinical, pathological, and bacteriological data to aid in the investigation of this rare and interesting form of cardiac disease.

The Autogenous Diseases.—Dr. VICTOR C. VAUGHAN, of Ann Arbor, Mich., in his paper said that the literature on this subject did not furnish sufficient data for the compilation of even a provisional classification of autogenous diseases. He called special attention to the following facts connected with this subject: (1) The products of the incomplete action of the digestive organs may be absorbed, and may cause more or less disturbance in certain organs of the body. Every part of the body will suffer from insufficient nutrition, due to the fact that properly prepared pabulum is not brought within the reach of the cellular element. Peptones and albuminoses, injected directly into the blood, act as powerful causes. 2. Certain secretions and excretions of the human body are poisonous when brought in contact with tissues with which, normally, they have no relation. 3. It is the function of certain organs of the body to prevent the passage of certain substances into the circulation. 4. The undue retention of excrementitious substances frequently leads to disturbances of health. 5. Certain cells in the body fail to adjust themselves to general alterations taking place in other organs at certain periods of life. 6. Under conditions but lit-

tle understood at present, certain cells of the body fail to utilize certain food stuffs. This is true in certain forms of diabetes. The cells which are accustomed to absorb and utilize the sugars, find themselves unable to accomplish this duty, and the unused sugar acts as a poison to other tissues. 7. Active poisons are sometimes formed by certain cells in the body. We account for the presence of certain of the more highly toxic leucomaines, some of the more poisonous acids, some of the poisonous gases, and some of the alkaloidal bodies, in this way.

A Case of Scurvy with Unusual Poverty of the Blood.—Dr. JAMES E. TALLEY, of Philadelphia, read this paper and concluded as follows: 1. There is no condition of the blood characteristic of scurvy. 2. Gingivitis is not a constant symptom of scurvy. 3. In certain scurvy cases there is a condition of the blood similar to that existing in pernicious anæmia, though any definite connection between the two diseases is not demonstrable. 4. The most important element in the causation of scurvy appears to be the lack of vegetable diet. Tainted foods may produce it, and an exclusive diet of perfectly fresh meat and blood may prevent it. 5. The infectious theory is gaining a strong foothold among authorities, although no definite micro-organism is acknowledged.

SECTION IN HYGIENE AND SANITARY SCIENCE.

Second Day, Wednesday, June, 11th.

SYMPOSIUM ON TUBERCULOSIS.

State and Municipal Sanitaria—The Present Aspect of the Tuberculosis Problem in the United States. By Dr. S. A. KNOFF.—Published in our issue for June 14th, p. 1066.

The United States Sanatorium and Hospital for the Treatment of Pulmonary Tuberculosis.—This paper was read by Dr. D. H. APPEL, of the United States Army, who gave a description of the work being done in the U. S. Sanatorium and Hospital, at Fort Bayard, N. M. He considered the use of alcohol; the methods of feeding, rest, and exercise; the regimen for patients; and the effects of altitude, upon the system in general, and the blood in particular.

Sanatorium Treatment for Tuberculosis Based upon the Experience at Fort Stanton, was the title of a paper read by Dr. P. M. CARRINGTON, of Fort Stanton, N. M., in which he gave an analysis of the treatment of 300 cases of tuberculosis as followed at Fort Stanton.

Sanatorium Treatment of Tuberculosis.—Dr. S. G. BONNEY, of Denver, in his paper, discussed the subject from the point of view of the climatic advantages offered in Colorado and other States, from the double point of view of the welfare of the consumptive class and the preservation of the community. He defined three distinct classes for whom some form of sanatorium control was directly demanded, regardless of climate; two broad classes for whom institutional treatment *per se* was still *sub judice*; and a large class of cases for whom residence in local closed sanatoria was contraindicated. Finally, he considered those cases for whom close sanatoria were of special benefit.

Recent Investigations Concerning the Relation of Human and Bovine Tuberculosis was the title of a paper sent by Dr. S. E. SALMON, of the Agricultural Department, at Washington, which dealt with the connection between human and bovine tuberculosis. The result of investigations made within the last year afforded sufficient evidence, he thought, that tubercle bacilli of human origin might infect cattle and produce progressive and fatal disease in them; also that tubercle bacilli from bovine sources might infect man and produce similar disease in him.

The Intertransmissibility of Human and Bovine Tuberculosis; a Review of the Experimental Evidence was the title of a paper from Dr. R. R. DINWIDDIE, of Fayetteville, Ark., which was read in part. He stated that it was a purely speculative question, and it was a matter of every day experience that different deductions might be made from the same data. Still, he did not think that many of them would agree with the process of reasoning by which Professor Koch had arrived at the conclusion that human and bovine tuberculosis were not intercommunicable. While there was still a wide field open for investigation, he thought that sanitarians would not be justified, in the present state of their knowledge, in recommending the discontinuance of those safeguards against infection from tuberculous dairy products which an unwilling public had just begun to appreciate.

The subject was further discussed by Dr. M. P. RAVENEL, of Philadelphia, and others, and at the close, upon motion of Dr. Knopf, of New York, seconded by Dr. Lee, of Philadelphia, a resolution was passed suggesting that the association petition the federal government to appoint a commission, similar to those appointed by European governments, for the purpose of studying and investigating the whole subject, with a view to the discovery of the best means of preventing the spread of the disease in man and animals.

The Treatment of Pulmonary Tuberculosis from the Sanatorium Standpoint was the title of a paper read by Dr. J. E. STUBBERT, of New York.

Dr. J. F. SCHAMBERG, of Philadelphia, gave a lantern-slide demonstration of small-pox and diseases apt to be confounded with it, showing the steps it was necessary to take to distinguish between small-pox on the one hand and chicken-pox, syphilis, and impetigo contagiosa on the other.

Miscellany.

The Surgery of the Thyroid Gland.—At the meeting of the Ohio State Medical Society, at Toledo, on May 27th, 28th, and 29th, Dr. B. Merrill Ricketts, after reviewing the Human and Comparative anatomy (microscopical and topographical) said that many assigned causes for abnormalities of the thyroid gland were given, the most common being heredity, acute infectious diseases, and malignant neoplasms. All vertebrates were subject to the same laws concerning disease and abnormalities of the thyroid gland. Nephritis from any cause was a common cause of them, and when it was a cause the growth was of rapid development. Thy-

reoiditis was rare and, when present, followed an operation, or injury. Of the parasites, echinococcus and cysticercus were rare causes, while the bacilli of pneumonia, typhoid, and tuberculosis, and microorganisms of a selective type, were more frequent.

The results of disease of the thyroid gland were insanity, infection, hæmorrhage, dyspnoea, and rupture. Death might be due to any or all of these causes.

The thyroid gland was subject to nearly all forms of benign and malignant neoplasms. Their treatment he classified as: 1. Medicative. 2. Operative. Medicative treatment was of but little avail, except to palliate. Extracts benefited, but did not cure. They lessened the size of the neoplasm. Only commendable in a certain class of cases as a palliative measure, other remedies were useless. Fresh glands on ice did not produce toxic effects, and the best results were observed in chlorotic patients when raw sheep's-gland was used.

Operative treatment: Dyspnoea, stridor, rapid growth, dysphagia, deformity, exophthalmic goitre, malignancy and emaciation, one or all, he said, indicated operation. Removal of all or a part of the gland should be given the preference to the injection of iodine, zinc, iodoform, alcohol, or any other solution. Excision was more radical, safer, and required less time for recovery. Then, too, none of the neoplasm remained to be the seat of new growth, malignant or benign. All forms of new growth of the thyroid gland should be removed. Even in cases of exophthalmic goitre it should be operated on. All operative experience led to this conclusion. Great relief had been given in exophthalmic goitre.

Method: If the disease was confined to one of the two lobes without the isthmus, the diseased lobe might be completely removed, without much likelihood of recurrence of the growth. If an isthmus was present the other gland might become involved. It was probable that the disease being confined to one lobe might be due to the absence of the isthmus. So far as possible, the presence or absence of the second lobe should be determined at the time of operation. If the second lobe could not be found, the entire diseased lobe should not be removed, unless malignant.

The probabilities were that one or more supernumerary lobes were more frequently present in persons possessing but one normal lobe, no matter where the abnormal ones might be located. Supernumerary glands were more frequent upon the left side. The presence of supernumerary lobes might account for the absence of ill effects in those persons who had been subjected to the removal of an entire right or left gland.

Division of the capsule would permit of a thyroid gland being enucleated with ease and with the loss of but little blood.

The rapid pulse following removal of a thyroid gland was probably due to the rapid absorption of the thyreoidine in the process of repair. The pulse would sometimes become much more rapid for from forty-eight to one hundred hours, reaching at times 160 per minute, but it would at the end of this time subside to 80 or 90. If there was any pathological tissue that should be excised, it was that of the thyroid gland. In none of the major operations was the mortality less.

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WHOLE No. 1230.

Lectures and Addresses.

THE METHODS WHICH MAKE FOR SUCCESS IN MEDICINE IN THE TWENTIETH CENTURY.*

By T. GAILLARD THOMAS, M. D.

NEW YORK.

Graduates of the Medical Department of Cornell University: It gives me great pleasure to meet you here tonight, and to welcome you to the ranks of medicine, as legally authorized successors of those great and good men who, during the more than two thousand years which have intervened between the epoch of Hippocrates and our own time, have held aloft the banner of our guild.

Their responsibilities, their trials, their labors, and their rewards will be yours. Periods and epochs have changed many times and oft since those early days, but the trusts which are placed in your keeping, the weighty responsibilities resting upon you to the State, the public weal, and the noble profession which you will henceforth represent, are the same today as they were in the beginning, and as they will be while organized society exists and civilization holds its head above social chaos.

But a graver duty than the pleasant and cheery one of welcoming you to the sphere in life which you have selected, has been allotted to me by the grave and potent seignors who sit around me. By their desire I am called upon to look backwards into the half century in which I have labored in that same field in which you, for the next fifty years, are to toil; to cull from it such warning, advice, and suggestions as may present themselves to me; and to offer them to you as maxims which may guide your steps as they wander among the pit-falls which will beset your pathway.

You are entering the arena of life at no ordinary period, but in one of the most remarkable that the world has ever known; one in which the most wonderful discoveries follow each other with a rapidity which startles mankind; in which gigantic financial operations, owning no limit of country or of nationality, throw similar transactions of former times completely into insignificance; and one in which the

wide-spread acquirement of great wealth by individuals, surpasses entirely the wildest conceptions of the past. These powerful influences cannot fail to disturb the relations which gave character to a previous time, and I warn you to prepare yourselves for a competition which will tax your talents to the utmost, and call upon you to bring to your aid every source of strength and every atom of power.

Influenced by this thought and taking my mission of this evening in absolute seriousness, I have decided to pursue with you no primrose path of pleasure in this address, but to imitate the sage Polonius, and to strive to say what may give you hints as to the future, which will be of real service to you. It will go hard but what I shall succeed, for I look back upon fifty years of labor of just such a character as that which beckons you into the half century which lies before you; like most of you, I had to hew out my destiny unaided; and the efforts of my past must surely furnish some seed which may germinate for your profit.

Permit me to congratulate you upon two facts before I proceed. First, as I look upon you at this moment my mind goes back to a night fifty years ago, when I stood, as you do now, a newly-made doctor. But oh! how much better educated and equipped you are than I was! Times are truly changed! The advances made by American medical colleges in the instruction of students during the last half century are so great as probably to exceed your conception of them. The best work which has been done in this field is, in my judgment, the following: first, the teaching of classes in graded courses; second, the instruction of each class by sections; third the drilling of students honestly and truly at the bedside in the arts of diagnosis, prognosis, and treatment, which constitutes the pith of the whole matter; and fourth, the establishment of laboratories, capable of giving training as perfect as that which any city in Europe can offer. Upon these advantages I congratulate you.

Second, it gives me great pleasure to be able to felicitate you upon the pleasing circumstance that your young mother who sits here tonight so gracefully blushing, as she looks proudly upon her comely offspring, has astonished the profession of medicine by the eagerness and zeal with which she has shown her appreciation of the importance of the improved methods just mentioned, and by her vigorous and

* An address delivered June 4, 1902, before the graduating class of the Medical Department of Cornell University.

pronounced adoption of them. May her energy meet with its merited reward!

The theme which I have selected for the address this evening is, *The Methods which make for Success in Medicine in the Twentieth Century.*

You will recall the fact that I just now stated that the trials, the labors, and the rewards of the patriarchs of medicine would be yours. Do not imagine that any great portion of the enormous wealth which I have alluded to as marking your times will fall to your lot. If that has been your calculation, take my advice and change your occupation at once. Great wealth is never attained by the legitimate practice of your chosen profession. A competency during your career; a sufficient fortune to enable you to live in ease at its end, you may hope for with confidence; but although I, like you, have heard of great wealth acquired in the practice of medicine, I have never known the man who gained it.

And now let me define my conception of the term "success in medicine." If you look forward to a success consisting of a practice which simply enables you to support yourself and your family; living in great degree isolated, out of touch with your professional brethren, doing no public work, and cherishing no ambitions connected with the elevation of your calling and with the benefit to be conferred by it upon the community in which you live, your conception of success differs widely from mine.

Do not imagine for an instant that, in advising you how to achieve success, I mean the mere acquirement of a large practice. That this is very essential goes without saying; but the success of which I speak is one of a larger, nobler, loftier kind; one which involves your full development in your profession, the advancement of the dignity and efficiency of the calling by which you live, and the furtherance of the interests of the community of which you form a part.

There can be no question of the fact that a man's success in his life-work depends in great degree upon his fitness for the calling to which he devotes himself. We shall all agree that one of a gentle and shrinking nature would not be suitable for the rough work of the army or navy; while he might prove an ornament to the church, and would find in the nobler vocation of divinity the very place for which Providence designed him. In the same way a man of violent, combative, and passionate nature would probably fail as a priest; while he might gain great credit as a soldier, and even mount to the highest rank in this profession.

In medicine a quiet, well-balanced, amiable, and kindly nature is of the utmost value to the aspirant for favor and success—nay, even more than this—it is almost an essential.

When I cast a retrospective glance upon my ca-

reer, and recall the many talented, brilliant, charming fellows whom I have seen fail in the race, fall out of line and give place to men inferior to themselves in everything but temper, I feel as if I could not speak too strongly upon this subject. The trials of patience to which the physician is exposed; trials inflicted by persons oppressed and disordered by anxiety and sorrow; upon men worn out by prolonged watching and loss of sleep; men who perhaps have just been roused up, upon a stormy night, at the time of greatest nerve depression between three and five in the morning, are hard to bear. Even the amiable man finds them so; the selfish, nervous, irritable, and quick-tempered one is often incompetent to bear them. But in our calling they must be borne, and the physician who cannot endure them must make up his mind, in spite of talent, ability, and perhaps even genius, to give place to one, his inferior in all these qualities but his superior in temper. If even up to this auspicious night which is to put into your keeping the coveted diploma, you have suffered from this disability, I urge you to determine to put your temper under perfect control, in preparation for your life work. Do you doubt the possibility of accomplishing this? Turn to history and you will learn that the greatest man, take him all in all, whom the world has ever known, George Washington, was cursed with a most violent and uncontrollable temper when, at the age of forty-four, he took command of the armies of America. Yet by his indomitable will he learned to control it so thoroughly in the interests of the great issue which the Almighty God had entrusted to his hands, that its very existence was generally forgotten.

It matters not what be his sphere of action, the physician of the twentieth century, if he aims at a dignified and proper success, must make himself a many-sided man, and the power of doing this is not confined to men of large cities by any means. Some wise man has said, "reading makes a full man; writing, an exact man; and speaking, a ready man." Bear this maxim in mind and put it into practice. The serial medical literature of the world, and more particularly that of the United States, is immense in amount, most valuable in character, and abundantly able to keep a faithful reader in full relation with his profession. Be extravagant in your subscriptions to medical periodicals and read them faithfully. The physician who does not read faithfully and systematically, may prosper and flourish from the results of a large practice, but he can never win the full measure of that kind of success which I am mapping out for you. Do not spend your time in reading text books, but read the good monographs as they appear, and take, and read the higher class of journals carefully; for "reading makes a full man."

Should your lot in life be cast in a small town, a village, or in the country, do not be discouraged by the fact, but remember that distance is now annihilated by our modern means of travel, and do not allow it to keep you in obscurity. Always attend the annual meeting of your State medical society, and write for it accurate reports of your interesting cases, for "writing makes an exact man."

Upon appropriate occasions take part in the discussions of the societies to which you belong; learn to express your views; and before you are aware of it, you will be convinced by the influence which you exert that, "speaking makes a ready man."

With perfect sincerity, I advise you not to feel discouraged if your lot be cast in the country. Some of the most judicious physicians that I have met with, have been those who lived and practised there, far away from the city's din; and most pleasant memories of many of them I carry with me at the present time. Remember that Jenner was one of their number when he taught the world vaccination, and left it his name as an heirloom. And do not forget that Marion Sims practised in a small Southern town when he taught Europe and America how to cure that *opprobrium chirurgiæ*, vesico-vaginal fistula!

Having encouraged you as to a life in village or country, let me offset this by a warning note as to one of the great dangers of life in a city. Beware how you overlook the well established and undoubted fact that one of your profession cannot accomplish at the same time success as a physician, and as a man of society. The two spheres are essentially different, and cannot be combined. It is a case in which you cannot serve two masters.

The late Professor Alonzo Clark—the man who, of all other physicians in my time accomplished the most complete, thorough, and perfect success—once said to me in warning tones, "Show me a young physician who dines out regularly three times a week, and I will show you one who will surely curtail the limits of the success which may await him." "And why?" I asked. "Because," he replied, "such a life breaks up the habit of study; because success in medicine requires devotion to one's patients; and because gout is a great drawback to a practitioner." I doubted the wisdom of the remark thirty-five years ago. I am sure of its truth today.

The profession of medicine differs from divinity and law in this respect; they deal with ideas, while medicine deals with physical facts. They may be studied in colleges and in seminaries; medicine must be studied at the bedside of the sick, face to face with disease, and battling and striving against death. Therefore it is that you find the brightest and best doctors of every city in the world in charge of its hospitals. It is from the hospitals, which teach them

practically, that professors in colleges are selected; and, in turn, it is from the colleges, which make men able lecturers, that hospital places are filled. The hospital and the college are sisters, and walk hand in hand.

As soon as you can do so, connect yourself with one or both of these; but do not imagine that your merits are such that you will be sought after by them. Form a union with them in any capacity which gives you a foothold; then work hard and long and hopefully for preferment. When preferment comes, you may justly feel like the weary pedestrian to whom the bounty of a horse has been vouchsafed. Thereafter, you will see the glimmer of success like a bright and burning light before you; and if you have the ability to justify your selection, the haven which you seek will soon be reached.

But I am admonished of the fact that I must bring this address to a conclusion. In doing so, let me wish for each and every one of you a long and prosperous life of professional labor; hosts of kind and appreciative friends; and in the end a crowning success, which, like the lustrous Alpine glow, will illumine the evening of your days.

Original Communications.

A CASE OF PREGNANCY COMPLICATED BY PYONEPHROSIS, WITH REMARKS.

By CHARLES GREENE CUMSTON, M. D.

BOSTON, MASS.

The following case is of equal interest to both the gynæcologist and the genito-urinary surgeon, and I think that from the relative rarity of such observations I am justified in giving a somewhat detailed account of the pathological history.

The patient, a twenty-nine-year-old multipara, was referred to me with a diagnosis of a uterine tumor, complicated by pregnancy. By carefully questioning the patient as to her family history, nothing of any import could be obtained on either her father's or her mother's side.

The patient had measles and scarlet fever as a child. Menstruation made its appearance at the age of thirteen, and the function has regularly occurred every twenty-eight days, lasting five or six days, and attended with practically no pain.

The patient has been married five years, and has been delivered of two healthy children. The two labors were unattended by any complication. She has had no miscarriages. The patient, however, had considerable œdema of the lower extremities toward the end of each pregnancy, and the veins were somewhat ectatic, but both these symptoms disappeared after delivery.

About two years ago the patient was troubled

* Read at the annual meeting of the American Association of Urologists, held at Saratoga Springs, N. Y., on June 13 and 14, 1902.

for some weeks with a cystitis, which occurred for no known cause, the urine containing some pus and a little blood, which, however, soon disappeared under appropriate treatment. Other than this, the patient said that she had always been well.

Upon examination and questioning, I found that the patient was about at the end of the fourth month of her third pregnancy. About two months before her coming under my observation, her physician discovered a large tumor in the right side of the abdomen, which was occasionally the seat of severe pain, especially when any pressure was exercised over it. At the same time that the tumor was first noticed, the urine was found to contain a large amount of thick sediment and was very dark in color.

Up to the time of the appearance of the tumor, the general health had not been impaired, but as the growth increased in size the abdomen became very tense and the urine became more and more laden with sediment.

The patient was a well built young woman, with well developed muscles and a fair amount of adipose tissue. The cheeks were somewhat flushed and there was a slight fur on the tongue. There was no œdema of the limbs, and there was no headache. The appetite was good and the bowels were acting normally every day. She slept well. Temperature normal; pulse 84.

Examination of the thoracic viscera was negative, but there was found some decrease of pulmonary resonance at the base of the right lung.

The abdomen bulged forward and the umbilicus protruded. By inspection a swelling in the right side could readily be detected, extending down to the pelvic brim and bulging somewhat in the lumbar region. By palpation a tumor could easily be made out above the symphysis, its upper limit being found in the middle line, midway between the umbilicus and symphysis, which was the pregnant uterus. The limits of the tumor could not be clearly defined except toward the middle line and near the uterus. Fluctuation was thought to be present. By percussion it was found that the left side of the abdomen was apparently free from the growth, as a clear tympanitic sound could be elicited. On the right side of the abdomen, which was occupied by the tumor, complete dullness was obtained, which reached backward as far as the spine and occupied all the space between the iliac crest and the lower limit of the right lung. Percussion dullness extended directly from the uterus to the growth, and above, the liver dullness continued directly with it. By changing the position of the patient the area of dullness did not change. Ascites was thought to be absent. An attempt to palpate the left kidney proved futile, on account of the extreme abdominal distension.

Vaginal examination showed a four months' pregnant uterus, but it was impossible to palpate the tubes and ovaries, and I was unable to discover whether or not the growth was connected with the uterus.

The total quantity of urine voided in twenty-four hours was two litres. It was of acid reaction. A large quantity of dirty-white sediment accumulated at the bottom of the glass. By Esbach's

tube it was found to contain, after being filtered, five grammes of albumin to the litre. The urine drawn by catheter from the bladder was purulent and acid. Microscopically, well preserved pus cells and bladder epithelium were found, but on no slide could be any casts be discovered. Examination of the sediment showed a large quantity of bacteria, but nothing that resembled the gonococcus.

Catheterism of the ureters showed that the urine coming from the left kidney was perfectly normal, while that from the right contained all the pus that was being excreted, and a diagnosis of right pyonephrosis was made.

A few days later the ordinary lumbar incision was made and the convex aspect of the kidney was rapidly reached. After freeing it from the surrounding cellular tissue, a large incision was made into the pocket and about 1,500 c. c. of thin purulent fluid was evacuated. After this pocket was opened its interior was explored by the finger, and another fluctuating mass presented high up under the ribs and bulged somewhat into the cyst cavity. A long pair of scissors was directed by the finger against this second cyst and a free opening was made into it, giving issue to about 300 c.c. of a thick yellow pus. The cavities were freely irrigated with a sterile salt solution, after which two large drainage tubes were inserted and the cavities packed with sterile gauze.

While emptying the cysts I noted that there was a considerable amount of apparently healthy renal parenchyma, which led me to believe that if, by proper drainage, the pus cavities could be made to retract, a fairly useful kidney might be saved. The drains were connected with a urinal and the urine collected directly from the kidney revealed a large amount of detritus, many pus cells, and a large number of bacteria. The urine drawn from the bladder by catheter after the operation was clear, with a specific gravity of 1.021. The total amount obtained from the bladder in twenty-four hours was 1,100 c.c. Microscopically, not a trace of pus or blood could be found, and the urine was free from albumin.

The urine voided by the drains from the right kidney had a specific gravity of 1.010, the total quantity in twenty-four hours being 550 c.c. It contained a large amount of pus, and after being filtered, Esbach's tube showed that it contained six grammes of albumin to the litre.

The general condition of the patient remained fairly good for one week, the temperature remaining at about 38° C. (100.4° F.), and the pulse averaged about 90. The drainage from the kidney remained free, but the urine continued to contain a large amount of pus. The quantity of urine discharged by the bladder averaged about 1,200 c.c. in twenty-four hours, while that voided by the drains from the diseased kidney averaged about 400 c.c. At the end of a week it was thought advisable to remove the drainage tubes, which was done, and the sac was thoroughly washed out with sterile salt solution. During the irrigation it appeared to me that the sac had considerably decreased in size, and as the general condition of the patient remained good, I was in hope that she

would shortly recover with a fistula, which in turn would probably heal.

However, in five days after removal of the drainage tubes, although the sac had been carefully packed with wicking and free drainage appeared to be obtained by this means, the patient was taken with a chill and her temperature rapidly reached 40° C. (104° F.) and the pulse 135. I therefore decided that there was a retention of pus, and I opened up the lumbar wound, and on breaking into the kidney substance there escaped about 300 c.c. of putrid pus. By carefully exploring the kidney it was at once apparent that it was utterly useless to endeavor to save it, and I immediately decided upon nephrectomy.

As the kidney was buried in a thick lardaceous tissue, it was found necessary to extend the lumbar incision downward and toward the umbilicus, in order to give more working space, and after a most laborious and difficult dissection the kidney, which was nearly of the size of a full-term head, was removed. As I was unable to make a satisfactory pedicle, two large curved hysterectomy clamps were placed upon it and the kidney was cut off above them. The cavity left was packed with iodoform gauze and the skin incision closed, except at the point where the gauze was brought out.

The subsequent course of the patient was most satisfactory. During the first twenty-four hours 500 c.c. of urine were voided, but by an exclusive milk diet and urotropin given in the dose of 50 centigrammes (7½ grains) four times daily, and also a solution of acetate of potassium, the urine finally reached at the end of four days the satisfactory amount of 1,100 c.c.

Examination of the urine two days after the operation showed that it contained a large amount of urate of sodium, but there was no albumin, casts, or blood, and the patient was discharged well at the end of three weeks. The pregnancy continued uninterrupted and the patient was delivered of a 7½ pound baby at term without any trouble.

I forgot to mention that the clamps were left forty-eight hours on the pedicle and were then removed, just as is done in vaginal hysterectomy, and I would also remark that on two other occasions where I have found it impossible to make a satisfactory pedicle, on account of the diseased condition of the surrounding tissues, I have resorted to this method, in both cases successfully.

Examination of the specimen showed that the kidney weighed 325 grammes after having been emptied of all the fluid contained in the cystic cavities, and was, as I have already said, of about the size of a foetal head at term. The renal pelvis was dilated, forming a cyst of about the size of a large orange, while the kidney itself was composed of three cysts, the largest occupying the middle and lower thirds of the organ, while a smaller one occupied the upper third. A third cystic cavity was found at the lower tip of the organ, and contained some 50 c.c. of pus. All these cavities were lined with a thick, tenacious, dirty-gray membrane. The upper cyst was the one that was opened through the larger cyst.

About 3 centimetres of the ureter had been removed with the kidney, and it was found that it took its insertion at about the middle of the renal

pelvis, but in an oblique direction, so that it formed an acute angle with the renal pelvis.

A certain amount of renal parenchyma was found, and that quite justified my endeavor to save the organ, but upon section it was found to contain small cysts varying from the size of a pea to that of a bean, filled with a purulent liquid.

The pelvis of the kidney and the ureter were much thickened, and the lumen of the latter appeared considerably larger than normal, but at the point where the ureter entered the pelvis the lumen was considerably narrowed, forming almost a stricture.

Microscopically, the renal parenchyma showed that the glomeruli and tubules were quite normal in structure, but that there was a considerable increase of connective tissue developing. In other parts of the field the uriniferous tubes were compressed and atrophied by an accumulation of highly colored round cells, which increased in quantity as the cyst was approached, and finally the tubules had disappeared completely and been largely replaced by closely arranged round cells.

The walls of the pelvis of the kidney were composed of a thickened mucous membrane and the muscular layer, both of which were interspersed with an abundant proliferation of round cells.

Now, given the history of this case, the patient having apparently been quite well until the evident development of the disease which made it an acute condition, the question arises whether or not an hydro-nephrotic kidney of congenital origin had existed, which secondarily, by infection, produced a pyonephrosis. This would seem to me fairly probable, because the symptom and increase in size of the cystic formation only began at the time septic infection of the kidney had taken place.

We also have an instance here of an open pyonephrosis, thus allowing the kidney to empty itself of its contents, although the upper end of the ureter, at its junction with the renal pelvis, was contracted, but not to such a degree as to prevent the escape of the fluid from the kidney, and the rest of the canal must have been perfectly patent, as before the operation no difficulty was found in passing the ureteral catheter up to the pelvis.

It is probable that, after infection had occurred, a certain amount of purulent liquid was retained in the cysts and thus gave rise to a visible increase in the size of the tumor, but the infection was of a mild grade, because there were wanting all the symptoms of a septic condition as well as those of uræmic poisoning.

The experimental researches of Cohnheim have demonstrated that the most extensive changes in the kidney are more frequently found in patent hydro-nephrosis and pyonephrosis, because if the closure is incomplete or the channel only temporarily obstructed, the existing secreting parenchyma may be preserved for a long time, and the quantity of liquid gradually increasing from the retention finally pro-

duces a pressure atrophy of the renal parenchyma.

Owing to the fact that the walls of the cyst adapt themselves as the process goes on to a higher pressure and yield, owing to their elasticity, these open hydronephroses give rise to very large cysts, whereas in the closed hydronephroses the disproportionately rapidly increasing high pressure soon produces disturbances of the circulation, and thereby suppression of the secretory function is produced, and in such cases only a moderately developed hydronephrosis is present.

I desire to call particular attention to the narrowing of the lumen of the ureter where it joined the renal pelvis in this case. Virchow was the first to point out this fold-like formation, and we all are familiar with those singular instances where, although the ureter is patent, there nevertheless exists an extreme degree of hydronephrosis, and if the specimen is carefully examined, a valve-like obstacle due to a fold in the mucous membrane of the ureter will be found, which is produced by the oblique insertion of this tube into the renal pelvis. Orth also believes that the oblique entrance of the ureter into the renal pelvis, with the resulting valve-like formation which this produces, is a frequent ætiological factor in the formation of cystic kidney, while Simon, on the other hand, considers that the hydronephrosis is the cause of the valvular formation. The reason that he gives for this is that the hydronephrotic tumor, as it grows, pulls upon the ureter at the pelvic opening, so as to form an acute angle, which produces at this point in the lumen of the ureter a valve-like formation.

In opposition to this theory, Englisch has pointed out the frequency of congenital stenosis and valve-like formations, which are more prone to arise in the lumen of the ureter at those points where normally a certain narrowing exists. Newly born children often have valve-like formations at the point of insertion of the ureter, and these are very slow to disappear.

Küster explains these folds as due to a catarrhal condition of the renal pelvis which produces a swelling of the mucous membrane resulting in a stenosis of the lumen of the ureter and finally a complete closure, and then, in consequence of the increased intrarenal pressure, the inflamed and tumefied mucous membrane is displaced in the direction of the flow of urine and a valve is formed which is an increasing obstacle to the discharge of urine, and when the distention has reached a certain degree the change in the position of the organ, as pointed out by Simon, can complete the closure of the duct, or even cause a direct compression of the ureter from the development of the cyst.

The oblique insertion of the ureter and the formation of valves are of practical importance as ætiolog-

ical factors of hydronephrosis. In those instances where the obstacle to the flow of urine is due to a ureter obliquely inserted into the pelvis, but not at its lowest part, the condition may be corrected by splitting the walls of the pelvis and ureter as far as the lowest limit of the renal pelvis, and then suturing the ureter and pelvis together. This has been successfully performed by Trendelenburg, Bardenheuer, Helferich, and others.

I should, however, be encroaching upon your valuable time if I entered upon the details of these operative techniques, but I cannot refrain from briefly mentioning one case of hydronephrosis produced by a valve-like formation in the ureter which was operated on by Bardenheuer. An incision was made through the fold in the enlarged renal pelvis as far as the commencement of the ureter, which started at the lower border of the dilated pelvis and which ran at the side contiguous to the ureter up to the point of the valve, and then through the latter as far as the side of the ureter which was next to the kidney. The borders of the incision were retracted and a procedure similar to the Heinecke-Mikulicz operation for stenosis of the pylorus was done, and the borders were sutured so that the opening became vertical in relation to the original incision.

A few words now regarding the question of nephrotomy being justified after the recognition of the pathological changes with which we were dealing in this case. As to nephrotomy and primary nephrectomy in cases of pyonephrosis and hydronephrosis, opinions of surgeons differ vastly at the present time. Some authorities speak decidedly in favor of nephrotomy as long as there is any apparently healthy renal parenchyma capable of secretion, except of course in those very serious cases of pyonephrosis where the entire organ is transformed into a number of pus pockets, while others prefer nephrectomy more frequently than is up to the present time practised in hydronephrosis and pyonephrosis.

Perthes has pointed out a physiological fact that the presence of large or small quantity of renal parenchyma in the wall of the sac in no way means that we can draw any conclusion as to the physiological value therein represented for the secretion of urine. The transformation of a hydronephrotic kidney into an organ which again would be capable of carrying on its functions is, according to this authority, quite an impossibility, because the walls of hydronephrotic kidneys show the plainest manifestation of the presence of an interstitial nephritis, and in his way of thinking the functional value of a closed pyonephrosis is nil.

This latter opinion is probably a correct one, but according to the researches carried out by Guth and Braun, the parenchyma of a single hydronephrotic

kidney can accomplish all the necessary secretion demanded by the entire organism, and this has also been proved experimentally on dogs by Tuffier.

As I have already pointed out, an open hydronephrosis produces much greater changes in the kidney than a closed one, but by nephrotomy another outlet is given to the urine and the obstructed ureter can be rendered permeable if the obstacle is a removable one. After this it naturally ensues that the impaired parenchyma can again renew its physiological functions, and it has been pointed out by Wagner that nephrotomy results in a cure of the hydronephrosis *without a fistula* in thirty per cent. of all cases operated on. This same authority points out that nephrectomy is contraindicated when the hydronephrotic sac has not been interfered with surgically, and should only be considered a secondary operation when an incurable fistula results from the nephrotomy, provided that other operative means for preserving the *status quo*, such for example as a resection of the ureter, appears inadvisable.

From my own experience I am inclined to agree with this reasoning, and in the case here reported nephrotomy, I believe, was the proper course to pursue primarily, and as this secured inefficient drainage for the pus, secondary nephrectomy was indicated in order to avoid the disastrous consequences of a general sepsis. In this case, however, the conditions differed somewhat from ordinary instances of this kind, on account of the presence of pregnancy, and it was of the utmost importance to perform an operation whose influence on the organism in general should be felt as little as possible. By palpation, a second healthy kidney was impossible to detect, but by catheterism of the ureters it was found to exist beyond a doubt.

Newman has collected 655 cases of acquired hydronephrosis, in 217 of which the affection existed in one kidney only, while in 448 cases it was bilateral. Consequently the surgeon should never expect that a hydronephrotic kidney can undertake to fulfill the functions of its fellow when the latter has been removed. Morris's statistics are very similar to Newman's. He found that, out of 142 cases of hydronephrosis, the affection occurred in both organs 106 times and in one organ only 36 times, while Roberts found both kidneys affected in 13 out of 20 cases of hydronephrosis. Hildebrand has reported a case where nephrectomy had been done on a left hydronephrotic kidney, and three weeks after the operation death resulted with symptoms of uræmia. At the necropsy hydronephrosis of the right kidney was found, and Hildebrand therefore very properly advises that, in all cases where pus can be drained away by nephrotomy, a fistula should be made, because one should assume that the exact condition of the other kidney is with difficulty ascertained. If now

the fistula gives rise to much inconvenience and if the existence of a second healthy kidney appears to be proved, secondary nephrectomy may be undertaken.

During the operation of nephrectomy for a hydronephrotic kidney Socin discovered that he was dealing with a horseshoe kidney, but for all that he was able to complete the operation, because the union of the two organs was composed of fibrous tissue which was within reach, and consequently separation was accomplished. Socin says, relating to this case, that in such cases, where the tumor lies toward the median line and takes on a development in a forward direction, one should be suspicious of horseshoe kidney.

Besides double hydronephrosis and horseshoe kidney, we must also take into consideration the congenital absence of one organ or an acquired atrophy of one kidney and the functional troubles ensuing from an acute or chronic affection. Ballowitz gives the following figures regarding this subject:

Brown, in 12,000 autopsies, found a congenital absence on one side in three cases: Morris, out of 8,008 post-mortems, found one kidney absent in two; Sangalli, out of 5,348 autopsies, found this condition in three subjects; Menzies, out of 1,790 autopsies, found it in two cases; Bootes found it once out of 600; while Ballowitz found it once out of 617.

In those instances where a person is in possession of only one kidney, it is quite probable that this organ becomes overworked and consequently diseased, and it is for this reason, perhaps, that subjects with a single kidney are more frequently met with on the operating table than in the post-mortem room. The practical importance of the question of congenital absence of one kidney must not be overlooked; for example, Malthe operated for hydronephrosis in a young woman, twenty years of age, the affection being on the left side. The sac, which was of about the size of a child's head, was opened and stitched to the abdominal walls. Three weeks later symptoms of pyelitis showed themselves, and the patient died uræmic. At the autopsy it was found that the right kidney had remained as a rudimentary embryonal organ, and was represented by a cyst of the size of a hazelnut. Rupprecht did a nephrectomy for hydronephrosis in a child, who died in uræmic coma two days later. At the autopsy the ureter of the remaining kidney contained three folds in the mucosa, dividing it into four sections, and this resulted in a bend which produced occlusion.

Championnière reports the case of a patient dying of uræmia after nephrotomy, it being found after death the remaining kidney was undersized. Polk removed a kidney situated in the iliac fossa in

a girl nineteen years of age. The patient died shortly after the operation, and at the autopsy congenital absence of the other kidney was discovered. There has been an interesting case reported by Taylor, that of a young man who fell from a considerable height, striking on the left lumbar region. The patient died very soon after the injury to his kidney, which had been ruptured, and it was found that it was the only one he possessed. A girl, twenty-five years old, had hydronephrosis of the left kidney for which a plastic operation had been done. Nine days after the operation the patient expired, the autopsy showing that the entire right kidney had become transformed into a hydronephrosis, the ureter being completely obliterated to the extent of one centimetre. Bardenheuer has recorded a case of an operation for hydronephrosis in a laborer, thirty-two years old, during the course of which the ureter had been torn, and consequently nephrectomy was done. Upon examination of the organ after its removal, its parenchyma appeared to have been completely destroyed. The presence of the left kidney had been ascertained by palpation. The patient died from anuria eleven days later, and the autopsy showed that the left kidney was absent. Barker did a nephrotomy for a hydronephrosis on the right side, from which a fistula resulted which could not be made to close, so that the patient desired to have the kidney removed. He, however, complained of slight pain in the left side, in the renal region, and for this reason Barker desisted from operating. The patient died eighteen months later, and it was then found that the right kidney was more nearly normal than the left one, which had become transformed into a large pus sac.

It is of essential importance, in order to avoid unfortunate outcomes in renal surgery, to make sure before operating of the condition of the other kidney. Many methods have been given for ascertaining the presence of the second kidney. The rectal exploration, as advocated and practised by Simon, is practically abandoned, and with good reason, as there is great danger of rupturing the intestine. Bimanual palpation of the abdomen, with the patient in various postures, may give excellent results to those whose hand is trained, and, at any rate, a fair amount of certainty as to the presence or absence of a kidney may be assured. The chances of a successful examination require that the patient be not too stout, that the abdominal walls are not put on the stretch, and that there exists a certain space between the lower rib and the ilium. Percussion of the kidney is of course possible, but it does not always succeed, and I believe gives uncertain results.

Without any doubt catheterism of the ureters is by far the surest means of ascertaining the presence of both kidneys, as well as the presence of pathological

conditions of one or both. If it is combined with cystoscopy, much light may be thrown on the case. It is evident that if a clear urine flows from the ureter, this does not suffice for the surgeon to affirm that the kidney from which the urine comes is healthy, and many renal diseases are not diagnosed, simply because the urine has not undergone any pathological change.

We should bear in mind in resorting to catheterism of the ureters that an apparently normal urine may come from a diseased kidney, and that many serious pathological changes in the kidney are not accompanied by the presence of albumin in the urine. The diagnosis of horseshoe kidney by ureteral catheterism is practically impossible, for one may obtain a normal urine from one and pathological urine from the other ureter, although we may be dealing with a horseshoe kidney.

Israel believes that it is safer, in those cases where nephrectomy is indicated for a kidney on which nephrotomy has already been done, to proceed in the following manner: The ureter of the diseased kidney is stitched to the skin, so that a uretero-abdominal fistula is secured, and consequently only the secretion from the other kidney would reach the bladder. Many operators prefer the transperitoneal operation, because one is able to ascertain the condition of the second kidney, and in cases of hydronephrosis, producing considerable abdominal tension a direct bimanual palpation is often most unsatisfactory.

Exploratory laparotomy has been recommended by Thornton and others, even if the operation is to be performed through the lumbar region. Such a procedure appears to me to greatly increase the danger of the operation, and in most respects to be unjustifiable unless some very distinct indication for its performance is present. It would be much better to resort to an exploratory lumbar incision when it is necessary to examine the other kidney. The absence or presence of the condition can be readily ascertained through a very small incision admitting two fingers.

The number of cases of operations on the kidney during pregnancy is relatively small, at least if one may judge from the number of reported cases, and I have only been able to find three. One was recorded by Lohmer in his inaugural dissertation where nephrotomy followed by nephrectomy was done during the fifth month of pregnancy, the patient making a complete recovery and being delivered at term of a healthy child. Kosinsky has recorded a case of nephrectomy undertaken in the fourth month of pregnancy. The pregnancy was in no way disturbed by the operation. Israel did nephrectomy for pyonephrosis in a pregnant woman. The disease had apparently existed in a latent form

for about a year and a half before she became pregnant, but after this had taken place, the affection made such rapid progress that the patient was rapidly rendered seriously ill. The result of the operation was satisfactory, the patient recovering, and a normal labor ensued. One thing should be noted in connection with pyonephrosis and pregnancy, and that is that the renal condition is rendered more severe by the presence of gestation, and on account of the rapid development and progress of the disease of the kidney, active measures must be resorted to.

The obstetrician will occasionally attend women during pregnancy who have only one kidney, its fellow having previously been removed by the surgeon. A pyonephrotic kidney had been removed, and in another case nephrectomy had been done on account of a ureterovaginal fistula which could not be closed. In both these patients pregnancy went to term and birth was normal. In Schramm's case the patient had had the right kidney removed, and pregnancy and labor were practically normal. During the fifth month, however, the quantity of urine became greatly increased and it contained a considerable amount of albumin, this being attributed by Schramm to either a disturbed circulation from compression of the left ureter and renal vessels, or explained simply as a consequence of pregnancy, for while there is circulatory resistance which the heart must overcome on account of a compensatory hypertrophy of the kidney which has lost its fellow, this resistance will naturally increase from the presence of pregnancy. Schramm sums up by saying that pregnancy, birth, and labor may be gone through with without any injury to the health of the patient having but one kidney, but it is probable that such a patient would have less resistance should she be afflicted by chronic nephritis or an attack of eclampsia, which would be fatal to her.

871 BEACON STREET.

For Desquamation of the Tongue.—The *Revue médicale* for April 9th ascribes the following local application for the painful denudation of the epithelium of the tongue which results from jagged teeth, certain gastro-intestinal disorders, etc., and which renders both eating and speaking a small misery, to Besnier:

℞ Cocaine hydrochloride 1 grain
 Balsam of Peru..... }of each 20 grains
 Boric acid..... }
 Petrolatum 1½ ounce
 M. ft. ungt. To be applied twice daily.

For Leucorrhœa.—The *Gazetta medica lombarda* for April 13th gives the following:

℞ Potassium chlorate 1½ ounce
 Tincture of opium..... 1 "
 Tar water 1 quart

M. Half a tumblerful in a quart of water for an injection morning and evening.

CEREBRAL LOCALIZATION AND BRAIN FUNCTION.

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 PROFESSOR OF NERVOUS AND MENTAL DISEASES IN THE CHICAGO CLINICAL SCHOOL.

(Concluded from page 1095.)

The *optic thalami* are clearly in close relationship with the general and special sensory areas of the cortex. The expression of the emotions is somehow connected with these ganglia, for when they are involved in cases of cerebral paralysis, the involuntary manifestation of delight, joy, sorrow, disgust, etc., seems to be impossible. The psychic reflexes such as laughing and crying are disturbed. Lesions of the posterior part of the thalami, namely the pulvinar, cause partial blindness, though this is not absolutely certain. It is said that a tumor of the pulvinar and adjacent parts will produce a hemianopsia which may be distinguished from a hemianopsia of occipitocortical origin by the hemiopic pupillary reaction, since these primary visual centres control the movements of the pupils through the third nerve. Disturbances of hearing, taste, smell, and the tactile and general muscular senses have all been attributed to disease of the optic thalami, but none of them have been positively established. Modifications of coordination and even general muscular atrophy on the opposite side of the body have also been seen. It is obvious that as the optic thalami are closely connected with the corresponding cortical centres, a differential diagnosis between a thalamic and a cortical lesion is quite impossible. In a case of a lesion confined solely to this ganglion, reported by Hunter, there was as usual a loss of the senses of smell, of sight, of hearing and of touch; the woman sank gradually and remained a stranger to all external impressions. The extensive character of these symptoms would of course suggest a basal rather than a cortical lesion, but even in such a case it would be difficult to say just how much of this symptomatology was due to pressure upon the internal capsule rather than injury to the thalami. In spite of our fairly accurate knowledge of the anatomical connections of the basal ganglia, we know very little about the functions of this part of the brain. Though Bechterew regards these ganglia as reflex organs controlling the muscular apparatus by means of both centrifugal and centripetal fibers, and though he, with Nothnagel and Brissaud, looks upon the optic thalamus as a centre for the involuntary automatic

movements, the subconscious, non-volitional psycho-reflexes of the body, his views are still largely hypothetical. Involuntary movements have been observed in disease of the thalamus, and Nothnagel has shown that the same cause will give rise to a crossed paralysis "observed only in laughing while the nerve still obeys the will" (Oppenheim). Still more questionable than all this are the views of Bechterew, Schiff, Lussana, Sinkler, and others that the cardiac, gastric, intestinal, sexual, vasomotor, secretory, and trophic centres are located in the optic thalamus. In a word then, the basal ganglia do not at the present day present any definite localizing symptoms, and granting that they did, it would scarcely be of much practical value to us beyond the making of a diagnosis excluding the cortex, for these ganglia are not amenable to surgical interference.

The *anterior corpora quadrigemina*, together with the *external geniculate bodies*, constitute the primary centres for sight. The latter seem to be the chief terminus of the optic fibres, and in this respect are closely associated with the pulvinar. Bechterew alleges as a result of his experiments that lesions of the anterior quadrigeminal bodies produce blindness, but this has not been observed in man. Their relationship to the pupillary reflex and ciliary muscles (Heuschen, von Monakow) is still problematical. Stilling believed that some of the fibres of the optic tract could be traced to the *corpora subthalamica*, but in regard to this there is no certainty. No localizing symptoms are known in connection with Luys's body, though much is said about its rôle in the maintenance of equilibrium and of coordination. The same is said, however, of the corpora quadrigemina, the geniculate bodies, and pretty nearly all the basal ganglia, all of which brings to mind the words of Foster, who, when commenting upon the interpolation of ganglionic masses in the course of a continuous tract, such, for instance, as the optic tract, says: "All day long and every day, multitudinous afferent impulses from eye and ear and skin and muscle and other tissues and organs are streaming into our nervous system. . . . By the checks and counterchecks of cerebral and spinal activities all these impulses are drilled and marshaled and kept in orderly array till a movement is called for; and thus we are able to execute at will the most complex bodily manœuvres, knowing only *why* and unconscious or but dimly conscious *how* we carry them out."

The *posterior corpora quadrigemina* and *internal geniculate bodies* are usually given the function of controlling the reflex movements associated with hearing. Von Monakow is not fully satisfied that the internal geniculate bodies have anything to do with audition. Fibres from the cerebellum enter

both the posterior quadrigeminal tubercles and the internal geniculates, so that one of the signs of lesion in or near them is disturbed equilibrium. Beyond this we know of no symptoms that are produced by focal lesions limited solely to the corpora quadrigemina and geniculate bodies.

The *red nucleus of the tegmentum* belongs to the cerebellar system, and therefore subserves in part the maintenance of equilibrium. The nucleus dentatus, the olivary body, the red nucleus, and the gray matter of the pons all bear a general relationship to the cerebellar cortex the same as the corpus striatum and the optic thalamus do to the cerebral cortex. They all connect ultimately with the anterior horns of the cord. No special localizing symptom can therefore be assigned to the red nucleus.

Lesions of the *corpora mamillaria* are not known by any localizing signs.

Tumors of the *hypophysis*, especially of the anterior part of it, are so often associated with the general symptomatology of acromegaly that they have almost come to be regarded as the cause of this disease. Histological structure and embryological development both demonstrate that the anterior part of the pituitary body is a pharyngeal, glandular organ rather than a part of the cerebrum, a fact which might explain in part the relationship between it and acromegaly. In the *Revista sperimentale di freniatria*, vol. xviii, December 31, 1892, is a report of the results of the destruction of the pituitary gland in thirty experiments upon dogs and cats. Complete destruction proved rapidly fatal; partial destruction, less rapidly. The animal was profoundly prostrated and exhibited a change of character. There was muscular weakness with clonic-tonic convulsions. The breathing became difficult. Anorexia alternated with bulimia. Alkaline polyuria was present, accompanied by polydipsia, depressed temperature, and emaciation out of all proportion to the anorexia. The inference was drawn that the destruction of the gland eventuated in the formation and accumulation of some special toxic substance within the organism. The localizing symptoms of slow disease in this gland are therefore neighborhood symptoms, acromegaly and some other signs of general emaciation. Among the neighborhood symptoms that should be closely studied in suspected tumor are such as are referable to involvement of the optic chiasm, the circle of Willis, and the structures in and about the third ventricle.

Lesions of the *epiphysis* can only be suspected from neighborhood symptoms which point to implication of the optic thalami and the parts about the midbrain. Such symptoms, however, are usually too general to be of any very great value in making a localization diagnosis.

Focal disease of the *crura cerebri* is rare, but when present may be recognized by a hemiplegia and possibly a hemianæsthesia. There is no way, however, of distinguishing such a lesion from one involving the corresponding motor and sensory areas of the cortex, except by remembering that the sensory-motor area is much more confined in the *crura* than in the cortex, and hence will exhibit a more widespread set of symptoms with the same-sized lesion. In tumor of the *crura*, furthermore, the third nerve will in all probability be implicated, giving rise to a crossed paralysis, a hemiplegia alternans. In this form of hemiplegia the degeneration occurs in the central neurone for the body and the peripheral neurone for the eye; therefore the body muscles exhibit a spastic form of paralysis while those for the eye are affected with a flaccid paralysis and degenerative atrophy.

The localization of lesions in the *pons* and the *medulla* is largely a matter of remembering the location and arrangement of the cranial nerve nuclei. Symptoms showing an involvement of the pyramidal tracts are the principal ones in pontile lesions. Tumors of the *pons* often cause conjugate deviation of the eyes, which, unlike the same symptom when produced by cerebral disease, is in a direction away from the side of the lesion. Especially true is this of tumors lying near the cephalic border of the *pons*. Lesions lying above a horizontal line drawn roughly through the points of emergence of the trigeminal nerves cause a hemiplegia and facial paralysis on the opposite side of the body, also a probable involvement of the third nerve. Lesions below this line produce a hemiplegia of the opposite side of the body and paralysis of the same side of the face. This facial paralysis is central and must be distinguished from that caused by disease of the facial root fibres or nuclei. The electrical reactions will not be those of a peripheral paralysis; the paralysis itself will be more or less incomplete, though more pronounced, than a paralysis due to a lesion of the facial tract higher up in the pyramidal paths or in the cortex. Tumors upon either side of the *pons* which encroach upon the peduncles give rise to forced movements of the body, the movements being either toward or away from the seat of the lesion. Vasomotor phenomena, such as pallor, flushing, temperature changes, mucous hæmorrhages, and epistaxis, have all been attributed to disease of the *pons*. Disturbances of hearing and of taste have been observed by Mills in disease of the lateral aspect of the *pons*. Vertigo, ataxia, and trismus may even occur as irritative symptoms of pontile lesions.

Most authors declare that no known symptoms result from lesions in the lateral lobes of the *cerebellum*. All localizations in this part of the brain

are to be referred to the middle lobe or vermis. Disease of this lobe is supposed to be indicated by disturbances of equilibrium, forced movements, and a peculiar gait known as cerebellar ataxia. Such is the teaching of Nothnagel. It should be remembered, however, that in the middle lobe decussate all the tracts that course from all parts of the cerebellar cortex, and that it may be these tracts that are especially affected in disease of the vermis. Kuh, of this city, says he has seen a case in which an angiomasarcoma had almost totally destroyed the middle lobe, and yet there never was any indication of incoordination. Mills does not regard the *cerebellum* in any part as a latent region. In tumors of the lateral lobes the general symptoms of an encephalic growth receive a special cerebellar stamp. The vomiting, vertigo, and optic neuritis, which is more frequent in cases of cerebellar tumor than of tumors elsewhere in the encephalon, are more or less increased and are accompanied by signs of compression upon the neighboring parts of the *medulla* and *corpora quadrigemina*. Most of the symptoms attributed to cerebellar disease are really pressure symptoms. The vertigo, vomiting, and headache can only be considered as valuable localizing signs by exclusion of other parts of the brain. Incoordination, vertigo, and dysarthria, or scanning speech, are the only symptoms that may be said to more or less definitely indicate a cerebellar lesion. With these nystagmus and occipital headache are highly suspicious. Jackson and Russel have credited the *cerebellum* with a *special* influence upon the great truncal muscles, but this is probably due in part to its general coordinating function. On account of the wide connection of this part of the brain with almost all the other parts of the encephalon above and the spinal cord below, the general function of it is believed to be that of securing the higher automatic and psycho-reflex movements. Even its great function of maintaining the equilibrium is in all probability due to its relationship to the eighth or space-sense nerve. The wonder, therefore, is that the localizing symptoms in connection with the *cerebellum* are as definite as they are.

According to Bechterew, the *olivary bodies* subserve the function of coordination, the impulses reaching the *cerebellum* by way of the decussating cerebello-olivary tract. No known localization symptoms have as yet been attributed directly to the olives. According to the same authority, the superior olives act as a reflex centre for correlating the movements of the head and eyes with auditory impressions.

A consideration of the localizing symptoms in connection with the pontile, nodal, and cranial nuclei would involve a discussion of the cranial nerves.

Thus far I have attempted to give a brief résumé of the modern views upon the sensory motor functions of the brain, and in doing so I have incidentally pointed out the localization symptoms of focal disease within the encephalic mass. The localization of the mind and the relationship of these sensory motor functions to mentalization is a vastly more difficult problem. Nevertheless I will briefly attempt to indicate the probable direction which its future solution will take.

Luys long ago remarked that certain convolutions were distended and hypertrophied when certain mental symptoms were present. In cases of delirium with delusions and hallucinations he found a pronounced gibbosity of the paracentral lobule to which a strictly motor function is usually assigned. Clinical observation has so far shown that only the motor zone possesses epileptogenous characteristics, though with epilepsy there are associated many sensory phenomena. It is unfortunate that in Luys's observations no mention was made as to whether the delusions and hallucinations partook of the motor rather than of the sensory type; that is, whether they were mental representations of abnormal kinesis or æsthesia. They seemed to show, at all events, that the cortical areas, both motor and sensory, are ideational and psychic, psychomotor and psychosensory rather than simply organic. Mickle showed that hallucinations were due mostly to lesions in the sensory centres of the brain. Disease of the angular gyrus (?), according to this author, produced visual hallucinations, and of the temporal gyrus, auditory, but in neither case to the full extent that one would have been justified in expecting. This shows of course that sight and hearing are not dependent upon these centres solely.

The cells of the sensory areas are preeminently receptive, and neither physiological experiment nor clinicopathological observation has yet proved that they are in any way emissive, except so far as they may send inhibitory impulses into the motor and into other sensory centres whereby there may be such a thing as a tactile paralysis or a sensory aphasia. There can be little doubt that these sensory cells are connected, mediately or immediately, with the motor cells of the cortex. These two sets of cells, thus intimately associated, form the summit, or bend, as it were, of the arc about which travel certain sensory motor impulses, and in all likelihood constitute the true physical basis of mind. Von Monakow declared at the Thirteenth International Medical Congress, held in 1900, that he believed that the diverse elements which had to do with the psychical functions were scattered all over the entire cerebral cortex. The gross character of the general sensibility and movements of the body, as compared with the special senses, necessitates a

larger and grosser development of the centres that subserve the former functions than those that subserve the latter. This may be the reason, too, why they are more readily determined than the latter. In connection with sight and hearing, however, there is pretty conclusive proof that the sensory and motor cells are in close juxtaposition or at least functional association. It is a warrantable inference therefore that the same ideational centres cap, as it were, the arcs about which play the afferent and efferent impulses from the eye and ear. Hence I take it that the cerebral cortex is, after all, only a grand reflex centre, the summit of the highest reflex arc. It is far more delicately organized, more richly endowed with elements, and more keenly specialized than the reflex centres of the cord, but in all other respects it is quite comparable to the latter, both functionally and structurally.

The morphological and embryological development of the brain throws a flood of light upon the relations existing between the motor and sensory elements. Among the invertebrates there is, strictly speaking, no such brain or spinal cord as we find among the higher order of animals. Nevertheless, the spinal cord of the latter is clearly foreshadowed in the series of sensory-motor ganglia with their respective projecting nerves found in the individual segments of the invertebrate. We know that in the articulates and insects each segment is furnished as it were, with a little brain of its own, which is nothing more nor less than the summit of the reflex arc for that particular segment. We furthermore know that the ganglia of the more forward segments of the creature are but a hyperdevelopment, caused by an increase of local function, of that part of the primitive cord or elementary chain of ganglia. The explanation of the cranial nerves is only possible upon a study of them from the evolutionary and embryological standpoint; for whereas the visceral components of some of them, as for instance, the vagus, are still traceable to their primitive segmental origin, others have disappeared or become incorporated with adjoining sensory and motor nerves as to quite obscure their primitive simple arrangement. In the lower cord the visceral components of the segmental nerve supply have completely disappeared or been replaced by the sympathetic, leaving only the cutaneous and muscular nerve supply represented in the posterior and anterior roots. All of which proves the primitive segmental structure of the entire cerebrospinal axis. In some of the higher representatives of the worms and insects the ganglia of the most anterior part of the body become massed together and undergo a somewhat fuller development to subserve the purpose and function of special senses. In this way they assume in a measure the general characteristics of the vertebrate

brain, and in their further phylogenetic development become so complex and changed in form and location as to involve their corresponding nerves in the same confused and complicated condition. Hence the absence of that simplicity among the cranial nerves that we see in the arrangement of the spinal nerves.

Note the exquisite arrangement—exquisite for simplicity—of the nervous system of the white ant (*Termes*), of the fly (*Musca*), and of the scorpion spider (*Thelyphonus caudatus*). In all of these creatures the various segmental ganglia are connected with each other like the cells of an electric battery. Some of them are so far advanced in development that they simulate, without representing, the brain and spinal cord of the highest order of animals. In the vertebrates and even in their highest representatives, man and the apes, the primitive invertebrate structure of the whole cerebrospinal axis is not wholly lost. As Owen says, a vertebrate is a clothed sum of segments, and therefore is nothing but a higher invertebrate. In the lowest vertebrate, the amphioxus, there is only a spinal cord without, comparatively speaking, any brain; and in all of its habits this humble creature closely resembles the invertebrates. Whether it be finally accepted or not that the human skull is composed of a number of metamorphosed vertebræ, the embryological development of the brain and spinal cord out of the one continuous germ layer and the remarkable similarity of the brain and cord in their more gross structure and functions, are all extremely indicative of the primitive characteristics of the encephalon of man. If there be any truth whatever in the principle of evolution, it seems to me that it is not irrational to look upon the brain of the highest vertebrates as a more highly developed portion of the spinal marrow or ganglia of the cord lying most frontal.

In speaking of what he calls the neurone-complex in its relation to brain function, von Monakow says that it is the sum of individual neurones, which articulate one from the other, forming progressively coordinate systems (projection systems of Meynert), of which systems the neurones become greater and greater in extent as they approach the cortex (cells of projection and association) the minimum of which is necessary to produce in the adult a simple nervous act such as a luminous impression. Romanes, in his *Mental Evolution in Animals*, adopts a somewhat similar view when he undertakes an explanation of consciousness and its dependence upon the integrity of the cerebral cortex; for he likens cortical activity to the reflex function of the lower parts of the central nervous system, and then says that consciousness is the result of the increased resistance which the original

sensory impulses meet with in their passage through the more highly developed complex and intricate structure of the cortex. As von Monakow notes, the sensory tracts, upon which consciousness and intellection primarily depend, are composed of a great number of these "neurone-complexes," all of a similar nature, the more central of which are myelinated first, while the more peripheral ones are myelinated later.

If all this be so, we should expect some similarity between the arrangement of the sensory-motor elements of the brain and those of the vertebral segments of the cord. The motor cells would not be identical with but might lie in close proximity and in intimate relationship with the corresponding sensory cells. The extreme simplicity of the arrangement of the celis in the cord is of course quite obliterated in the brain by the overcrowding of so vast a number of nervous elements in so confined a space as the cranium. The rolling about of the encephalic ganglia in their embryological and evolutionary development, so as to accommodate themselves to the constrained limits of the skull, results in a more or less complete disappearance of that relative and simple arrangement of the sensory and motor elements seen in the vertebral segments of the cord. We can clearly recognize, however, that the ganglia and cerebral cortex are like the centres of the sensory motor reflex arcs found in the cornua of the cord. It is observable, for instance, in the relative arrangement and mutual development and dependence of the motor and sensory areas of the brain. General sensation is the least specialized of man's sensory functions, and being coextensive with the entire surface of the body, proves man's connection with the lower animals. The contemporaneous development, the similarity in extent and the relative anteroposterior location of the cortical sensory and motor areas, all reveal their connection with similarly related parts of the body and their homology with the sensory-motor arcs of the cord. Their unusual development in size and functional activity gives them a preponderance over the corresponding segmental elements of the cord, and in their function, especially, makes them to appear as though they were voluntary while the latter are involuntary. But voluntary and involuntary are relative terms, merely expressing different degrees of the same form of nervous activity. The psychic functions of the cerebral cortex are involuntary quite as much, if not in so glaring a manner, as are the involuntary functions of the various segments of the cord. They are both alike a form of reflex action, but instead of the cerebral reflexes being direct and unconscious, as the spinal reflexes are, the more sensitively and highly organized character of the cortex causes them to assume the nature of

consciousness and self-will, while the connection of the cortex with the segments of the cord, as these in turn are again connected with one another, causes the cortical reflexes to be transmitted and perceived through the medium of the spinal centres rather than directly from the periphery of the body. In regard to the special senses of sight and hearing, the reflex sensory-motor arc does not pass through the cord or its ganglia, but is limited solely to the encephalic ganglia, while their sensory elements are always posterior to and more or less in close proximity with the motor elements just as they are in the spinal segments.

The bilaterality of the cord, both in structure and in function, is duplicated in that of the encephalon. At the session of the Société de biologie de Paris, May 25, 1889, M. Dupuy reported a case that showed the identity of the two hemispheres of the brain in regard to function. The patient possessed the power of moving the two eyes in different directions simultaneously. Even the perceptive centres seemed to be distinct, in spite of the opinion of Horsley to the contrary, for the young woman saw objects with one eye, and when she tried to use both eyes together to view the same object she was overcome with dizziness. Magnan has had four cases of this sort, one of which he reported in full. The patient heard one class of statements in one ear and another in the opposite ear. Agreeable ideas only were readily received on one side of the head, disagreeable ones on the other. The independence of the hemispheres has for a long time been a subject of discussion and partial acceptance among neurologists. Dr. C. L. Bruce reported in *Brain*, 1895, a case of double consciousness in regard to which he concluded that there was right hemispheric melancholia or dementia, with left hemispheric mania. Kiernan has also reported two cases which led him to believe in the independent action of the hemispheres. The coming possibility of a complete independence of action on the part of the hemispheres in regard to their higher, or psychic, function would seem to be foreshadowed in the fact already well recognized that the more complex and independent movements of the body, such as those of the hand, have less of a bilateral representation in the cortex than do those movements which are less complex, such as the movements of the respiratory and deglutitory muscles. Speech and its mechanism have attained such an exalted degree of development and specialization that they are already subserved by one hemisphere independently of the other. Brown-Séquard insisted long ago upon the identity of function in the two hemispheres, and physiologists are now beginning to recognize the truth of this fact and to admit the possibility of their independence of action. The

whole question is most interestingly discussed by Dr. Ireland in his work *The Blot on the Brain*.

I conclude, therefore, that man's mental activity is largely automatic and purely reflex; that the cortical centres for ideation are constituted, localized, and interrelated much like the reflex centres of the cord but that the larger and more complex development of the former confers upon them the possibility of a higher and more complex form of activity; that the sensory and motor elements of the cortex are not identical, but are separate, are closely intermingled, and are most intimately associated with one another in function; and, finally, that mentalization is somehow subserved by the entire cortex and its more or less independence of action in the two hemispheres.

If this progressive differentiation of function, based upon the principle of simple reflex action, continues within the encephalon as it has up to the present time in the evolutionary development of the whole nervous system in animals, it may ultimately happen that the mind will acquire the power of thinking upon two or more subjects at one and the same moment. Its capabilities in this direction will be immensely enhanced, and the old dictum of the psychologists that the association of two or more ideas is always consecutive, never coincident, will be overthrown. In his essay upon the Molecular Dynamics of the Encephalon, published in the *American Journal of Insanity* for October, 1889, Dr. Williams hints at this future possibility. "Who knows," he asks, "but that the more fully evolved mind of the future shall learn, after the present mind has come to look with stunned discouragement upon the vast field of knowledge presented to its view by an advanced civilization, gradually to so adjust its fibres and its vessels by isolating them into separate fields momentarily, (since the isolation is the acme aimed at by the higher mind in its concentrated workings today), that consciousness may, in fact, come to be not a single energy, but a double, triple, quadruple or multiple energy? Imagine, for example, the school boy of the thirtieth century studying his mathematics visually with concentration, while orally listening to a lecture on a different topic. In all seriousness, there seem to be some reasons for believing that such a seemingly paradoxical mentality may be evolved." The tendency of mental and brain development is certainly in this direction. It is already so striking a characteristic of the human mind as to place man in a position above the lower animals. The separation of the various representative areas of the cortex, so that even now an animal can feel a prick of a pin in the foot, move the paw and listen intently to some unwonted sound, all at the same instant, would seem to give promise

of such a future possibility in brain development.

A mere glance at the localization of the various centers of the cerebrospinal apparatus, suggests the similarity of the brain and cord in regard to their primitive structure and inclines one to believe in the more ancient and higher development, both anatomically and physiologically, of the more forward part of this apparatus. The principle of inhibition, ever since its discovery in connection with the cardiac nerves, has been applied to the higher cerebral functions, but with variable success until quite recently. When closely studied, it appears that inhibition is the highest function of nervous matter. To inhibit an action and thus to control it, presupposes on the part of a nervous centre a finer degree of organization than does the power merely to receive and transmit reflex impulses. Inhibition is the basal phenomenon of the higher mind, and is of such a startling character that it gives us the notion of an absolute independence resulting in free will. An afferent impulse is reflected into the motor sphere, but is checked or inhibited by some other afferent impulse or impulses before it eventuates into actual movement; and at once we jump to the conclusion that our free and independent will has been the cause of the motor phenomena. The inhibitory function of the mind is admitted by all the physiologists and psychologists. The former assert that were it not for this magnificent function of all the cerebral centres, or at least of some of the highest among them, our bodies would be kept in a constant state of convulsion through the manifold impulses which our nervous systems are ever receiving and reflecting outward again to the muscles. Mills speaks of the higher psychical centres in the forebrain as constituting the inhibiting lobe." When we recollect that all mentalization is based upon sensory and motor phenomena, and that the cortical areas for the psychical representation of these phenomena are quite fairly outlined, we are not surprised that there should be so much mystery surrounding the functions of the unknown areas of the brain. We noted that injuries of the prefrontal lobes always gave rise to mental deterioration with abnormal psychical phenomena while the best physiologists admit that one function of this *terra incognita* of the cerebral cortex is at least that of inhibition. Putting all facts and inferences together then, we may conclude that the power of inhibition is the last of the acquired functions and is in all probability the special characteristic of the *most* highly organized nervous matter; that this power resides in the gray matter of the prefrontal lobes to a very large degree; and that therefore these lobes are preeminently the psychical centres, though the mind *in toto* is the result of the combined activities of all the sensory motor elements of

the cortex. We may even infer that this anterior, highly specialized portion of the brain differs from the rest of the nervous apparatus in degree rather than in kind.

Not only do the higher cerebral centres exercise an inhibitory control over the spinal cord and lower centres, but certain cerebral centres clearly exercise the same function in relation to other cerebral centres. I suggested this fact a long time ago. This intracerebral inhibition was again pointed out by Pick, of Prague, before the Thirteenth International Medical Congress in 1900, and illustrated by the inhibitory control which the auditory speech centres exercise over the motor speech centre. As is well known, persons suddenly attacked with word-deafness exhibit in addition to paraphasia, a special symptom, logorrhœa. The importance of this in this connection is that it furnishes the first positive proof that in the sphere of the higher psychical phenomena, the mechanism of inhibition enters just the same as it does in the domain of the lower nervous functions.

The known sensory and motor cerebral centres which have been described include, it will be remembered, the central convolutions, part of the first and second temporal, part of the occipital, the hippocampus, the uncus, and part of the limbic lobes. These areas are in connection with what Flechsig calls the projection system of fibres. In function they are identified with voluntary movement, general and tactile sense, hearing, sight, smell, and taste. They represent approximately about one third of the whole brain surface. The remaining two thirds do not seem to connect with parts of the nervous apparatus lying below the brain but with one another and with the parts already referred to. Flechsig calls these latter areas the "higher centres," or "association centres," and believes that they have to do especially with the complex mental acts, a view, however, in which he is not well supported by other authorities. As Sachs argues, projection and association fibres probably arise from every cortical area. Even Flechsig himself has recently admitted that the projection and association areas are not so distinctly defined as he originally believed them to be. The generally accepted idea that the frontal lobes preside over the higher psychic phenomena need not preclude the idea that the entire cortex is more or less involved in the act of thinking. As Hitzig remarks, Flechsig's opinions upon the purely intellectual function of the association areas are at the present moment extremely hypothetical. Even the theory which localizes the so-called memory-pictures in certain cell groups is not absolutely proved. About all that can be affirmed positively, as the result of the brilliant myelinization method of investi-

gation employed by Flechsig is that in the cortex certain areas are primordial, in which areas the projection bundles are much thicker than they are in other cortical territories; and that the development of the sensory centres precedes in all likelihood that of the cortical areas which serve as a basis for the intellect. To go further than this and declare that the intellect is the result of special, limited cortical foci with a particular anatomical structure, as Flechsig is inclined to do, is hardly allowable. The work of Flechsig is admitted by all, however, to mark an important advance in our knowledge of the structure and function of the brain.

In the evolution of the nervous system the centres of the medulla oblongata which preside over the vital processes may be the oldest in time. They are first because they are necessary to life itself. They take precedence phylogenetically. Ontogenetically, however, there are centres which precede even these in importance, and if, as the biologists tell us, the more highly organized matter is probably the more ancient (though this is not an established fact by any means), these higher psychical centres may be, after all, the oldest in time, while those of the medulla may be later differentiations of primitive nervous matter for the special regulation of the vital processes. It is not improbable, therefore, that the highly specialized inhibitory centres of the brain are the most ancient portions of the nervous apparatus, so far as their mere evolution is concerned, though from the embryological and physiological standpoint the cord is to be regarded as the primitive factor.

In its influence upon the next lower centres the forebrain may be compared to the entire brain itself in its influence upon the centres of the medulla and spinal cord. In both cases the influence is chiefly inhibitory. Thus the inhibitory function is graduated from that of the highest psychical centres down to that of the lowest organic centres of the cord where it is practically so overpowered by the supreme inhibitory influence of the highest centres, that it appears to be almost entirely absent, reducing the cord, as it were, to a mere organ of gross and unobstructed reflex action. From its evolution, therefore, the conclusion may be drawn that the entire cerebrospinal axis is a series of connected sensory motor ganglia, reflex couplets, or arcs, differing in its several parts more in degree than in kind. The more frontal ganglia subserve the purpose of psychosis, which in its highest manifestation is the expression of an inhibition and which differs from the spinal cord neurosis chiefly in respect to consciousness. Consciousness and its physiological explanation are in need of much elucidation; its localization is still an undetermined question. Brain and spinal cord are nevertheless

shown to be mere arbitrary divisions of a uniform, continuous, composite organ whose functions are more or less the same throughout all of its parts, these functions being simply adaptive modifications of the primitive sensory-motor reflex.

As a result of a study of the modern views upon the cerebral localizations, I would suggest the following conclusions:

1. The known motor and sensory areas of the cerebral cortex are not sharply distinguishable one from another, as was at first supposed by Ferrier and his followers.

2. Nor are they, as separate foci, of such a character and of such relative unimportance as to render the action of the brain that of a single organ, for which Goltz and his school contended.

3. There are separate motor and sensory centres within the cortex, but they are closely intermingled and are most intimately connected with one another.

4. Both the motor and sensory areas have foci of special intensity; the former in the central, the latter in the posteroparietal lobules.

5. While there may be a general intercommunication between all the sensory and motor elements of the cortex, there is the most intimate connection between the related sensory and motor cells which preside over corresponding parts of the body.

6. The primary function of these cortical sensory-motor groups of cells as couplets is that of reflex action like that of the sensory-motor reflex arcs of the various spinal cord segments. This is shown by the morphological and embryological development of the entire cerebrospinal axis, and it explains most satisfactorily the majority of the sensory-motor phenomena of physiological experimentation and clinicopathological observation.

7. Mentalization depends upon sensory-motor phenomena, and is therefore a function probably of the cortex, basal ganglia, and entire nervous system. Conscious mentalization is probably a function of the cerebral cortex alone. The relative importance of the cortical areas in the production of the mind is not yet determined.

8. Inhibition is apparently the latest and highest differentiation in the functions of nervous matter, though it is itself a more or less latent function of all nervous substance, its degree of activity varying merely with the stage of nervous development.

9. Inhibition is probably the special function of the forebrain and therefore endows this part of the nervous system with a commanding influence over the rest of the nervous apparatus. The forebrain is therefore justly spoken of as preeminently the psychic centre, though when exhaustively examined, its inhibitory and reflex functions differ from the inhibitory and reflex functions of the ganglia

lower down in the cerebrospinal axis in degree rather than in kind.

10. The inhibitory function of the forebrain appears in the sphere of consciousness, and thus forms the basis of volition. It is preeminent in force and manifestation, but it does not preclude the exercise of the same function in a lesser degree by the lower parts of the nervous system upon parts still lower.

11. The sensory-motor functions of the cerebral cortex are psychical in character, and influence the external parts of the body through the mediation of the cord and special ganglia, just as the highest of all the psychic centres, the forebrain and other association territories still unknown, influence the body through the sensory-motor cortex, special ganglia, and spinal cord.

12. In fine, inhibition and reflex action being the special property of all nervous matter, they are found, in varying graduation, as the functions of the most highly organized matter of the cortex, which therefore seems to be the special seat of mind, down to the most primitive ganglia of the spinal cord which retain only the lowest degree or most elementary form of reflex irritability.

100 STATE STREET.

Therapeutical Notes.

For Superficial Burns.—According to the *Maryland Medical Journal* for April, the following ointment is recommended by Rectus:

℞ Iodoform.....from 7½ to 18 grains
 Antipyrine..... }of each 75 grains
 Boric acid..... }
 Vaseline10 drachms
 M.

Wertheimer applies to burns, especially in children, the following liniment [a modified "carron oil"]:

℞ Thymolfrom 1½ to 2 grains
 Lime water..... }of each 3 ounces
 Linseed oil..... }
 M.

For Hepatic Colic Due to Gall-Stones.—The *Practitioner* for April gives the following:

℞ Extract of belladonna.....½ a grain
 Extract of opium.....2 grains
 Cacao butterq. s.

Ft. suppos. i. Mitte iv. A second may be inserted one hour after the first, a third two hours after the second, and a fourth two hours after the third, should it be necessary. A flax-seed poultice should also be applied over the abdomen, a little laudanum being added.

Internally the two following mixtures may be given in alternation:

(1) ℞ Sodium bicarbonate1 drachm
 Distilled water3 ounces
 Simple syrup1 ounce

M. One teaspoonful every half hour alternately with

(2) ℞ Citric acid1 drachm
 Distilled water3 ounces
 Syrup of lemon.....1 ounce

M. One teaspoonful every half hour.

Salicylic Treatment for Children in Rheumatism.—M. Gillet (*Gazette des maladies infantiles; Revue médicale*, March 5th) gives the following formulæ:

℞ Sodium salicylate..7½ grains for each year
of age
 Syrup of orange flowers.. } of each from 1
 Distilled lettuce (or other) } to 2 ounces ac-
 water..... } cording to age

M. To be given in teaspoonful doses every hour in a little milk.

When a mixture cannot be administered suppositories may be used:

℞ Sodium salicylate..7½ grains for each year
of age
 Cacao butter. from 60 to 120 grains accord-
ing to age
 Waxq. s.

M. Make into four suppositories to be introduced at equal intervals in the twenty-four hours.

Ointments may also be used by inunction around the joints, the whole being covered with cotton wool and waxed taffeta:

℞ Methyl salicylate15 grains
 Menthol3 " "
 Petrolatum450 "
 M.

Another formula for an ointment is the following:

℞ Salicylic acid (or sodium
 salicylate or methyl
 salicylate)..... } ..of each 150 grains
 Spirit of turpentine.... }
 Lanoline }
 Lard2½ ounces
 M.

An Anodyne Liniment.—The *Practitioner* for April speaks well of the following liniment as a local application in painful affections of the abdomen, thorax and joints. Where heat can be combined with the friction its efficacy is increased:

℞ Belladonna liniment1½ ounce
 Extract of opium..... }
 Extract of belladonna. } ..of each ½ a drachm
 Extract of hyoscyamus. }
 Chloroform2 drachms

M. For external application.

Sir Benjamin Brodie's Pills for Gout.—According to the *St. Louis Medical Review* for April 26th, Sir Benjamin Brodie recommended and used the following formula:

℞ Blue pill..... } ... of each
 Extract of rhubarb..... } 20 grains
 Compound extract of colocynth. }
 Acetic extract of colchicum.....15 grains

M. ft. pil. xv. One to be taken every three hours until relieved.

Issues and Events of the Day.

THE TRAGEDY OF A CORONATION, THE ILLNESS OF KING EDWARD VII.

The last few years have been startlingly prolific in tragedy among the great ones of the earth. The assassination of M. Carnot, President of the French Republic; of the Empress of Austria; of King Humbert, of Italy; of our own revered President McKinley; the death of Queen Victoria, which, while her advanced age rendered it daily more and more imminent and therefore to be expected, was in fact almost unrealizable at the time of its occurrence, so firmly had the length and prosperity of her reign enshrined her personality among the eternal verities; all these have passed rapidly in kaleidoscopic procession before our view. Now, on the very eve of his long awaited coronation, in the very midst of the festivities marking the culmination of his life's career, King Edward the Seventh has been stricken in a manner so tragically displaying the inexorableness of Fate as to overwhelm us with an Æschylean gloom.

The history of the calamity is fresh in the minds of all. On June 26th, after a lapse of some eighteen months since his accession to the throne, a delay prompted, there is good reason to believe, by the King's most laudable desire to see first the accomplishment of that peace which his own personal efforts did so much toward bringing about, King Edward the Seventh was to have been solemnly crowned with all the pomp and pageantry which, mediæval and useless as it may appear to us, is inextricably bound up with the continuity of English history. Official representatives from all the nations of the earth, millions of visitors of all ranks and nationalities, were gathered in the King's capital. Elaborate decorations had been established, and functions planned, entailing enormous expenditure; the very week of rejoicing entered upon; the very pageant itself near enough to be counted in hours, when the world was startled, England stunned, by word that the King was at the very moment undergoing a grave surgical operation for a dread disease, and that all must be foregone for months at least, while fear whispered perhaps forever.

On June 16th the King had attended a great

review at Aldershot. After the review he collapsed, wet and fasting as he was, with chills, nausea, severe pain, and other symptoms of abdominal trouble. The news of his illness spread, and fears, born of the circumstances, greater than the meagre information justified, grew deeper and more settled in men's minds. Eminent physicians and surgeons were in attendance, but still, it was asserted, the coronation would be gone through with as arranged. Had the King been a private person, there can be but little doubt that, owing to the gravity of the situation, every obligation, however important, would have had to yield before the autocratic orders of the physicians. But a king is a king, and in view of the widespread disappointment and the enormous financial loss that a postponement would entail, King Edward determined that, come what might, risk or no risk, he would fulfil his engagement first, even though he should succumb afterwards. When operation was first urged upon him, it is related that he said "Operation or no operation, I will not disappoint the people; I must go to the Abbey." But Nature is no respecter of persons; no reasons for non-compliance with her demands, however highminded, can avert the operation of her inexorable laws; and the coronation has had to be indefinitely postponed after all, while the King hovers between life and death with chances markedly lessened by his inflexible devotion to duty as he saw it.

On Monday, June 23rd, the King arrived in London, in pursuance of his determination to go through with what he deemed his public duty. On the next day his symptoms were so severe that there was no longer any question of the imperative necessity for instant action, and accordingly Sir Frederick Treves, whose great services to the British troops in South Africa are fresh in the minds of all, operated, in the presence and with the assistance of Lord Lister, Sir Thomas Smith, Sir Francis Laking, and Sir Thomas Barlow, Dr. Frederick Hewitt administering the anæsthetic. Surgically, the operation was successful, the perityphlitic abscess being opened and drained.

The London *Lancet* with prompt and characteristic courtesy has replied to our request for accurate information by cable as follows:

Condition of the King at Noon Wednesday.

(By Cable from the London Lancet to the New York Medical Journal.)

LONDON, June 25, 12 M.—The King's disease is perityphlitis following cold contracted nine days previously. His symptoms became rather acute, a week ago, but had subsided, and it was hoped that he would go through the coronation ceremony. Owing to a sudden exacerbation early on Tuesday morning, an operation was decided upon at ten o'clock, and the operation was performed at noon on Tuesday by Sir Frederick Treves, the anæsthetic being administered by Dr. Frederick Hewitt. The abscess around the cæcum was opened, the pus evacuated, and the cavity drained. There was no resection of the bowel, the newspaper reports that tubing was required to preserve the continuity of intestine being completely misleading. The recovery from anæsthesia was satisfactory; the patient passed a restless night, succeeded by improvement, his condition being favorable on Wednesday at noon.

Condition of the King at Noon Friday.

[By Cable from the London Lancet to the New York Medical Journal.]

LONDON, June 27, 12 M.—So far as it is possible yet to say anything definite the King's prospects are distinctly favorable. Thursday was a good day, followed by a fair night, the patient having refreshing sleep. The state of the wound is satisfactory, the discharge healthy, the temperature Thursday evening normal, a fact which is important as indicating that the occasional pain experienced in the wound had no sinister significance. Nourishment was taken and cheerfulness maintained. The King has seen and conversed with the Prince of Wales and the Royal Princesses. The Queen has visited the sick room several times. The definite statements issued by *The Lancet* that the bulletins are accurate, that the condition is simply perityphlitis, that the right medical opinion has been sought, that the right procedure has been followed, and that no symptoms of malignant disease are present have much reassured the public. At noon to-day the wound is comfortable and the general condition less anxious.

THE VIEWS OF ENGLISH AUTHORITIES.

The following excerpts from *The Lancet* were cabled to the New York newspapers from London on Wednesday:

"While it is impossible to disguise the serious nature of the King's condition it is also a joyful privilege to be able to contradict flatly some of the sinister rumors. The prevalent idea that some dreadful news is kept back ought to be dispelled.

"We would like to draw attention to the absolute sincerity of every bulletin issued. This sincerity should prevent the public from giving heed to the wild rumors that are rife.

"It is an unfortunate fact that the symptoms of perityphlitis may be entirely masked. Thus the necessity of an operation being apparent was absolutely prevented until the Tuesday before the coronation. There was no symptom of malignancy present."

The *British Medical Journal* is quoted on Thursday morning in the press dispatches as follows:

"Since the operation the progress of the King has been as satisfactory as could be hoped for.



By Courtesy of the Tribune.

LORD LISTER, M. D., LL. D., D. C. L.
Surgeon Extraordinary to the King.

His Majesty is by no means out of danger, but should the symptoms pursue the course hitherto followed there is good reason to hope for his restoration to health. Owing to the nature of the affection and the character of the surgical dressing used it is inevitable that convalescence will be somewhat prolonged, but we are glad to believe that if no complications arise there is no reason to fear that recovery will not be complete.

"The condition of the parts, made clear at the operation, is such as to assure the surgeons that the abscess was due to one of those unexplained inflammations which are known to occur with remarkable frequency in the neighborhood of the vermiform appendix. It was not due to any organic disease of more serious nature or to a malignant growth.

"Having regard for the fact that the abscess

was situated within the abdomen it is impossible to say that some complication will not yet arise, but we feel justified in saying at the present time there are no indications of the occurrence of any such, and should no complications arise His Majesty may be restored to health and live many years to occupy the throne.

"Sir F. Treves says that the King on June 18th found his temperature elevated and there were swellings and tenderness in the right iliac fossa. These are symptoms of perityphlitis, but during the two following days all the ominous symptoms disappeared. When Sir Frederick saw the King on Saturday his temperature was normal and the swellings were gone. He believed there would be a rapid recovery.

"It was only on Monday when Sir Frederick saw him again that the doctors began to be suspicious that there might be pus in the right iliac region. The temperature on Monday was 102 degrees. The swellings rapidly increased.

"The operation showed that an abscess of very large size lay at a considerable depth. The matter evacuated had undergone decomposition. It was clear that the King had borne severe suffering in the hope of avoiding a postponement of the celebrations.

"The abscess was thoroughly evacuated and thoroughly washed. Two large drainage tubes were introduced and the wound packed with antiseptic gauze."

SIR FREDERICK TREVES'S PUBLISHED VIEWS ON APPENDICITIS.

The following summary of Sir Frederick Treves's previously published opinions on the subject of appendicitis may be of interest at this juncture. As to the name of the condition, which



By Courtesy of the Library

SIR FREDERICK TREVES, BART., C. B.
Sergeant Surgeon to the King.

is at present the subject of almost as much discussion as the condition itself, Sir Frederick says (Article on perityphlitis, Allbutt's System of Medicine, Vol. 4): "By perityphlitis is understood a peritonitis localized in the region of the cæcum. Many names have been applied to this condition, which serve to perpetuate current views of its

pathology." After instancing "iliac phlegmon," "paratyphlitis," and "typhlitis," he continues: "Burne seems to have been the first to develop the modern doctrine of the predominant part played by the appendix in this affection. Fitz in 1886 placed the pathology of perityphlitis upon a sound basis, and demonstrated the part of the appendix in its production. Finally, the uncouth name 'appendicitis' has been given to this disease."

In the same work he considers the pathology of the affection under the following headings:

- A. Perityphlitis taking origin from the cæcum
- B. Perityphlitis taking origin from the appendix. (a.) With catarrh or ulceration of the appendix. (b.) With gangrene of the appendix. (c.) With stricture or occlusion of the appendix. (d.) With actino mycosis of the appendix.
- C. The Peritonitis.
- D. The Abscess.

He quotes Einhorn, of New York, who gives the origin as appendicular in ninety-one per cent. out of 18,000 post-mortem examinations. "Perityphlitis," he says, "represents the very commonest variety of peritonitis, and the remarkable frequency of inflammation in this position is due to the fact that the appendix is one of the weakest points within the abdomen." As to the causation, "long impacted fecal masses in any part of the colon may give rise to catarrh. This catarrh when of severe degree serves to produce the spurious diarrhoea which is seen in cases of obstruction of the lower colon. This catarrh often passes on to ulceration. If the ulcer acquires a sufficient depth to allow the peritonæum to be infected, perityphlitis results." Again, "the primary ulcer may be due to the presence of a foreign body, to septic infection, to typhoid ulceration, or to tuberculosis."

[Sir Frederick Treves gives typhoid fever as one of the causes of the disease. Dr. Abbe says (see p. 1144) "an appendix once diseased is always diseased . . . The King's appendix must have been diseased for many years whether it gave evidence of it or not . . . Some past inflammation in childhood may have initiated the change, or a later remnant of influenza or colitis infection may have lurked in this . . . until its altered lining membrane thickened and harbored destructive bacterial disease." These considerations suggest the possibility that the serious attack of typhoid from which the King, as the Prince of Wales, nearly lost his life in the sixties was complicated by appendiceal disease, which, in the state of medical knowledge at that time, was likely to go unrecognized.]

A large proportion of the subjects, he says, are chronic dyspeptics, and certain of the patients are nervous persons, who seem to be victims of a kind of nervous dyspepsia. As to the action of cold and fatigue incident upon the King's attendance at Aldershot, to which reference has been frequently made, Treves says in the work before quoted, "I am not aware that exposure to cold has been clearly shown to have been an exciting cause of perityphlitis." "Two factors, at least, appear to be necessary to produce an attack of localized peritonitis through the medium of the appendix. The first is such a condition within the bowel as

will render the colon bacillus virulent; and the second is such a lesion within the appendix as will permit the bacillus to reach the peritonæum. The invasion of the peritonæum by the microorganism gives rise to sudden, violent, and acute symptoms." As to operative intervention, Sir Frederick says, that it is by no means possible to distinguish the cases which will end in suppuration from those which will not. "The main feature," he says, "in this treatment" [during an acute attack] "consists of the urgent advice that a free incision should be made down through the inflamed area as soon as there is evidence that suppuration has taken place. To this rule there is practically no exception. It is not always easy to tell when suppuration has taken place; the swelling may be large and tender, the temperature may be high, the symptoms may persist for some days, and yet the whole may end in complete resolution. Cases which begin very acutely may end in speedy recovery, while those that begin mildly may pass on to suppuration." [According to the *British Medical Journal*, when Sir Frederick saw the King on June 18th he found the temperature elevated, with swelling and tenderness in the right iliac fossa; but in the two succeeding days these symptoms entirely subsided,



By Courtesy of the Tribune

SIR FRANCIS LAKING, M. D.

Physician in Ordinary and Surgeon Apothecary in Ordinary to the King.

and on June 21st the temperature was normal and the swelling had completely disappeared. It was not till Monday, the 23rd, that any reasonably clear indication of impending suppuration was manifested.]

"If the swelling is marked, and the part very tender, the fever high and all the local symptoms persisting, and perhaps increasing, the question of operation becomes a pressing one. It may be laid down as a rough rule that the use of the knife will very seldom be called for before the fifth day. Indeed, I would venture to think that surgical interference before the fifth day should not be undertaken except in the presence of emphatic symptoms. Indeed, the great majority of the operations for perityphlitis are performed after the first week."

"The treatment of this disease by rational and precise surgical method is a matter of recent

years. The older method of practically leaving the malady to itself, and of not opening the abscess until it was about to burst through the skin, may excuse the excessive enthusiasm of some modern surgeons who have gone to the other extreme, and advise the use of the knife without compromise and without delay. One writer on this subject compares the delay in operation in perityphlitis to a like delay in dealing with strangulated hernia. That the author does not recognize the incongruity of his comparison is shown by the following heroic advice: 'After persevering for forty-eight hours with this treatment,' (an original treatment by means of opium, saline purgatives and massage under ether), 'if relief is not obtained, I would at once resort to laparotomy.' Another American surgeon considers 'all cases of appendicitis as being imminently dangerous to life from the beginning of the attack.' This conclusion is absolutely at variance with facts. This surgeon always operates within twenty-four hours if medical treatment fails. Another writer asserts that if operation be delayed until the sixth day, fifty per cent. of the patients die, an assertion which is also totally opposed to facts."

Among the various possible complications which are occupying a good deal of attention at present, one appears to have remained unnoted. In his work on *Intestinal Obstruction* (last edition 1899), an amplification of his Jacksonian Prize Essay of the Royal College of Surgeons, in 1883, Treves refers to "the matting together of the intestinal coils consequent on perityphlitis," as one of the regular causes of intestinal obstruction.

As to prognosis: "Perityphlitis would appear to be the most fatal in the quite young and the quite old. The common causes of death are diffuse peritonitis, collapse, septicæmia, exhaustion, and troubles arising from the abscess. When an abscess forms in perityphlitis it is probable that the risk to life is at once raised to thirty per cent. Bull found the death rate in sixty-seven cases of abscess which were not treated surgically to be forty-eight per cent. Finally, it will be noticed—and the matter is important in connection with treatment—that only four per cent. die within forty-eight hours, and only twenty-two per cent. before the fifth day. The highest death rate comes between the seventh and eighth days."

Views of American Physicians.

(By telegraph to the New York Medical Journal.)

THE RELATIVE MORTALITY UNDER OPERATIONS AT DIFFERENT STAGES OF THE DISEASE.

By ALEXANDER H. FERGUSON, M. D.,

CHICAGO, ILL.,

PROFESSOR OF CLINICAL SURGERY, COLLEGE OF PHYSICIANS AND SURGEONS, ETC.

The unfavorable features of the King's case are his mental forebodings, age, reported state of his constitution and late operation.

Judging from even the meagre data at hand, of operative findings by Treves, and of the post-operative conditions, I am inclined to give a grave prognosis. If he were a beggar instead of a King, I judge that an early operation, within 24 hours of onset of the attack, as is our rule in Chicago, would probably have been done and the disease have been thereby promptly robbed of its dangers.

The surgeon whose fingers are in the abscess cavity is the best judge of whether the appendix should be removed then or not. When local conditions are favorable and the patient is behaving well under the anæsthetic the appendix should be removed. I do not think it wise to temporize; once the diagnosis is made, an operation is the only rational and safe treatment for appendicitis. Whereas clinical manifestations do not interpret truly the anatomical changes, or the virulency of the infection, why should we wait? The King's case is an object lesson to the world on appendicitis. It must be remembered that in his case there were extraordinary national and international environments and considerations which no doubt naturally influenced him and his attendants to favor the postponement of surgical aid, and in the meantime to avoid it if possible. It is evident that at the beginning of the attack and for a few days thereafter the symptoms and signs were not alarming, and herein lies the deception in appendicitis. This we all know. The symptoms improve, and then light up again as they did with the King. The chances of recovery by operation in this class of cases are about from 85 to 90 per cent. with certain reservations, viz.:

- (1) Age and condition of internal organs.
- (2) Extent of toxæmia.
- (3) Whether the circumappendicular abscess is safely walled off or not with a fibrous exudate.
- (4) The extent of the suppuration.
- (5) Complications. In the gravest cases the mortality is higher, but in early operations, that is within 24 hours, very few die.

In my own experience the mortality is less than one per cent.

It may now be said that His Majesty has survived the immediate effects of the operation and if no complications arise to interfere with his resisting powers or to check his normal elimination the prognosis is fair.

In their trying positions and treatment of their distinguished patient the surgeons have my sympathy and approval.

JUNE 26TH.

(By Telegraph to the New York Medical Journal.)

THE CHANCES OF RECOVERY DEPENDENT UPON THE CHARACTER OF THE ABSCESS.

By JOHN B. MURPHY, M. D.,

CHICAGO, ILL.

PROFESSOR OF CLINICAL SURGERY, RUSH MEDICAL COLLEGE.

The official bulletins are very vague and indefinite, as the doctors do not state whether the perityphlitic abscess was due to appendicitis, carcinoma, or perforating ulcer. They infer that it was appendicitis, but the clinical course for five days preceding the operation does not correspond with that inference. If it is an appendiceal perityphilitis, opened and drained with no attempt at removal of the appendix, his chances of recovery, allowing for his age and mode of living, should be ninety-seven per cent. Even if there is gangrene of a small area of the cæcum from a peri-appendiceal abscess, his chances of recovery should be good unless the infection is very virulent. One would infer from the mild symptoms on the day previous to the operation that it is not virulent. If the perityphlitic abscess is from a perforating ulcer of the cæcum, the prognosis is more grave, for these perforating ulcers are grave in themselves, particularly the tuberculous. If the perforation occurred from a malignant ulcer, his chances of recovery would be very meagre, as a resection of the caput coli would be demanded and this is such a long and grave operation that he could scarcely withstand it, as it would involve an immediate risk of from forty to forty-three per cent. The assumption that the abscess is of appendiceal origin is the most logical, judging from the symptoms of pain and syncope on the fifth or sixth day preceding the operation, and there was every reason for his physicians withholding information from the public as long as possible. If the diagnosis of appendicitis had been made early, it is probable the operation would have been performed immediately, as the consensus of opinion of the American medical and surgical profession is that the immediate operation, *i. e.*, operation within the first twenty-four hours after the onset of symptoms, gives the best results and subjects the patient to the least risk. There is a unanimity of opinion in the profession that no one, no matter how familiar with the disease, is able to predict from the early symptoms what will be the subsequent course of the disease. It is therefore incumbent upon the profession to operate early to avoid the probability of later and most dangerous pathologic conditions.

Expectant or medical treatment is uncertain, inefficient, and hazardous, and thousands of lives have been sacrificed by this method of treatment. In Chicago alone in the past three years there have been seven hundred and fifty-two deaths from appendicitis.

What a colossal crime! What an indulgent and forbearing public to tolerate such results from the medical profession! On this basis there should be no perityphlitis of appendiceal origin, as in all cases operations would be performed before that stage.

JUNE 26TH.

THE CASE OF THE KING IN THE LIGHT OF HIS PREVIOUS MEDICAL HISTORY.

By ROBERT F. WEIR, M. D.,

PRESIDENT OF THE NEW YORK ACADEMY OF MEDICINE.

Perityphlitis or, as it is known here, appendicitis, can be divided in its results into 3 classes: (I) Those where the operation is done within 36 hours (which is the period of election), after the inception of the disease, where the mortality is under 3 per cent.; (II) where done from that time to the fifth day where the mortality is from 4 per cent. to 15 per cent. and the most critical judgment has to be exercised by the surgeon in respect to the time of operation; and (III) those operated on after the period named, when the disease often limits itself to a circumscribed abscess, where the mortality after operation again markedly diminishes.

In the present instance which occupies the attention of the whole world there is a factor that has not been alluded to. In an ordinary case after the existence of the disease of a week or thereabouts, with the formation of an abscess, there would be a very favorable prognosis as above detailed, but it is well known in the inner medical circles in London that King Edward has been the subject for several years past of diabetes. It was this complication that decided, some time ago, when he sustained a fracture of the patella, the abstention from an operative treatment and that it was advisable to resort to the old method of immobilization of the limb, with its risks of imperfect union, rather than to take the chances of the modern and better method of suturing the broken ends of the bone together after an incision. It is this factor that lends gravity and anxiety to the King's condition. So far, he has progressed favorably and it may be hoped that recovery will be unimpeded by the constitutional affection under which he has labored for so long in the past. In fact many diabetics do well under surgical interference, but it is well

known that the presence of this disease is likely to bring about unexpected complications.

JUNE 26TH.

THE OPERATION MASTERLY IN ITS SIMPLICITY AND CORRECTNESS.

By ROBERT ABBE, M. D.,

NEW YORK.

SURGEON TO ST. LUKE'S HOSPITAL.

It sounds strange to the ears of American surgeons to have the cable send back the word "perityphlitis" in describing the grave illness and momentous struggle of King Edward. It is like an echo of the early studies and battles that were waged in New York twenty years ago, when that inadequate and unsatisfactory word was displaced by "appendicitis."

Accumulating experience shows, that not once in hundreds of operations in this region, does the surgeon find any cause for perityphlitis, or inflammation around that part of the intestine, except as a result of a diseased appendix.

The extreme importance of this organ, and the gravity of its diseased condition, have been recognized and studied nowhere in the world as much as in America—and its treatment perfected by a score of able surgeons.

In England, no surgeon has kept more nearly in touch with advanced American work than Sir Frederick Treves, personally an intimate friend of some of our surgeons, and known and admired by all through his writings and visits to America. No one can doubt that he has suffered the greatest anxiety in being forced to delay operating, owing to circumstances over which he had no control—until the abscess matured about the diseased appendix.

If reports are correct, that he simply opened and drained the abscess using rubber tube and gauze, and desisted from search for the appendix, his action was masterly in its simplicity and correctness. A more ardent, enthusiastic, or fearless operator, might have pursued the matter to its finish and secured an appendix as a trophy, but sacrificed his patient. Science and the people may be congratulated that so conservative a surgeon was in control.

The vexed question as to searching out the appendix in such cases, has been one of many in this great problem—and today it stands answered as follows. It does no harm for the time to leave it in the abscess wall, so long as the drainage outward is free. The risk of damage by tearing it out when deeply buried, as often is the case, is too great to be excused when life is at stake. In four out of five cases, the appendix has ended its

own existence by the explosion, as it were, which produced the abscess, and one frequently finds a ragged remnant of the organ hanging free in the abscess. If it has not sloughed off it frequently undergoes interior obliteration and gives no future trouble. If it has not obliterated or sloughed off, it may set up a second abscess years afterward, but of less gravity, as this tends to discharge itself through the former scar. Such second abscesses happen in about one in ten of cases treated by open drainage.

Hence, the question of removing the remnant of the diseased appendix must be left to the decision of the operator at the moment, who will leave it, if it be not readily accessible.

Nevertheless, the attitude of surgeons and physicians alike, today, is not to allow an appendicitis attack to advance to the stage of abscess formation, which has many perils. The danger of grave pyæmia, when abscess has been evacuated, is an exaggerated one. The type of pyæmia most fatal in appendix cases is where an initial chill is followed by a second or third and septic thrombosis of the veins about the appendix occurs early.

Or again if the abscess is not promptly opened, it may burrow extensively and grave absorption-pyæmia follow. In King Edward's case it is reasonable to suppose that neither of these conditions prevail, and one may expect, as happens in 95 per cent. of abscesses opened with adequate drainage, that a fairly prompt convalescence will ensue.

The age factor in a patient of sixty years, so well cared for as the King, is not so much to be dreaded as the public fears. The kidneys, lungs, and heart are much more often accused of being responsible for death than is just. In acute septic infectious processes even the healthiest organs soon clog up and become inactive—but even in patients of feeble constitutions and weak hearts, when once a frank abscess has formed, as is reported in this distinguished patient, we have in that very thing an evidence of vigorous reparative action, and an argument against absorption, with every reason to expect excellent repair. I have seen patients at eighty years of age make as beautiful a convalescence from operation for appendicitis with abscess, as a vigorous youth.

The greater lesson to be learned from exhaustive study of the appendices taken out after one or more attacks, and during quiescence, is that *an appendix once diseased is always diseased* and a perpetual menace to its owner.

The King's appendix must have been diseased for many years, whether it gave evidence of it or not. The first attack of appendicitis, so called, is always the death struggle of a long diseased

organ. How long diseased, is now a matter of more or less exact knowledge, for by proper study one can prove that the internal strictures always present as a cause of the disaster, have invariably been progressive for several years, even twenty or more—as occasional histories will show. One may safely say, therefore, that some past inflammation in childhood may have initiated the change, or a later remnant of influenza or colitis infection may have lurked in this, the only pocket of the alimentary canal, until its altered lining membrane thickened and harbored destructive bacterial disease. In this more intimate study, we have ample reason for the prevailing and growing tendency to advise early removal of any appendix once known to be diseased.

American surgery may well be proud of its advanced attitude in regard to this momentous subject, and the zeal with which it has attacked the problem, and raised to a position of almost absolute safety, the radical cure of *latent* appendicitis.

Insurance companies now debar the victim of one attack from insurance for two years—and of two or more attacks, until the appendix is out. What better argument of the gravity of the subject?

JUNE 26TH.

THE CASE OF KING EDWARD.

By ROBERT T. MORRIS, M. D.,

NEW YORK.

PROFESSOR OF SURGERY, NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

King Edward's case appears to be one of appendicitis of a rather common type, following his exposure to chilling winds last week, with consequent engorgement of mucous surfaces. Bacterial infection progressed to the point of abscess formation about the cæcum before it was determined by the medical advisers that the King's life depended upon the performance of some emergency operation. Apparently wise counsel prevailed, and the very conservative procedure of simple evacuation of the abscess was chosen. The cable reports lead us to believe that the infective process had been very well cared for by the peritonæum, and that the area of infection was walled-in by the phagocytes. We may fairly expect then that His Majesty will escape from his immediate peril and that he will gradually reach a safer condition during the next four weeks. In such a case various accidents of bacterial invasion may occur at any time however, before the healing processes are completed. Septic emboli from the smaller mesenteric veins may become dislodged and make their way through the veins of the portal system to the liver, or the endothelial layers of various

veins outside of the area of leucocyte protection may become invaded. An extension of infection into connective tissue layers in the vicinity of the right iliac fossa, or along peritoneal planes may occur, unless an efficient local leucocytosis has become established. On the whole however these dangers are not grave in a patient who possesses normal cell resistance. When the repair of the damaged structures has been completed by slow granulation, the future events in the history of such a case naturally depend largely upon the condition in which the appendix was left. In some cases of appendicitis with the complication of perityphlitis and abscess formation the appendix is completely destroyed, and the patient escapes the danger of further infection at that point. In other cases only a part of the appendix is destroyed, and sometimes it is left almost intact excepting for scar strictures, and local peritoneal adhesions. In both of the latter cases the patient may anticipate recurrence of appendix infection at some time in the future, unless the appendix can be accurately palpated in the interval between attacks, and unless the evidence gained on such palpation leads the surgeon to remove Hamlet from the play, and to complete what could not perhaps have been wisely done at the time of the emergency operation. Aside from further infective processes, the adhesion complications may become sufficiently important to require operation for their relief at any time during the life of a patient who has suffered such a severe peritoneal inflammation. In addition to new infection and adhesion complications one must expect also the development of post operative ventral hernia at the site of an abdominal wound that has been left open for drainage. All of these things could have been avoided by early operation in advance of abscess formation, but we readily comprehend the kind of responsibility that was placed upon the King's medical advisers at just this critical time, and we must believe that they have acquitted themselves in a manner that is most acceptable to responsible medical authorities the world over. There is always the hope in any progressing case of appendicitis that the invading bacteria will soon cease their operations, without interference on the part of the surgeon, but no one can ever tell in advance what the limitation of bacterial influence is to be. It is not generally understood that in any case of appendicitis an operation for removal of the appendix is actually being done by bacteria, and that an operation by the surgeon is simply to forestall the work of operators already occupying the field. There is perhaps no disease so well understood to-day as appendicitis, both as to its cause, course, and complications. Our text books upon the subject leave little of consequence for further discussion, and yet the newspaper reports of interviews

with various physicians give a grotesque collection of misinformation upon a subject that is of greater consequence than the Boer war or the war in the Philippines; of greater consequence, at least upon the score of death rate, because the annual death rate from appendicitis improperly managed is greater than the death rate from war.

In King Edward's case we are gratified to observe that the anæsthetist, the surgeons, and the physicians are all men who have international reputations in their respective fields of work. This is apparently the result of some system in England that does not obtain in this country, where it is rather the exception for a man of great consequence to have well chosen medical advisers, excepting as a matter of accident, and while we are apt to think that European methods in the management of appendicitis are far from being as successful as those employed in America, there seems to be the compensating advantage that in England a method is adopted for obtaining the services of the best authorities, on an occasion of great public importance.

JUNE 26TH.

THE SURGEONS AND PHYSICIANS IN ATTENDANCE.

SIR FREDERICK TREVES was born in 1853 and was educated at the Merchant Taylor's School, and at the London Hospital. He became a licentiate of the London Society of Apothecaries in 1874, a Member of the Royal College of Surgeons of England in 1875, and a Fellow in 1878. He became in due course surgeon to and lecturer on surgery at the London Hospital, and has the distinction of having been the youngest man that ever held a double professorship at the Royal College of Surgeons of England, having been appointed Wilson Professor of Pathology in 1881, and later, Hunterian professor of anatomy. He has been examiner in surgery at the University of Cambridge, and in anatomy at the Universities of Durham and Aberdeen, as well as a member of the court of examiners of the Royal College of Surgeons of England. He was surgeon extraordinary to Queen Victoria, and is sergeant surgeon to the King, and surgeon in ordinary to the Prince of Wales. As consulting surgeon to the South African Field Force with the Ladysmith Relief Column he rendered signal services to the soldiers and the Empire, for which service he received the C. B. and the Knight Commandership of the Victorian Order. His recent promotion to a baronetcy in the coronation list of honors comes at a singularly apposite time. He has done more work on intestinal surgery possibly than any other British surgeon; his principal works being *Acute Peritonitis Treated by Abdominal Section*, 1885; *Anatomy of the Intestinal Canal and Peritonæum in Man* (Hunterian Lectures, 1885); *Peritonitis* (Lettsonian Lectures, 1894); *Surgical Treatment of Appendicitis*; *Intestinal Obstruction* (an elaboration of his Jacksonian Prize Essay at the R. C. S. England, in 1883) and the classical articles on *Intestinal Obstruction* and on *Perityphlitis*, in Vol. iv. of *Allbutt's System of Medicine*.

LORD LISTER is so well known to all medical men that comment upon him seems superfluous. Some details of his career, however, may be of interest. He was born in 1828 and took his B. A. degree at London University in 1847, and his M. B. in 1852. In the latter year also he became a Fellow of the Royal College of Surgeons of England, and in 1855 of the Edinburgh College. In 1860 he became a Fellow of the Faculty of Physicians and Surgeons of Glasgow; in 1878, LL. D. of Edinburgh; in 1879, M. D. (*honoris causa*) of Dublin, and LL. D. of Glasgow; in 1880, D. C. L. of Oxford and LL. D. of Cambridge. He is also a Fellow of the Royal Societies of both London and Edinburgh, and an honorary M. D. of Würzburg and Bologna. Among his titular honors he is a baronet of Great Britain and an English baron, a Knight Commander, first class, of the Order of the Danebrog, and a Knight of the Prussian order "*pour le mérite*." His scientific honors and memberships include: Cothenius Medallist of the German Society of Naturalists, 1877; Royal Medallist of the Royal Society of London, 1880; Lauréat of the French Academy of Sciences, 1881; Associate Member of the Institute of France; Honorary Member of the American Academy of Arts and Sciences, and of the Medical Societies of Munich, Leipzig, Vienna, Buda-Pesth, Dresden, Amsterdam, Petersburg, Finland, and of the Obstetrical Society of Leipzig. He has held professorships at King's College, London, and the Universities of Edinburgh and Glasgow. His best known work is, of course, his introduction of the antiseptic system into surgery, a system which is the parent stock from which all modern asepsis has sprung. For that alone, his name will be held for all time in honor among physicians the world over. But it is not perhaps so well known, that, like the late Sir James Paget, he attained in his early years a position as a scientific investigator in the domain of physiology, which would suffice to ensure him an illustrious name, even if he had never been the father of antiseptis. Mr. Lister married a daughter of the famous Scottish surgeon, Professor Syne, of Edinburgh. He was Surgeon Extraordinary to Queen Victoria.

SIR FRANCIS LAKING took his first diploma as licentiate of the London Society of Apothecaries, in 1869, being an alumnus of St. George's Hospital, London. In 1868 he became a licentiate, and in 1872 a member, of the Royal College of Physicians of London. In 1869 he took the degree of M. D. at Heidelberg. He was surgeon apothecary to Queen Victoria and apothecary in ordinary to her household, as also to those of H. R. H. the late Duke of Edinburgh (Reigning Duke of Saxe Coburg Gotha), and the Prince of Wales. When the latter became King Edward VII, Sir Francis Laking became his physician in ordinary and surgeon apothecary in ordinary. He is apothecary in ordinary also to the King's household, to the Duke of Cornwall and York (the present Prince of Wales) and to H. R. H., the Duke of Connaught. He is a Knight Commander of the Victorian order.

SIR THOMAS BARLOW became a Member of the Royal College of Surgeons of England in 1871. In 1867 he became B. Sc. at London University, M. B. and B. S. with double honors in 1873, and M. D. in 1874. In the latter year he became a member, and

in 1880 a fellow, of the Royal College of Physicians of London. He is Physician to His Majesty's Household, and late physician extraordinary to Queen Victoria; professor of clinical medicine at University College, London, and examiner in the practice of physic to the Victoria University, Manchester, Durham University, and the Conjoint Examining Board of the Royal College of Physicians and Surgeons. He is a Knight Commander of the Victorian order.

SIR THOMAS SMITH became a Fellow of the Royal College of Surgeons of England in 1858. He is consulting surgeon to St. Bartholomew's Hospital, and Honorary Sergeant Surgeon to the King. He has been vice-president of the Royal College of Surgeons and examiner in surgery at the Royal College of Physicians of London. He is a Knight Commander of the Victorian order.

The Pathogenesis of Tetanus: A New Theory.

—*Medicine* for May, in a leading article, reviewing the investigations of Zupnik and comparing them with those of Myer, says that according to these principles, the pathogenesis of tetanus is as follows: 1. The poisonous principle of tetanus toxine acts through the peripheral organs upon the muscular tissue, and through the central nervous system only upon the motor ganglion cells of the spinal cord. The union of the poison with the muscles results only in rigidity, the union with the ganglion cells only in reflex irritability and general clonic spasm. 2. Both forms of the tissue receive the poison by way of the blood current. 3. Local tetanus is brought about by direct combination with the poison. The ascending contractions are explained by the conduction of the poison in the muscle substance itself, the connective tissue as it appears only supporting it, inasmuch as it receives the injected poison and holds it for a relative length of time, giving it up slowly to the muscles. 4. The incubation finds its explanation in the necessary time required for the chemical reaction between the poison and the sensitive tissue. 5. The small quantity of the poison that reaches the subarachnoid space by way of the connective tissue of the peripheral nerves is given up, not to the spinal cord, but to the circulating blood. This result followed the experiments of both Zupnik and Ransom. 6. The poisonous substance itself may be simple and produce two entirely different results through combination with two different tissue elements, or the tetanus toxine may contain two poisonous substances, one of which has a specific affinity for the muscular, and the other a specific affinity for the ganglion cells of the spinal cord. Further experiments, it will be hoped, will settle this point.

The experiments suggest a large series of new investigations and open a new point of view from which to regard the treatment of symptomatic tetanus. It would be desirable to find out by direct intradural injections of substances by which the reflex irritability of the spinal cord is destroyed or increased, how to exclude the general clonic spasms which are most dangerous for the patient.

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THE CASE OF KING EDWARD VII.

We cannot enter upon a professional consideration of this most regrettable case without first assuring our British brethren of the universal sympathy felt by our own people for the people of the British Empire in this time of their affliction. Too short a time has elapsed since President McKinley was stricken down for us to forget the grief that seizes upon a nation when its official head is suddenly laid low. There mingles not with the sorrow of the British subject that feeling of anger that rose hot in every American citizen's breast last autumn; happily, our kindred across the sea have been spared the occasion for any such feeling, for the assassin had no part in the prostration of their sovereign. In most points, however, the two situations must be regarded as too similar to admit of any other feeling than that of the deepest sympathy on our part. In each instance the august sufferer had the benefit of prompt and unremitting attention at the hands of surgeons unexcelled in the whole world. In the King's case Sir Frederick Treves, a surgeon of world-wide fame and of special experience in abdominal surgery, was the operator, and there were with him Lord Lister, the father of antiseptic surgery, Sir Thomas Smith, a surgeon who has given particular attention to intraperitoneal injuries, and the two eminent physicians Sir Francis Henry Laking and Sir Thomas Barlow.

We cannot but regard it as most unseemly that a few medical men in this country and in Europe have seen fit to deliver themselves of derogatory "long-distance criticism" in the newspapers, with as little justification—that is to say, none at all—

as was done in the case of President McKinley. In the light of our own London dispatches and of such other information as appears to us to be trustworthy, we feel perfectly certain that a correct diagnosis was made in the King's case at as early a period as was possible, and that the operative intervention was well timed and conducted with the utmost skill and prudence. It is not at all uncommon in that form of appendicular troubles which leads to a bulky exudation of lymph and then to perityphlitic abscess for the manifest attack to be preceded by vague manifestations that nobody would be bold enough to declare due to disease of the vermiform appendix.

It will surprise no well informed surgeon, therefore, to learn that King Edward was at first said to be suffering from lumbago. When, however, phenomena specifically indicative of appendicular trouble did finally appear, their significance was at once recognized. As they soon abated, it was reasonable to hope that there would be no recrudescence until after the time set for the coronation; moreover, in view of the great interests involved, and especially in view of the King's manly and self-sacrificing determination not to disappoint the people, it was the duty of his medical advisers to make the most of such hope. But recurrence took place with quite exceptional rapidity, with the result now known to the whole world. Sir Frederick Treves and his associates in the case may rest assured that their management of it meets with the entire approval of the leading surgeons of the world, and as we go to press the news from London, we are happy to say, indicates a fair prospect of the King's recovery.

VINEGAR EELS IN THE URINE.

In a pamphlet recently issued by the Bureau of Animal Industry of the United States Department of Agriculture, entitled *Eleven Miscellaneous Papers on Animal Parasites*, we find an interesting article by Charles Wardell Stiles, Ph. D., and W. Ashby Frankland, M. D., headed A Case of Vinegar-Eel (*Anguillula aceti*) Infection in the Human Bladder. In November, 1900, one of the authors, presumably Dr. Frankland, found some minute worms in the urine of a young married woman. To

exclude the possibility of accidental contamination of the urine from external sources, a specimen was obtained by means of the catheter, and in it there were found numerous specimens of *Anguillula aceti* in various stages of development.

In five samples of the woman's urine the worms were found in great numbers, and their presence in the bladder persisted for thirty-three days after they were first observed. The urine was always very acid, and as certain of the specimens slowly became alkaline the worms died. One specimen, however, which had a decided odor of vinegar, retained its acidity for two months, and during all that time the worms remained alive, though at the close of the period their signs of life were very feeble. "Six of the worms were then removed from the urine and placed in two test tubes containing vinegar free from parasites. Their movements quickened in a few hours, and, from seeming almost dead, they became in a day or two as vigorous as ever. In one month they increased greatly by breeding, and within two months after their transfer from urine to vinegar there were enough of them in one of the tubes to make the fluid appear turbid."

The patient had chronic parenchymatous nephritis, and her urine had frequently contained albumin, but the heat and nitric acid tests failed to reveal its presence at any time during the persistence of the worms in the urine, though several authors' statements that certain albuminous matter in poorly prepared vinegar constitutes the worms' food seem to have led to the supposition of albuminuria. There were no symptoms traceable to the verminous infection. The woman had severe headache and decided constipation while she was infested with the worms, but these conditions were quite common with her and were not supposed to be caused by the worms, which disappeared from the urine without any special treatment.

Discarding as scarcely reasonable and entirely without analogy the assumption that the worms had been swallowed, bored their way through the intestinal wall, and finally reached the interior of the bladder, the authors were led to conclude that they had entered through the urethra. Their first thought was that, to prevent conception, the woman had used vaginal douches acidulated with vinegar, but she denied having done so. "While she was not entirely free from hysterical tendencies," they say, "no

grounds are present for assuming that she introduced the parasites for the purpose of mystifying her physician." So the origin of the verminous infection is not cleared up, but it is gratifying to learn that, so far as this case indicates, the presence of vinegar eels in the bladder is harmless and tends to come to an end spontaneously.

THE ILEOCÆCAL VALVE.

The old question of the permeability of the ileocæcal opening to fluids forced upward from the colon has lately been reopened by our German colleagues. One of them, Dr. Oskar Kraus, of Carlsbad (*Wiener klinische Wochenschrift*, May 8th), taking his metaphors from Oriental affairs, declares that it cannot be a matter of entire indifference to the economy of metabolism whether the small intestine is shut off from the large intestine by a Chinese wall with a sally port or whether the policy of the open door prevails. In that declaration we find a touch of humor such as is not often met with in medical literature. The writer proceeds to claim for himself priority in the view that in certain individuals there exists a condition of ileocæcal insufficiency, a view that has lately been put forward by a Dr. Herz. Kraus avers that insufficiency of the ileocæcal valve is the rule in young infants and that it exists in a certain number of adults. It may well be that herein lies a sufficient explanation of the diversity of opinion that has long prevailed as to the permeability in question.

Certainly not all men are made quite alike in every detail. Even what we somewhat vaguely term idiosyncrasy is doubtless the outcome of some original peculiarity of structure, and we are certainly getting to recognize more and more that the occurrence of insanity is due to some congenital "blot on the brain," some subtle structural departure from the normal that eludes our means of demonstration. If the contending knights of tradition had only taken the trouble to look at both sides of the shield over which they disputed, much bickering might have been avoided. In the human mechanism we are not always dealing with "interchangeable parts"; hence it is that in cases of its derangement we should study the patient's peculiarities quite as much as the morbid phenomena. As a working hypothesis, it might be well to assume that in some men the ileo-

cæcal valve is like a Chinese wall, while in others there is an open door between the ileum and the colon.

THE ARMY MEDICAL CORPS.

Again there has been exemplified the difficulty of procuring a sufficient number of accessions to the corps. It is understood that another examination is to be held in the course of a few months, and it is to be hoped that greater success will then be met with, for it is supposable that a large number of new graduates will by that time have profited by needed rest. An army examination coming almost coincidentally with the final exercises in the large metropolitan schools is not so alluring as one that comes a little later.

THE MORBID CRAVING FOR SENSATIONAL DETAIL.

In our issue for May 10th, we referred in a minor editorial to "the public's unjustifiable demand for details concerning the health of distinguished persons" which showed itself by the dissatisfaction of the Dutch people with the fact that Queen Wilhelmina's physicians issued bulletins expressed only in general terms. We wish once again to express our emphatic reprobation of a similar spirit displayed by the lay press in England as well as here in regard to the information officially given out concerning the King of England. We have noted several comments complaining of the absence of details as to temperature, etc. We fully applaud the wisdom of our English colleagues in confining the information publicly given out to general terms and to a summary of results. The habit of publishing more precise details is entirely without any real justification. The public at large cannot properly appraise the value of such details, even if they are published; the publication gives rise to a lot of irresponsible criticism that is as unjust as it is absolutely worthless; it undoubtedly plays such an autosuggestive part in public hygiene as a condition of morbid introspection does with the health of the individual; and, even if these very weighty reasons did not exist, it is absolutely no business whatever of "the man in the street." The public is deeply interested in the welfare and health of prominent people, and has a right to look for general information as to the condition of an illustrious patient; but nothing but a morbid and altogether reprehensible curiosity can explain its demand for technical details which it is as incapable of properly appraising as the paving-stones upon which it walks.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 21, 1902:

DISEASES.	Week end'g June 14.		Week end'g June 21.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.	39	13	5	8
Scarlet fever.	291	20	276	28
Cerebro-spinal meningitis.	0	5	0	4
Measles.	435	12	363	22
Diphtheria and Croup.	291	48	306	32
Small-pox.	32	13	50	8
Tuberculosis.	258	154	241	143

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the Week ending June 21, 1902:

Smallpox—United States.

California.	Los Angeles.	May 31-June 7.	7 cases.	
"	Sacramento.	May 31-June 7.	1 case.	
"	San Francisco.	May 31-June 8.	6 cases.	
Illinois.	Belleville.	June 7-14.	1 case.	
"	Chicago.	June 7-14.	4 cases.	
"	Freeport.	June 7-14.	3 cases.	
Indiana.	Evansville.	June 7-14.	3 cases.	
"	Indianapolis.	May 31-June 7.	11 cases.	
"	South Bend.	May 31-June 14.	5 cases.	
"	Terre Haute.	May 31-June 7.	1 case.	
Kansas.	Wichita.	May 31-June 14.	5 cases.	
Kentucky.	Covington.	June 7-14.	6 cases.	
Mass.	Boston.	June 7-14.	12 cases.	9 deaths.
"	Lawrence.	May 31-June 7.	1 case.	1 death.
"	Lowell.	June 7-14.	3 cases.	2 deaths.
"	Malden.	June 7-14.	1 case.	
"	Newton.	June 7-14.	1 case.	
Michigan.	Detroit.	June 7-14.	4 cases.	1 death.
Missouri.	St. Louis.	June 7-14.	52 cases.	2 deaths.
Montana.	Butte.	June 7-14.	6 cases.	
Nebraska.	Omaha.	June 7-14.	17 cases.	
N. Hampshire.	Nashua.	June 7-14.	11 cases.	
New Jersey.	Hudson County.	June 7-14.		
"	Jersey City.	June 7-14.		
"	Newark.	June 7-14.	55 cases.	14 deaths.
New York.	Albany.	June 7-14.	26 cases.	4 deaths.
"	New York.	May 31-June 7.	2 cases.	
"	Yonkers.	June 7-14.	32 cases.	13 deaths.
Ohio.	Cleveland.	June 6-13.	1 case.	
"	Dayton.	June 7-14.	29 cases.	5 deaths.
"	Toledo.	June 7-14.	3 cases.	
Oregon.	Portland.	May 31-June 14.	5 cases.	
Pennsylvania.	Philadelphia.	June 7-14.	18 cases.	
"	McKeesport.	June 7-14.	3 cases.	
"	Philadelphia.	June 7-14.	1 case.	
"	Pittsburgh.	June 7-14.	8 cases.	3 deaths.
"	Seranton.	June 7-14.	38 cases.	
Utah.	Salt Lake City.	May 31-June 14.	2 cases.	
Wisconsin.	Green Bay.	June 8-15.	48 cases.	
"	Janesville.	May 31-June 7.	2 cases.	
"	Milwaukee.	June 7-14.	1 case.	

Smallpox—Foreign.

Austria.	Prague.	May 19-31.	7 cases.	
Belgium.	Antwerp.	May 24-31.	8 cases.	1 death.
"	Brussels.	May 24-31.	1 case.	1 death.
China.	Hong Kong.	Apr. 27-May 3.	4 cases.	3 deaths.
Colombia.	Panama.	June 2-9.	15 cases.	
Great Britain.	Birmingham.	May 24-31.	3 cases.	
"	Glasgow.	May 31-June 6.	1 case.	
"	Liverpool.	May 24-31.	6 cases.	
"	London.	May 24-31.	51 cases.	48 deaths.
India.	Bombay.	May 13-20.	7 deaths.	
"	Calcutta.	May 10-17.	4 deaths.	
"	Madras.	May 3-10.	1 death.	
Italy.	Palermo.	May 24-31.	8 cases.	2 deaths.
Mexico.	City of Mexico.	May 25-June 8.	2 cases.	3 deaths.
Russia.	Moscow.	May 17-24.	10 cases.	
"	St. Petersburg.	May 17-24.	14 cases.	8 deaths.

Yellow Fever.

Mexico.	City of Mexico.	June 1-3.	1 case.	1 death.
"	Vera Cruz.	June 7-14.	27 cases.	0 deaths.

Cholera—Insular.

Philippine Is.	Manilla.....	Apr. 28-May 3...	174 cases.	138 deaths.
"	Bataan			
"	Bulacan	Province... Apr. 28-May 3...	44 cases.	47 deaths.
"	Camarines	Province... Apr. 28-May 3...	79 cases.	58 deaths.
"	Cavite	Province... Apr. 28-May 3...	109 cases.	98 deaths.
"	Laguna	Province... Apr. 28-May 3...	1 case.	1 death.
"	Neuva Ecija	Province... Apr. 28-May 3...	14 cases.	13 deaths.
"	Pampanga	Province... Apr. 28-May 3...	1 case.	1 death.
"	Pangasinan	Province... Apr. 28-May 3...	118 cases.	81 deaths.
"	Tarlac Province	Apr. 28-May 3...	1 case.	1 death.
"			4 cases.	4 deaths.

Cholera—Foreign.

India.....	Bombay.....	May 13-20.....	1 death.
"	Calcutta.....	May 10-17.....	4 deaths.
"	Madras.....	May 3-9.....	1 death.
Straits Settlements.	Singapore.....	Apr. 12-19.....	12 deaths.
		Apr. 27-May 3...	84 deaths.

Plague—United States.

California....	San Francisco...	May 19.....	1 death.
"	"	May 25.....	1 death.
"	"	May 26.....	1 case.
"	"	May 29.....	1 case.

Plague—Foreign.

India.....	Bombay.....	May 13-20.....	224 deaths.
"	Calcutta.....	May 10-17.....	209 deaths.
"	Karachi.....	May 10-18.....	54 cases. 54 deaths.

Army Intelligence :

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending June 21, 1902:

COX, WALTER, First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended two months.

HARVEY, LUTHER S., Captain and Assistant Surgeon, United States Volunteers. The extension of leave of absence granted him on account of sickness is still further extended to include June 30th.

PINKHAM, EDWARD W., First Lieutenant and Assistant Surgeon. The resignation of his commission as an officer of the army, has been accepted.

SNYDER, HENRY D., Captain and Assistant Surgeon, is granted leave of absence for two months.

VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board at Columbus Barracks, Ohio, vice SANFORD H. WADHAMS, First Lieutenant and Assistant Surgeon.

WALSH, JOSEPH W., Contract Surgeon, will proceed to Brooklyn, N. Y., for annulment of contract.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending June 19, 1902:

BANKS, C. E., Surgeon. Granted leave of absence for one day, June 16th.

COBB, J. O., Surgeon. The leave of absence granted him by the Bureau letter of May 24th is revoked.

CURRIE, D. H., Assistant Surgeon. Directed to proceed to the San Francisco Quarantine and report to the medical officer in command for temporary duty during the absence of L. L. LUMSDEN.

HOBBS, W. C., Assistant Surgeon. Relieved from duty at Savannah, and directed to proceed to Honolulu and report to the chief quarantine officer for duty.

KALLOCH, F. C., Surgeon. Granted leave of absence for ten days.

LUMSDEN, L. L., Assistant Surgeon. Granted leave of absence for fifteen days.

PERRY, J. C., Passed Assistant Surgeon. Granted leave of absence for fourteen days.

SMYTH, P. R., Acting Assistant Surgeon. The leave of absence granted him by the Bureau letter of June 12th is revoked.

WILLIAMS, L. L., Surgeon. The Bureau letter of June 10th, granting him leave of absence for ten days, is amended so that the said leave shall be for six days only.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending June 21, 1902:

BISHOP, L. W., Assistant Surgeon. Detached from the Cavite Naval Station, Philippine Islands, and ordered to duty with the Marine Brigade.

BLAKEMAN, R. S., Passed Assistant Surgeon. Detached from the *Hartford* and ordered home, and granted leave of absence for three months, on account of illness.

DENNIS, J. B., Passed Assistant Surgeon. Detached from the Naval Academy, and ordered to the *Hartford*.

Births, Marriages, and Deaths.*Married.*

BRICK—UNRUH.—In Holmesburg, Pennsylvania, on Wednesday, June 18th, Dr. Benjamin Brick, of Marlton, N. J., and Miss Edna M. Unruh.

COMSTOCK—DILLEHUNT.—In Baltimore, on Thursday, June 5th, Dr. William Carpenter Comstock and Miss Mary Gordon Dillehunt.

CURTIN—MONAHAN.—In Brooklyn, on Wednesday, June 18th, Dr. Thomas Hayes Curtin, of Manhattan, and Miss Lavinia A. Monahan.

FULLERTON—PALMER.—In Baltimore, on Wednesday, June 18th, Dr. Walter Wilson Fullerton, of Brockton, Massachusetts, and Miss Mary Eleanor Palmer.

Died.

BARTON.—In New York, on Friday, June 20th, Dr. William H. Barton, of the New Jersey State Insane Hospital, Morris Plains, N. J., in the thirty-second year of his age.

CAREY.—In New York, on Tuesday, June 17th, Dr. George F. Carey, in the sixty-sixth year of his age.

DEXTER.—In Washington, on Tuesday, June 17th, Dr. James E. Dexter, in the eightieth year of his age.

EARLY.—In New York, on Friday, June 20th, Dr. Morris B. Early, in the fifty-second year of his age.

HARRIS.—In Halifax, N. S., on Saturday, June 14th, Dr. John H. Harris, in the sixty-fourth year of his age.

HORNER.—In Marshall, Virginia, on Saturday, June 14th, Dr. Frederick Horner, Jr., United States Navy, retired.

LEONARD.—In Brooklyn, on Saturday, June 14th, Dr. Algernon Sidney Leonard, in the sixtieth year of his age.

LUSK.—In Rockaway Beach, N. Y., on Friday, June 20th, Dr. Obed Latham Lusk, in the forty-second year of his age.

PRICE.—In New York, on Monday, June 16th, Dr. Elias C. Price, in the seventy-sixth year of his age.

RUSSELL.—In New Orleans, on Wednesday, June 11th, Dr. Stephen C. Russell, in the eighty-second year of his age.

SHREEVE.—In Baltimore, on Saturday, June 14th, Dr. Thomas J. Shreeve, of Uniontown, Maryland, in the forty-third year of his age.

SMITH.—In Dorchester, Massachusetts, on Friday, June 20th, Dr. Elbridge Smith, in the eighty-fourth year of his age.

TALCOTT.—In Middletown, N. Y., on Sunday, June 15th, Dr. Selden H. Talcott, in the sixtieth year of his age.

Pith of Current Literature.

The Boston Medical and Surgical Journal,
June 12, 1902.

On Tuberculosis in Relation to the Live-stock Industry. By Dr. J. G. Adami.—Badly-kept milk, according to the author, is the great cause of infantile mortality, and he suggests that our legislation should not be directed merely against the employment of milk from animals suffering from the one disease, but should be directed to secure milk that is as free as possible from all forms of contamination. We should make it an offence to employ the milk of animals suffering from any disease whatsoever, and demand that the bacteria shall not exceed a certain number per cubic centimetre; then we shall have removed practically all the dangers from infection.

The Struggle against Consumption. By Dr. Edward O. Otis.—The author points out that our hope in the struggle is founded on four great facts: (1) That pulmonary tuberculosis is contagious and not inherited; (2) that it is avoidable; (3) that it is curable; (4) that the sputum of the consumptive is the main source of infection, is accessible, and can be controlled. The public, or State, sanatorium affords the best means of cure; it isolates the consumptive and sends forth, in its cured patients, teachers of wholesome hygienic living and of the avoidance of danger from the sputum.

Cystoscopic Appearance in Non-Tuberculous Cystitis and Pyelonephritis in Women. By Dr. Edgar Garceau.—In cases in which the bladder and upper urinary passages are inflamed, the author notes the frequency with which some alteration from the normal occurs about the orifice of the ureter on the side corresponding to the lesion above. This is of the greatest diagnostic importance.

Seven Cases of Placenta Prævia. By Dr. J. G. Henry.

Cæsarian Section for Placenta Prævia. By Dr. P. J. Conroy.

Medical News, June 14, 1902.

Intestinal Anastomosis: Further Remarks Thereon. By Dr. Frederick Holme Wiggin.—The author advises the surgeon to remember that when he wishes to unite severed portions of the intestinal tract, only normal and clean peritoneal surfaces should be united. When employing the Lembert suture, the needle must be made to include some fibres of the submucosa. Special care must be exercised, in approximating the mesenteric borders of the intestine, to include a portion of the mesentery. There is no danger of cicatricial contraction following end-to-end union of divided intestinal ends. A quantity of saline solution should be left behind when closing the abdominal wound, and there is less danger to the patient in closing the wound after suturing the gut than in leaving the wound open and surrounding the injured parts with gauze packing. The union of the parts, under favorable conditions, is effected in about sixty hours.

Hysteria: Its Ætiology and Management. By Dr. Joseph M. Aikin.—The author points out that the cause of hysteria is always chronic: many pa-

tients get instant relief under certain mental and moral influences. The diagnosis is not so difficult if we will remember the distinguishing marks, neurasthenia, emotional disturbance, and wilfulness on the part of the patient. We must analyze and know the potential of physical, mental, and spiritual power in the individual, and apply the material psychic or spiritual therapeutics indicated.

Stone in the Female Bladder. Report of a Case. By Dr. H. H. Stoner.

Philadelphia Medical Journal, June 14, 1902.

Suggestions for Certain Cheap and Convenient Forms of Apparatus for Class Work in the Bacteriological Laboratory. By Dr. Allen J. Smith.

Some Gastric Conditions as Found in Forty Healthy Persons. By Dr. Richard F. Chase.—In thirty-nine of the forty cases, where, after a ten-hour fast, a Ewald test meal was given and the stomach-contents measured one hour thereafter, the average amount of the stomach-contents was found to be one hundred and five cubic centimetres. The average relation of the lower border of the stomach to the umbilicus was three-eighths of an inch above. The xipho-umbilical resonance, as determined by gentle percussion between the lower border of the stomach and the inferior edge of the liver, was four inches and a half. It is particularly desirable to obtain this resonance, because, by its measurements in cases of low positions of the curvature, one can usually distinguish between dilatation and ptosis. The author lays stress on his opinion that the liquid capacity test depends more upon the tolerance of the stomach than upon its capacity, and is less to be relied upon in judging the size of the stomach than are inflation and percussion. In the thirty-one cases in which free hydrochloric acid was present, the mean amount was one and seven tenths per thousand, as determined by titration with dimethylamidazo-benzol as an indicator.

The Place of Drugs in the Treatment of Stomach Troubles. By Dr. Boardman Reed.—In general, according to the author, medicines are less useful than hygienic or mechanical measures, such as a carefully selected diet, a freer use of pure drinking water, exercise, massage, electricity, etc.

Focal Facial Epilepsy, Followed by Temporary Unilateral Paralysis of the Face and Tongue. By Dr. D. J. McCarthy, and Dr. A. P. Francine.

Superior Tabes. By Dr. M. H. Bochrach.—The author records a case, evidently not one of ordinary locomotor ataxia. The ataxia, slightly marked in the legs, pronounced in the arms, suggests superior tabes. The patient's mental slowness, however, his loss of memory, somnolence, and general facial expression, strongly suggest paresis, and the author inclines to the view that his case is one of paresis with beginning tabes of the cord.

A Study of Heredity. By Dr. Hiram A. Wright.

British Medical Journal, June 7, 1902.

Tuberculin as a Remedy in Tuberculosis of the Lungs. By Dr. W. C. Wilkinson.—The treatment of tuberculosis with tuberculin is specific. It is of no avail except for tuberculous diseases, and if

other complicating conditions exist—if other micro-organisms are associated with tubercle bacilli in the morbid process—tuberculin may fail absolutely to arrest or modify the morbid process; indeed, tuberculin may then do harm and perhaps even hasten the fatal issue. It may be powerful for harm and powerless for good when the chief cause of the symptoms is not the tuberculous process at all, but various other infective processes.

Tuberculin treatment aims at a progressive process of active immunization, radically different from the passive process used when diphtheria antitoxine is administered. Active immunization makes a large demand upon the energy of the tissue cells, and requires that the cells and tissues should be in a relatively healthy state. The presence of streptococci may so depress cellular energy that active immunization is not possible.

Indispensable to success is a thorough knowledge of mixed infection. As a rule fever is the danger signal, and suggests mixed infection, yet fever may be present in certain forms of pure tuberculosis (acute tuberculosis, and the gelatinous caseous pneumonia); and, on the other hand, mixed infection may be present without fever. Careful examination of the sputum furnishes the only sure mode of distinguishing. The author has treated fifty cases of pulmonary tuberculosis with tuberculin, with but twelve deaths. Of these, thirty-five cases were in the first and second stages of the disease; of these three died, all three being cases of mixed infection.

He has never seen a dormant process lighted up by the use of tuberculin. The treatment can be carried on without loss of employment, and, although he has given many thousands of injections, he has never had an accident, not even a skin abscess. The time will come when it will be generally admitted that Koch has not only taught us all we know of the ætiology of pulmonary tuberculosis but has found also a remedy which in skilled hands will prove an inestimable boon to the large section of humanity afflicted with pulmonary tuberculosis.

The Administrative Control of the Tuberculous Diseases. By Dr. H. C. Pattin.—The author's conclusions are as follows: Before setting out upon an attempt to control the tuberculosis, we need: (1.) Reliable information as to their whereabouts, which can only be acquired by obligatory notification. (2.) Rigorous adoption of consequential administrative measures as to destruction of sputum, etc., and disinfection and improvement of affected dwellings, and sometimes their condemnation and removal. (3.) Provision of sanatoria for recuperative treatment either by sanitary authorities singly or conjointly. (4.) Instruction in all elementary schools in the means of propagation, and the methods of prevention, in dealing with tuberculous diseases.

On a Model Sanatorium for Consumptives. By Sir T. Lauder Brunton, M. D., F. R. S.

The Technique of the Intratracheal "Direct" Method of Treatment of Phthisis. By C. Campbell, M. R. C. S.—The instruments required in the author's intratracheal "direct" method of treatment of phthisis, are an intratracheal syringe and a laryngoscope. The syringe should be entirely of metal and should hold sixty minims. The laryngeal mir-

ror should be made entirely of metal; it is impossible to clean the ordinary glass mirror. The two formulæ used most frequently by the author are as follows:

- (1) R Thymol 1 drachm
 Salol 2 drachms
 Menthol 1 drachm
 Glycerin 5 ounces

Mix in a six-ounce bottle, and dissolve in a water bath. Inject from two to twelve drachms twice daily at a temperature of 140° F.

- (2) R Medicinal izar 3 drachms
 Menthol 2 drachms
 Glycerin 5 ounces

Mix, and inject as the preceding.

The patient sits upright in front of the operator, with his mouth on a slightly higher plane; a special chair is desirable. Next the patient draws his own tongue forward and downward with his right forefinger and thumb, covered with a clean handkerchief or paper "tongue cloth." Then the operator, with the aid of the laryngeal mirror, guides the nozzle of the syringe along the curve of the palate, without touching it, over the tip of the epiglottis, then it is brought down rapidly, and the injection delivered. This is best done at the beginning of inspiration.

The duration of treatment obviously depends on a variety of circumstances—the primary factor being the extent of the disease. If the infection is recent and the digestion and general health still fairly good, one may expect a rapid "cure."

Arsenical Beer Poisoning at the Halifax Union Poor - Law Hospital. By J. F. Woodyatt, M. R. C. S.

Lancet, June 7, 1902.

Certain Diseases of the Blood-Vessels. By A. Pearce Gould, F. R. C. S.—In this, the third of the Lettsomian lectures, the author considers the subject of venous thrombosis and obliterating endophlebitis. Under the head of thrombosis of the superior mesenteric vein, he reports the very interesting case of a man, aged forty years, who suddenly exhibited all the symptoms of intestinal obstruction. At the operation a long coil of small intestine was found to be of a dark purple color, the corresponding mesentery being thickened and firm, and with several hæmorrhages into its substance. The patient died the same evening.

Chronic Hypertrophy of the Faucial and Pharyngeal Lymphoid or Adenoid Tissues. By F. Marsh, F. R. C. S.—Enlarged tonsils and adenoids are usually associated, occur essentially in adolescence and childhood, and are almost equally prevalent in the two sexes. Opinion differs widely as to the relative influence and importance of the various assigned causes, viz., heredity, scrofula, lymphatic temperament, climate, anterior nasal stenosis, cleft palate, vaginal secretions at birth, the acute exanthemata, whooping-cough, and nasal and nasopharyngeal catarrh. An analysis of 816 cases of tonsillar hypertrophy, shows that the greatest number of patients were in their fifth year, those in their sixth, fourth and seventh years coming next. Over one third of the 816 cases occurred in these four years.

Enlarged tonsils vary greatly in size, shape, and consistence, but they may be arranged in three groups: (1) where the hypertrophy is chiefly in the horizontal diameter—the projecting tonsil; (2) where the hypertrophy is chiefly in the vertical diameter—the elongated tonsil; and (3) where the hypertrophy is chiefly in the antero-posterior diameter—the broad sessile or flat tonsil.

The symptoms caused by enlarged tonsils may be classified as follows: (1.) *Obstructive symptoms.* The size alone of the tonsils may cause considerable mechanical trouble. Swallowing is rendered difficult, buccal respiration is much impeded (a serious matter if nasal stenosis from adenoids exist) and the voice is thick and indistinct. In some cases there is deafness from imperfect middle-ear aeration due to interference with the reaction of the palatotubal muscles. (2.) *Catarrhal symptoms.* The crypts and recesses are suitable places for the lodgment and growth of the pneumococcus and other cocci capable of setting up catarrhal inflammation. This catarrh may keep localized to the tonsils, or extend to the adenoids, or by absorption of toxins, the lymphatic glands corresponding to the tonsils (the upper set of the deep cervical group) may become inflamed and enlarged. In the mild cases there is little tendency to suppuration, but in the acute cases the glands break down and suppurate from the very first. (3.) *Reflex symptoms.* The only reflex symptom to be attributed to enlarged tonsils is "cough." This may be short, dry, or hacking in character, or occurring in paroxysms and distinctly spasmodic in character.

The treatment resolves itself into the question of operation or not. Amygdalotomy should be undertaken solely for the relief of some definite symptom or symptoms which cannot be satisfactorily treated by other means. The author prefers Mackenzie's instrument. The risks of a well-performed amygdalotomy are practically *nil*. The author has never yet had occasion to tie a vessel for hæmorrhage. There is a slight risk of sepsis, as it is not possible to sterilize the patient's throat. Treatment after operation consists of (1) avoidance of exertion immediately afterward (a fertile cause of recurrent hæmorrhage); (2) an equable temperature during the healing process (to prevent catarrhal attacks); (3) suitable diet; and (4) the use of a cleansing wash.

Concerning Injurious Constituents in Whiskey and Their Relation to Flavor. By Sir Lauder Brunton and Dr. F. W. Tunnicliffe.—The authors conclude that the aldehydes to which the initial imitating taste and flavor of raw whiskey must be ascribed, are only indirectly—viz., by their disappearance—concerned with the ultimate bouquet of old whiskey. Since some of the energy of maturation is spent upon the disappearance of these substances it is probable that an initially dealdehyded spirit will become mature in a shorter time than an ordinary one. Finally, since the aldehydes and furfural do not seem necessary for the production of whiskey, they are from the point of view of the public health, better removed from it.

Dilatation of the Heart and Other Manifestations of Weakening of the Heart as Results of Rheumatism. By Dr. T. Fisher.—The author holds that dilatation of the heart, ending in death, may occasionally occur without valvular disease or

general adhesion of the pericardium being present; that in rare instances hypertrophy of the heart may occur without valvular disease or general adhesion of the pericardium; that there is evidence that myocarditis may exist in the absence of pericarditis; and that slight weakening of the myocardium may be shown by loss of physical energy, by attacks of cardiac pain or by tachycardia.

The Ventilation of Ships, with a Description of an Efficacious Method. By Dr. W. E. Home.—In this article the author describes and speaks strongly in favor of Utley's porthole and skylight ventilators. By means of these contrivances, a little fresh air can be supplied on shipboard in any weather no matter how bad.

Difficulties in Diagnosis: Chicken-Pox or Small-Pox? By Dr. W. M. Young.

Primary Gangrene of the Tonsils. By Dr. R. Fullerton.—The author reports two cases of primary gangrene of the tonsils, both occurring in adults. The appearances were those of a tertiary specific lesion, but there was no history of infection with syphilis, and specific treatment failed to bring about any improvement. The treatment must be prompt and thorough; internally iron, quinine, and opium should be given, and locally the actual cautery should be freely used.

Roussky Vrach, May 4, 1902.

On Gelatinous Urine. By Professor N. P. Kravkoff.—The author has studied the chemical characteristics of the gelatinous substances which often appears in the urine of animals, particularly of rabbits. He finds that this jelly-like substance is not, as is commonly stated, composed of proteids, but is chiefly composed of calcium phosphate. If the urine is diluted with water, and if enough sodium or potassium hydrate solution is added to render it alkaline, the jelly-like mass is precipitated in the form of an amorphous sediment. The supernatant liquid, however, remains perfectly clear, and the precipitate is insoluble in alkalies and soluble in acids. If dissolved and re-precipitated several times, one can obtain a purely mineral precipitate, free from all organic matter, but sometimes the precipitate gives proteid reactions, or the reactions for urea, owing to the fact that in the process of precipitation some of the urea and proteids of the urine are brought down. The jelly-like masses in the urine of rabbits, which are familiar to all those who work with these urines, are, therefore, composed of phosphates, principally calcium phosphate.

The Formation of a Nose by Means of a Finger. By Dr. R. R. Wreden.—The author describes a method of rhinoplasty which involves the utilization of the fourth finger of the left hand, which was selected on account of its comparative uselessness. The finger is rendered anæsthetic, the nail removed, the end of the terminal phalanx is exposed, leaving the skin and subcutaneous tissues with their vessels, in place. The end of the phalanx is then provided with a small groove corresponding to the end of the nasal bone, and the edges of the remainder of the nose are freshened. The patient's finger is now fixed in position by bandages, in front of the nasal stump in such a manner that the term-

inal phalanx fits into the nasal bones, and that the skin over the first and second phalanges may be united to the remaining edges of skin. The wound is dressed twice daily to prevent infection from the nose, and the sutures are removed on the fifth day. The second part of the operation, is performed about four weeks later. It consists of a resection of the metacarpo-phalangeal joint of the finger used for the rhinoplasty, and the end of the first phalanx is used to form a new nasal septum, after bending the finger so that the lower part of it, namely the first phalanx, is at about right angles from the upper part, which by this time has grown to the nasal bone and the sides of the defect in the face. The chief advantage of this method is that it provides for a firm bony support for the new nose.

Foreign Bodies that Remain for a Long Time in the Air Passages. By Dr. N. F. Schwoger-Lettetsky.—The case reported here is interesting because nothing in the history pointed to the presence of a foreign body in the air passages, and because in spite of the fact that the foreign body in question had remained in the air passages for over a year, it gave no signs of its presence there during that time. The patient was a man, aged twenty-nine years, who entered with the symptoms of fever, pain in the right side of the chest, cough, and expectoration. Under the right clavicle, along the border of the sternum, a small area of dull tympanitic resonance on percussion was noted, over which bronchial breathing and râles were audible on percussion. There was marked dyspnoea, and the sputum was purulent. The picture was that of a resolving pneumonia. The temperature slowly defervesced, and a few days later again began to rise, with a recurrence of the physical signs in the interscapular region. There had probably been, therefore, an extension or migration of the pneumonia. The symptoms continued to vary intermittently, until, in a violent access of cough, the patient expectorated a piece of spongy bone $1\frac{1}{2}$ centimetres long and 1 centimetre wide. Rapid improvement set in from that time on, and the patient remembered that over a year ago at dinner, he had swallowed a piece of bone "the wrong way." The author emphasizes the fact that the presence of foreign bodies in the lungs gives an obscure clinical picture, and advises that, in cases where the symptoms of pneumonia are localized and indefinite in their course, the presence of a foreign body be suspected.

The Isolation of Typhoid Bacilli from Water. By Dr. A. W. Windelband.—The author tested the various methods of isolating the typhoid bacillus from water, such as those of Thoinot, Rodet, Vincent, etc., and found them all unsatisfactory. He proposes instead a method which is based on the agglutinating properties of the germ in question when mixed with the serum of an animal previously immunized against typhoid fever. The experiments were conducted as follows: A certain quantity of bouillon culture of the typhoid bacillus, and a larger quantity of colon bacillus culture were added to a standard quantity of drinking water, and to 1 cubic centimetre of the solution 10 cubic centimetres of bouillon were added in a test tube. The culture thus prepared was grown in the incubator, and, at the end of from three to five days, the contents of the

tube were carefully poured into another sterile tube, taking care to leave the cloudy part at the bottom of the first. To this sediment the immunized serum was added, and at the end of a certain time, there appeared a sediment, which consisted of typhoid bacilli, which were completely isolated and identified by growing upon plates. By this method the author claims to be able to isolate typhoid germs which were diluted in the proportion of one part of culture to from ten to thirty million parts of water.

Diphtheria and the Diphtheria Bacillus in Scarlet Fever. On the Question of Coexistence of Diphtheria and Scarlet Fever. By Dr. I. A. Schabad.—(*To be continued.*)

The Mortality from Cancer in the Municipal Hospitals of St. Petersburg from 1890 to 1900. By Dr. A. S. Manuiloff.—The author found that, in the eleven years which comprise the period investigated, there died in the municipal hospitals of St. Petersburg from cancer: 2,733 women and 1,952 men, i. e., about 800 women in excess of the men. On the other hand, consumption was the cause of death in the cases of 16,502 men and only 6,630 women. The number of cases of cancer admitted, as well as the number of deaths from cancer, grows every year, while the percentage of mortality has remained about stationary.

The Present Status of the Contest Against Tuberculosis in Russia. By Dr. R. A. Pawlowskyi.—An interesting article giving the status of the sanatorium and hygienic movement in Russia. In a word, the status of the question in Russia has reached that phase which characterized it in Germany ten years ago, namely the recognition of the necessity of doing something to promote the cause of united action and of active work, instead of mere words. Societies, committees, etc., for this purpose are everywhere organizing in the Russian Empire. Sanatoria are in the course of construction, but few being at present available, especially to the poor, and funds are being collected in many places to help to establish more sanatoria.

Chirurgia, March, 1902.

On the Removal of Bullets from Muscles. By Dr. A. P. Krymoff.—The author recommends a simple method by means of which a bullet may be grasped securely without the use of the ordinary probes and bullet-forceps. When the bullet is imbedded in a muscle he employs a little appliance which consists of a frame in the form of a parallelogram, each side of which is wedge shaped. This frame is placed with its sharp edges over the bullet, so that the latter is in the middle of the frame, and the appliance is then pressed forcibly through the muscle, cutting a parallelogram around and above the bullet, which can then be easily removed. The great advantage of this frame is that it can be used without any assistance and that it prevents recurrence of hæmorrhage in the field of operation.

On Surgical Diseases Produced by the Pneumococcus. By Dr. A. B. Tikhonovitch.—A report of two cases of comparatively rare pneumococcus infection. The first of these was a case of general pneumococcus infection of the organism.

The second one was of especial interest, as it showed how the pneumococcus interfered with the healing of an operative wound, producing suppuration, and thus taking upon itself the rôle of a pyogenic germ.

A Plastic Operation on the Nose: Restoration of an Ala, the Tip of the Nose, and the Skin Sæptum. By Dr. E. G. Lazariëff.—In a woman in whom there was almost complete absence of the left wing, the tip and the skin sæptum of the nose, the author performed the following operation: He freshened the edges of the gap with a scalpel and mapped out a flap on the cheek, as follows: An incision was made obliquely on the skin of the cheek toward the edge of the mucous membrane of the upper lip, and then over the mucous membrane to the gums. A parallel incision was made in an exactly similar way near the nose. The flap thus obtained was very movable. A piece of the mucous membrane was employed to repair the sæptum, and the rest of the flap was so turned that the edge of the mucous membrane formed the edge of the wing of the nose. The skin edge of the flap was sutured to the skin part of the gap in the nose, while the mucous membrane edge was sutured to the mucous membrane in this gap. The lip was simply sutured across the part removed, but sometimes it might be necessary to perform a plastic operation on the upper lip as well. This method is only applicable to women, as in men the growth of hair on the upper lip interferes.

Transpleural Excision of an Echinococcus Cyst According to Bobroff's Method. By Dr. S. P. Feodoroff.—A report of a case in which an echinococcus cyst, situated on the upper surface of the liver, was reached transpleurally, incised, and closed tightly according to Bobroff's method. The patient was a woman, aged thirty years, who had been complaining of acute pains in the right side, which were aggravated by breathing. There were no dyspeptic phenomena, no fever, and no jaundice. The liver was found enlarged, and there was an area of dulness on the right side of the chest below the angle of the scapula. On puncture, a clear fluid containing a piece of an echinococcus hooklet was found. The operation consisted in resecting a portion of the tenth rib, about two inches away from the spine, of opening the pleura, evacuating the fluid contained therein, and suturing the parietal pleura along the whole incision to the portion of the diaphragm projecting into the wound, so that a certain area of diaphragm was perfectly isolated from the pleural cavity. The diaphragm was now incised, and the hepatic tissue over the cyst cut through, the cyst evacuated, dried with gauze pads, the echinococcus membrane separated with the fingers, and the cyst closed by sutures going through the liver and diaphragm. The pleural cavity was drained through a little opening left between the sutures attaching the pleura to the diaphragm, and the cavity was flushed out with salt solution. The superficial structures were sutured, leaving an opening for the drain. The drainage was discontinued on the second day and the sutures were removed on the fourth day. On the seventh day the wound had healed, and the patient had improved markedly. Since that time, with the excep-

tion of a short attack of pain and fever, the patient has been perfectly well. The closed method of treating these cysts should not be employed in all cases, and the contraindications to its use are: (1) Malignant suppuration in the cysts. (2) A resistant fibrous sac enclosing the parasite and not easily removable. (3) A markedly exhausted patient with tissues possessing little vitality.

The Operative Treatment of Appendicitis in Various Forms of the Affection. By Dr. D. E. Gorokhoff.—The author thinks that a collective investigation on the subject of appendicitis should be undertaken by the Pirogoff Congress. In appendicitis complicated with acute purulent diffuse peritonitis the only hope of saving the patient's life lies in laparotomy, which should be performed as early as possible. In sacculated multiple abscesses of the appendical region one should not hesitate long before operating. The author's general conclusions are as follows: (1) Diffuse peritonitis accompanied by considerable infiltration and exudation around the appendix is an indication for operation during the first week of the disease. (2) In some cases the rapidly appearing symptoms of general peritonitis force us to operate during the first few days, as soon as the diagnosis is made. (3) Patients with large collections of pus, including those in which perforations take place, are exposed, if operated on in the later stages of the disease, to a variety of serious complications. (4) The prolonged delay in operating on sacculated cases of suppurative appendicitis may be very dangerous. (5) The best time for operation should be chosen in each case according to the symptoms observed, and, in the diffuse forms of appendicitis with peritonitis, the saying "better late than never," holds good, but the earliest possible time for operation should always be selected.

A New Form of Urinal for Cases of Chronic Suprapubic Vesical Fistulæ. By Dr. Dobrotvorsky.

Diseases of the Retroperitoneal Glands. By Dr. I. A. Tyrmoss.—In addition to the infectious adenitis, these glands may be the seat of tuberculosis, syphilis, or malignant growths. The author reports four cases: In the first case there was a cancerous growth in the intestines, which permitted the *Bacillus coli* to penetrate into the retroperitoneal glands. In the second, there was a colitis which acted in the same way. The third case was one of acute adenitis which became absorbed. The fourth case was one of infection of the retroperitoneal glands as a result of suppuration of the inguinal glands.

Presse médicale, April 10, 1902.

Accidents Resulting from Quinine Administration.—M. Alfred Martinet mentions the aural disturbances. He speaks of vesical irritability caused by the drug, especially in elderly people. He denies the power of quinine to evoke uterine contractions. The drug may cause vomiting or cutaneous eruptions. In poisonous doses, it may bring about collapse, with convulsions, unconsciousness, coldness of the extremities, cyanosis, accelerated pulse-rate and urinary suppression. Evacuants, stimulants and diuretics can usually overcome these disagreeable phenomena.

The Apex of the Heart.—M. Ernest Barié, in an exhaustive article on the anatomy and topography of the heart, gives this table of the diagnosis of systolic murmurs heard in the region of the apex.

1. Systolic Murmur of Mitral Insufficiency.		2. Cardio-Pulmonary Murmurs of the Apex.	
Site	At the very apex.	Variable.	
		a Apical (mesosystolic). b Subapical (mesosystolic). c Parapical (systolic, like the murmur of mitral insufficiency). d Endapical (rare; almost always mesosystolic).	
Moment—Absolutely systolic.		Usually mesosystolic.	
Timbre—Sibilant or rough, like a jet of vapor.		Soft, muffled, aspirating.	
Pitch—High.		Medium.	
Propagation	Toward the left axilla, the inferior angle of the scapula, or even toward the spine.	None.	
Fremissement catane—Systolic.		None.	
Duration	Permanent, except occasional disappearance during asystole.	Very variable. Murmurs may appear or disappear and can change in rhythm, site and timbre during a single examination.	
Attitude of the Body	Sometimes more marked in dorsal decubitus.	Maximum intensity in dorsal decubitus; diminution or disappearance on standing.	
Respiratory Influence—Not appreciable.		Respiratory amplitude causes disappearance of murmur which often changes into a jerky respiratory bruit.	
Functional Disturbances—Numerous.		None.	

Wiener klinische Rundschau, April 20, 1902.

[This number is dedicated to Professor von Leyden, in honor of his seventieth birthday anniversary.]

Blood Pressure in Chronic Nephritis.—Dr. Czyhlarz demonstrates that by rest in bed and suitable diet, the blood pressure can be materially reduced without causing heart weakness. Simultaneously, headaches and vertigo disappeared, so that they probably depend upon increased blood pressure in persons suffering from chronic nephritis.

Differential Diagnosis of Pleural Effusions.—By Dr. A von Koranyi.

Spinal Cord in Muscular Defects.—By Dr. H. Obersteiner.

Central Innervation of the Larynx.—By Dr. A. Onodi.

Chronic Myelitis.—Dr. A. Pick reports the anatomical findings in a case of chronic myelitis, which closely resemble those found in acute myelitis. The case was apparently of luetic origin. The author concludes that there are cases of chronic myelitis of syphilitic origin which, at the present time, can not be distinguished from simple myelitis.

On Mumps.—Dr. F. Pick reports a single case of orchitis occurring during an epidemic of measles, in which, however, there was no enlargement of the parotid. The author believes, however, that it must have been due to mumps. The author says that in four cases he was able, at the height of the

disease, to demonstrate tenderness over the pancreas when there were no gastric symptoms whatever. Epidemic parotiditis runs its course without a leucocytosis, indicating that the disease calls forth an exudation of a serous character, not of fibrinous, nature, with an inflammatory diapedesis of leucocytes.

Dyspnœic Coma in Uræmia.—By Dr. F. Pinelles.

Contributions to the Study of Malaria.—Dr. S. Purjesz describes some experiments with the anopheles. He had anopheles mosquitoes bite patients ill with malaria and subsequently attack six non-malarial persons, in all of whom the disease then developed. Nine other persons were infected by the accidental escape of the mosquitoes from their cages. In one of the first series, the preliminary administration of quinine had no influence on the development and course of the disease.

Traumatic Neuritis.—By Dr. E. Redlich.

Case of Amaurotic Idiocy with Anatomical Findings.—By Dr. K. Schaeffer.

Nervous Hyperthermia.—By Dr. A. Strasser.

Hæmoptysis and Its Treatment.—Dr. A. von Weismayr draws attention to hæmoptysis as a symptom of a cavity, as a serious sign in prognosis, and as alarming to the patient. In cases of light bleeding, sedatives to allay the cough are enjoined, but they should not be given in severe cases as it is then essential to clear the lungs of the collected blood. Bed-rest should be ordered with the upper part of the body lying high, and the limbs may be bandaged, but not so tightly as to interfere with arterial bleeding. Ice-bags are useful, and terebene, eight drops five or six times daily on sugar, has proved beneficial. No advantage is to be expected from astringents, even from gelatin injections. As long as the bleeding continues, cold milk only must be given and the return to solid food must be gradual.

Feeding and Treatment in Chronic Renal Disease.—Dr. J. Wiczkowski says that the harmlessness of a milk diet and the injury of alcohol and of the sharp root vegetables are demonstrated facts. Yet in severe cases, a milk diet brings about no improvement, but, on the contrary, a mixed diet is better for these patients to keep up the appetite and the nutrition, the main things to be considered. Occasionally, he has observed a cure in patients who followed their own desires in the matter of diet. Fats sometimes improve the general condition and decrease the albuminuria and the oedema. In three cases, bleeding had a beneficial influence in uræmia.

April 21, 1902.

The Clinical Importance of the Personal Factor in Disease.—Sir Dyce Duckworth says that personal idiosyncrasy against infection is always a most important element in the consideration of disease. Especially in gout and rheumatism, individual immunity or individual susceptibility to tissue change, plays a most important rôle. Patients, not diseases, must be treated.

The Existence of Diabetogenous Leucomaines.—M. R. Lépine has come to the conclusion that

the blood of non-diabetics, especially that of persons ill with pneumonia, is capable of evoking diabetes. In his experiments, the author has been able to isolate leucomaines which caused glycosuria in dogs or rabbits when injected into them in weak solutions. This glycosuria lasted longer if the pancreas had been previously extirpated. It would appear, therefore, that a function of the pancreas is to destroy matters of a toxic nature which could lead to diabetes.

Polyarthritides Rheumatica and Typhoid Fever.—By Dr. P. K. Pel.

New Method of Examination of Gastric Function.—By Professor Sahli. (*To be concluded.*)

Tubercular Skin Diseases and Their Relation to Internal Organs.—Professor O. von Petersen believes that skin tuberculosis is a purely local disease, just as joint tuberculosis and pulmonary tuberculosis are. When phthisis and lupus appear in the same patient, it is probably a coincidence. Heredity plays little rôle in lupus. Any local tuberculous process can, however, evoke a general tuberculosis. Treatment should be general but also local.

Redundant Venous Pulse.—By Professor G. Ascoli.

Symptom-Complex Resembling Banti's Disease.—Professor E. Hoeke reports the case of a patient who died from a ruptured varicose vein of the œsophagus, who had an enlarged liver and spleen, and, especially, a very decided leucopenia. The author thinks that the case was one of syphilitic liver and a precirrhotic enlargement of the spleen.

Experiments on the Action of Oxygen by Inhalation.—Dr. J. Kovacs finds clinically that the inhalation of oxygen diminishes dyspnoea, and cyanosis, increases diuresis and decreases the pulse-rate. The freezing-point of the blood rises when breathing is poor, as well as when carbonic acid gas is added experimentally. This change is overcome by the addition of oxygen experimentally or by inhalation.

"Stroking" Auscultation and Transsonance in the Determination of the Ventricular Boundaries.—Dr. Axel Blad recommends these procedures. A stethoscope is placed over the stomach and the abdomen is slightly stroked. Over the stomach cavity a loud roar is heard which ceases, however, when the boundaries of the stomach are passed. In this manner its boundaries are easily mapped out.

Berliner klinische Wochenschrift, April 28, 1902.

Para-amidobenzoic-acid Ester as a Local Anæsthetic.—Professor Carl von Noorden describes this preparation, also called anæsthesin, as an odorless and tasteless powder, easily soluble in warm, less so in cold, water, and easily dusted over a surface or made into a salve. It is not poisonous. As a powder, Von Noorden has used it beneficially in gastric hyperæsthesia; as troches in irritating coughs and dysphagia originating

in the pharynx or larynx; and for insufflation into the larynx, where it exercised no irritation as orthoform does. It has proved useful in tenesmus and especially in pruritus of diabetic origin.

Polyneuritis following Malaria.—By Dr. A. M. Luzzatto.

The Problem of Hemiplegia.—By Dr. M. Rothmann.

Treatment of Pharyngitis Granulosa and Pharyngitis Lateralis.—By Dr. M. Halle.

New Method of Examining the Gastric Function. (*Conclusion.*)—Professor Sahli says that up to the present, gastric examinations have not been entirely satisfactory, owing to the lax separation of the three factors—motility, secretion and absorption. Sahli, therefore, sought a substance which, added to the test meal, would not be absorbed in the stomach, and which could be easily estimated quantitatively, so that after the lavage, an estimation could be made from the remaining substance as to the quantity of the test-meal which entered the intestine, how much of it remained in the stomach, and the quantity of secretion removed by the lavage. He found fat the best material, and as a test-meal roasted flour is given. The fat removed by lavage is estimated by the butyrometer. The author gives minute details as to the estimation of the various factors.

Münchener medizinische Wochenschrift,
April 29, 1902.

Hay Fever.—(*Continued article.*) By Dr. Arthur Thost.

Recurrent Herpes of the Male Urethra.—Professor Bettmann says that a recurrent discharge from the urethra with absence of gonococci, usually accompanied by the appearance of herpetic vesicles on the external skin, is significant of herpes of the urethra, which can be endoscopically demonstrated. The affection usually does best without any treatment.

Relation of White Blood Cells to Appendicitis.—(*Continued article.*)—By Dr. M. Wassermann.

Exit of Hæmoglobin from Red Cells Fixed in Sublimate.—By Professor Max Matthes.

Influence of Slight Changes in Atmospheric Pressure upon the Human Organism.—By Dr. O. Rosenbach.

Dormiol in Epilepsy.—Dr. J. Hoppe recommends dormiol, an addition product of chloral and amylene hydrate, in doses of from thirty to forty-five grains daily, given by rectum, as a sedative in epilepsy when the patient is subject to many attacks, and in the status epilepticus. No injurious effect has been noted from its use.

Does Pulmonary Emphysema Follow the Playing of Wind Instruments?—Dr. Hans Fischer does not believe that the playing of wind instruments induces emphysema or other pulmonary diseases which may lead to emphysema. He attributes it rather to the general mode of life, most often to a bronchial catarrh having its origin in alcoholism.

Rare Causes of Plumbism.—Dr. Adolf Weber reports a number of cases having their origin variously in lead water-pipes and the presence of lead in flour. The author favors in the treatment of this condition, hypodermic injections of atropine sulphate, rather than opium or belladonna.

Credé's Ointment.—By Dr. E. Taff.

Münchener medicinische Wochenschrift,

April 22, 1902.

Intravenous Injections of Corrosive Sublimate.—Professor A. Serafini concludes from his experiments that the intravenous injection of corrosive sublimate in experimental anthrax and chicken cholera, shows no bactericidal influence in a proportion of 1 to 360,000, as to the bodily weight, or of 1 to 30,000 as to the total weight of the blood. He does not regard it as a specific, therefore, in bacterial diseases, nor as the part of good judgment to inject it into the veins in syphilis.

Iodine in Arteriosclerosis.—By Dr. Jodlbauer.

Impaction of Uterus in a Pessary.—Dr. Gustav Wiener records such a case, in which difficulty in urination and defecation constituted the subjective symptoms.

Trigger Finger with Atrophy of the Terminal Phalanges.—By Dr. Wilhelm Stöltzing.

Pancreatic Disease and Diabetes.—By Dr. Teschemacher.

Diagnostic Significance of Angeioma of the Skin.—Dr. Rosenbaum has tabulated a number of cases of patients with carcinoma of the stomach, liver, and stomach, and has found in all of them angeiomata of the skin. While these were selected cases, the author believes that angeiomata of the skin have a diagnostic significance as regards cancer of internal organs.

Quinine in the Treatment of Wounds.—Dr. Hugo Marx highly recommends quinine hydrochloride as an antiseptic. Experimentally, it inhibits at once the growth of bacteria in a solution of from 1 to 1.5 per cent., and in from thirty to sixty minutes it absolutely kills the spores of anthrax in the thermostat. As a styptic it is excellent, particularly for parenchymatous bleeding. It is harmless, as far as the author's observations go. In the form of wet tampons, it has equal power with the acetate of aluminum in overcoming odors from necrotic tissues or septic wounds.

New Localization of Lead Poisoning—(Concluded).—By Dr. George Köster.

Centralblatt für Gynäkologie, May 3, 1902.

Fœtal Monstrosities.—Dr. M. Popescul describes a case with a very large cystic spina bifida in a twin birth, in which the growth proved to be an obstacle to the birth of the second child. The tumor was almost as large as the fœtus. It sprang from the back of the neck and was covered with thin, transparent, hair-covered skin.

Tampon Holder.—By Dr. J. Rudolph. A description of a new instrument.

Berliner klinische Wochenschrift, May 5, 1902.

Medicinal Treatment of Tuberculosis.—Dr. E. de Renzi employs, besides dietetic and climatic measures, ichthyol, ichthoform and sodium salicylate. The first is useful in the diminution of the bronchitis and can be employed in hæmoptysis as well. The salicylate, in doses of from sixty to eighty grains daily, is a good antipyretic.

Treatment of Sciatica.—Dr. L. Brieger recommends a combination of the Scotch douche with warm baths and massage. The massage is undertaken during the application of the spray of steam. A cure takes from two to eleven weeks.

The Antroscope for the Examination of the Upper Jaw.—By Dr. M. Reichert. A new instrument of the author's devising.

The Problem of Hemiplegia. (Concluded).—Dr. M. Rothmann concludes that the pyramidal tract is probably not the only one affected, but that other cerebrospinal tracts must also be involved. The gradual restitution which takes place is due to the gradual development of independence on the part of the cortical motor centres, and has nothing whatever to do with the pyramidal tract.

Gonorrhœal and Syphilitic Infections of the Rectum.—Professor Koenig reports three cases of acute infection of the rectum with gonorrhœa, in which the mucous membrane was covered with pus. The subjective disturbances increase as the disease progresses, and consist mainly of painful tenesmus, constipation, and painful stools. Condylomata frequently appear about the anus. A stricture of the rectum gradually develops, which ascends above the sphincter and can be felt *per vaginam* in women, as a hard cord. During the acute inflammatory process, pus may break through into the circum-rectal tissues and fistulæ may be formed that are difficult or impossible to cure. Occasionally, perforation into the peritonæum and death may occur. Mixed treatment and bougie treatment are of no avail. Circular resection of the gut may have to be performed, or, if the process extends high into the rectum, an artificial anus may have to be made.

Postsyphilitic and parasymphilitic Symptoms of Diagnostic Importance (To be continued).—By Dr. J. Heller.

Centralblatt für Chirurgie, May 3, 1902.

Resection of the Liver with a new Hæmostatic Instrument.—Dr. Koslenko says that from experiments made on animals, Professor Snegirew's steam "saw" offers a safe hæmostatic measure for operating on parenchymatous organs. In the case of large blood-vessels, the steam may be turned directly upon the vessel or it may be ligated, as the ligature does not cut through with the slough which results. In the case of the liver, no secondary hæmorrhage follows, and the hepatic wound heals by granulation with a subsequent growth of abundant connective tissue.

American Medical Association.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

Third Day, Thursday, June 12th.

Dr. W. A. Evans, of Chicago, introduced a resolution to the effect that the name of the Pathologic Exhibit be changed to that of Scientific Exhibit, and be placed under the entire charge of a director, with the chairmen of the various sections as an advisory committee. The director to be chosen by the board of trustees, and be paid a reasonable compensation, in addition to his expenses.

This resolution was referred to the board of trustees, who subsequently reported it back to the House of Delegates with the recommendation that action upon it should be deferred this year.

The chairman of the Committee on Sections and Section Work introduced the following resolution, which was adopted: No member of the American Medical Association shall read papers before more than two sections, and these papers shall be on different subjects.

Dr. A. D. Bevan, of Chicago, introduced a resolution to the effect that any member of the American Medical Association proved guilty of a division of fees without the consent of the patient, should be held guilty of misconduct, for which he might be expelled from the association.

Dr. E. Eliot Harris, of New York, said that the point brought up by Dr. Bevan was covered in the code of ethics submitted by him, for the revision of which a committee had been appointed by the chair during the session on the previous day.

Dr. H. N. Moyer, of Chicago, moved that Dr. Bevan's resolution be laid on the table. The question of the code of ethics, which had stirred the association to its depth in the past, was now in the hands of a committee for revision, and the action of that committee should not be hampered by the enactment of a penal statute. Dr. Moyer said he did not object to Dr. Bevan's resolution in its essence, but he did object to have it go into the code of ethics. "Let us get a code of ethics," he said, "that is an expression of what the highest duty of a physician should be, but let it not be penal."

Dr. A. Walter Suiter, of Herkimer, N. Y., said that at a meeting of the National Confederation of State Medical Examining and Licensing Boards, held on June 9th, a committee was appointed to consider the proposed plan of Dr. William L. Rodman, of Philadelphia, for a voluntary national board of examiners, which was first advanced at the April meeting of the Committee on National Legislation of the American Medical Association. Dr. Suiter said that, after a careful consideration of this proposed plan, the committee came to the conclusion that it would not be feasible for various reasons, among them the following: (1) Such a voluntary board would have no legal right or power to exist; (2) no guarantee could be given of the permanence of such a board; (3) a license given by a voluntary board of examiners would have no legal value.

A resolution was introduced by the delegates from the Section in Hygiene and Sanitary Science, requesting the American Medical Association to

petition the federal government to appoint a commission, similar to those appointed by European governments, for the purpose of studying and investigating the whole subject of bovine and human tuberculosis, with a view to the discovery of the best means of preventing the spread of the disease in man and animals.

A resolution was introduced requesting that a joint committee, composed of the delegates from the Section in Hygiene and Sanitary Science and those from the Section in Cutaneous Medicine and Surgery be appointed by the President for the purpose of promoting and spreading knowledge regarding the prophylaxis of venereal diseases, and of presenting to the association a plan for a national meeting for the elaboration of this subject. The action taken was detailed in our issue for June 21st, p. 1104.

Fourth Day, Friday, June 12th.

Upon the recommendation of the nominating committee, officers were elected for the ensuing year. The complete list is as follows: President, Dr. Frank Billings, of Illinois; first vice-president, Dr. J. A. Witherspoon, of Tennessee; second vice-president, Dr. G. F. Comstock, of New York; third vice-president, Dr. C. R. Holmes, of Ohio; fourth vice-president, Dr. James H. Dunn, of Minnesota; treasurer, Dr. H. P. Newman, of Illinois; secretary, Dr. George H. Simmons, of Illinois; trustees, (for three years), Dr. E. E. Montgomery, of Pennsylvania; Dr. H. L. E. Johnson, of District of Columbia, and Dr. A. L. Wright, of Iowa; judicial council (for three years, ending 1905), Dr. Philip Marvel, of New Jersey; Dr. George Cook, of New Hampshire, and Dr. N. S. Davis, Jr., of Illinois; (for two years, ending 1904, Dr. T. C. Martin, of Ohio, Dr. J. B. Roberts, of Pennsylvania, and Dr. Christopher Tomkins, of Virginia; (for one year, ending 1903), Dr. F. H. Wiggin, of New York, Dr. G. B. Gillespie, of Tennessee, and Dr. D. C. Peyton, of Indiana; Orator in Medicine, Dr. J. M. Anders, of Philadelphia; Orator in Surgery, Dr. A. F. Jonas, of Omaha; Orator in State Medicine, Dr. W. H. Welch, of Baltimore.

New Orleans, La., was chosen as the next place of meeting, to be held between May 1 and 15, 1903, the determination of the exact dates being left to the president and the secretary.

Dr. William H. Welch, of Baltimore, offered a resolution "that a committee of five be appointed by the President to consider the question of a national examining board for the licensing of physicians and inter-State reciprocity and allied subjects."

In explanation of this resolution, Dr. Welch said that many members of the association expected that this subject would be discussed before the House of Delegates. It was apparent, however, that it was hardly ripe for a profitable discussion. Still, there was no subject of greater interest to the profession, and some remedy must be found to relieve the situation, which under present conditions was simply intolerable.

The resolution introduced by Dr. Welch was adopted, and the following members were appointed by the chair to serve on this committee. Dr. Wil-

liam L. Rodman, of Pennsylvania; Dr. William H. Welch, of Maryland; Dr. Henry Beates, Jr., of Pennsylvania; Dr. Joseph M. Mathews, of Kentucky; and Dr. Murray, of Montana.

Dr. P. Maxwell Foshay, of Ohio, made the following motion: Resolved, that it is the sense of the House of Delegates that the solicitation of votes for office is not in keeping with the dignity of the medical profession, and that such solicitation shall be considered a disqualification for any office in this association. Carried.

A motion was also made and adopted, tendering the thanks of the association to Dr. George F. Comstock, of Saratoga Springs, the chairman of the Committee on Arrangements, together with his associates, and to the citizens for the entertainment given in the course of the meeting.

Before the House of Delegates finally adjourned, a vote of thanks was unanimously tendered to the President for the ability and courtesy with which he had discharged his duties.

GENERAL SESSIONS.

The closing General Session of the Association was held in Convention Hall on Friday, June 13th. The President, Dr. Wyeth, called the meeting to order promptly at noon. The secretary gave a brief résumé of the business transacted by the House of Delegates, after which Dr. Wyeth introduced his successor in the following words: "The King is dead; long live the King." I take great pleasure in introducing our next President, Dr. Frank Billings, of Chicago.

Dr. Billings, in taking the chair, spoke as follows: I cannot express in words my feelings at this moment: I would that words could express what my heart feels. I have had conferred upon me what I consider the greatest honor in the gift of the medical fraternity of America. There is no greater body of men and women than the members of the American Medical Association, and to be chosen the President of that organization should be, I think, the fulfilment of the ambition of any man. This position has been held by some of the most eminent men in this country. When one follows these eminent men, it is naturally with a sense of pride, and it is so to me.

The re-organization of this Association, which occurred last year, has had its successful beginning in this meeting. The success of this meeting is due in great measure to the earnest work done by the gentleman who preceded me. He has set a pace—a mark for me to follow. If I can but accomplish as much as he has done I shall feel a pride next year greater than I feel today. Great, therefore, as is the honor you have done me, the responsibility is even greater. Without your help I can do nothing; with it, I hope successfully to carry on the work of this great organization. Therefore I bespeak your help.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

Third Day, Thursday, June 12th.

Address of the Chairman.—[This address was accidentally omitted from the report in our issue for

June 14th, p. 1072.] Dr. J. H. CARSTENS, of Detroit, asked "What of the Future?" He called attention to the fact that most of the moot questions in obstetrics were settled, and that in gynecology we were fast approaching the same point; consequently the future work should be on different lines than that of taking out tumors and diseased pelvic organs. We must get closer to the people in general and do more missionary work from house to house. We must discourage the constant tendency of suggestions to young girls and women about the menstrual function. We must teach that this physiological process in a healthy body would be taken care of by Nature without artificial assistance. We must see to it that the young woman had a sound body if she wanted to acquire knowledge; that it was more important to have a healthy body than to possess great learning. We must oppose the cry that too much was being taught in our higher schools or the universities, that the demand on the mind was too great; for that was entirely wrong. *We must teach that everybody was not born to attain this higher education*, that only those should attend the higher institutes of learning who had the attributes of the mind that enabled them to *learn easily and quickly*, and that even these required plenty of exercise and fresh air. We should insist that gymnastics and systematic physical exercise should be taught in every school of the land, from the lowest to the highest, and that the curriculum of study should embrace the most systematic course of gymnastics to produce a *sound body with a sound mind*. We should thoroughly study the effects and the results of erotism on the human body. We should study how we could more thoroughly bring about a more perfect marriage relationship and prevent the frequent mismatings as they were shown in our courts. In fact we must more thoroughly study the exact positions of individuals, every combination of physical and mental condition, and their most fit place and best vocation in life. We must branch out, we must look ahead, we must be the councillors and the guides of the race in the future.

Vaginal Section for the Uncomplicated Symptom of Sterility with Relief of the Symptom. Report of Four Cases.—Dr. J. RIDDLE GOFFE, of New York, said that causes of sterility in women might be pathological or mechanical, extra peritoneal or intra-peritoneal, or both. Sterility might be present in a woman free from any other symptoms pointing to disease in the pelvis. Under these circumstances a surgeon was justified in performing vaginal section or laparotomy for relief. The author reported four cases of which two patients subsequently became pregnant and were delivered of healthy children. Before placing the blame, Dr. Goffe recommended that the husband be also examined for the cause of sterility.

Dr. Watkins, of Chicago, was thoroughly in accord with the work done by Dr. Goffe. Vaginal section was perfectly justifiable where the cause of sterility was uncertain. Before treating a woman for sterility, the physician should determine whether the husband was sterile, as investigations of sterility in women showed that at least 50 per cent. of the cases of sterility were due to the man. The speak-

er's results had been unsatisfactory after opening the anterior fornix. Adhesions at the new ostium were likely to occur and occlusion take place.

Dr. Ricketts, of Cincinnati, also subjected the husband to examination before proceeding to operate on the wife, although the tendency was and had been to lay the blame on the wife. The fimbriated extremity of the tube in these cases was often found turned in and bound down by adhesions. He said: Don't be hasty in operating, and don't perform hysterectomies recklessly. Do conservative work.

Dr. Noble, of Philadelphia, said that where the cause of sterility lay in the ovary he had had good results. He had never had a case of occluded tube followed by pregnancy.

Dr. Massey, of Philadelphia, said that sterility was primarily a catarrhal disease of the uterus. If sterility was due to a diseased mucous membrane the proper thing was to treat the disease in its inception in the uterus.

Dr. Cheeseman, of Auburn, N. Y., called attention to the fact that the first case reported by Goffe was not complete, as the condition of the husband was not taken. Where lacerated perinæum existed, and endocervicitis, etc., pregnancy followed after repair.

Dr. Hall, of Cincinnati, was very much in favor of the operation on account of the slight risk involved.

Dr. C. L. Bonifield, of Cincinnati, seemed to think that in every case of sterility reported there was some other condition present, and that the title of the paper was very misleading.

Dr. Goffe, in closing the discussion, said that in cases where there was an extensive inflammatory exudate with adhesions, when the inflammation was removed the adhesions were absorbed and disappear. As to statistics, that depended on the number of cases. Further he said that when either a curetting or dilatation was done, one was justified in opening into the peritoneal cavity through the anterior fornix—a very simple and harmless procedure. A man would certainly not operate upon a woman if there was not some pathological condition present. By "uncomplicated form of sterility" he meant that there were absolutely no other symptoms present.

Pathologic Condition of the Omentum as a Surgical Factor. The Best Method of Treatment.—*Dr. H. O. Marcy*, of Boston, said that modern surgery had exceptionally demonstrated the physiological importance of the omentum. He detailed the pathological factors incident to the omentum, and went over its relationship to abdominal neoplasms; the so called internal hernias, the involvement by it of the intestine, causing intestinal obstruction or impairment of function. Parietal adhesions seemed to be the cause of obscure, oftentimes marked, suffering. He considered it in detail as an operative factor when its integrity had not been involved. He also took up the various injuries of the omentum and their restoration, and the pathological conditions of the omentum requiring surgical intervention.

Dr. Nelson, of Chicago, thought the omentum a very important structure physiologically and con-

sidered it a good sign when the omentum was sufficiently large to cover up. *Dr. Watkins*, of Chicago, thought too little attention had been paid to the omentum. He thought it was a very important organ and that it played an active part in the prevention of infection in the peritonæum. It was very uncertain whether it was advisable to draw down the omentum, and thus possibly produce an adhesion. *Dr. F. H. Wiggin*, of New York, always filled the abdominal cavity with hot saline solution in omental operations to prevent the formation of adhesions. *Dr. J. H. Carstens*, of Detroit, thought the omentum the greatest friend of the abdominal surgeon. In a vaginal hysterectomy he would rather see the omentum come down than the intestine. The omentum was a great preventer of hernia. *Dr. Marcy*, in closing, said that in one hundred cases of fibromyoma of the uterus, he had had but four deaths.

Treatment of Umbilical and Ventral Hernia.—By *Dr. W. H. WATHEN*, of Louisville. Read by title.

Post-operative Phlebitis.—By *Dr. J. G. CLARK*, of Philadelphia. Read by title.

Preventive Gynæcology.—By *Dr. GEO. J. ENGELMAN*, of Boston. Read by title.

Some of the Complications of Gonorrhœa in the Female.—By *Dr. J. TABER JOHNSON*, of Washington. Read by title.

The Evolution of the Treatment of Pelvic Inflammation.—By *Dr. E. E. MONTGOMERY*, of Philadelphia. Read by title.

The Mortality following Operation for Pus in the Pelvis.—By *Dr. HUNTER ROBB*, of Cleveland. Read by title.

Drainage versus Radical Operation for Suppuration in the Female Pelvis.—*Dr. CHARLES P. NOBLE*, of Philadelphia, said that the usual typical case of pyosalpinx or abscess of the ovary should be treated by the radical abdominal operation. Salpingo-oophorectomy for the unilateral cases, and hysterectomy for the bilateral cases, gave admirable results—a mortality of less than five per cent., and permanent results that were very satisfactory.

In large pelvic abscesses and in pyosalpinx or abscess of the ovary complicated by intraperitoneal abscess, the radical abdominal operation gave bad results. The mortality was twenty-five per cent. or more, and the morbidity and sequelæ of the operation were such as to emphasize its disadvantages. In this group of cases vaginal incision and drainage had a mortality of only two per cent. and they permanently cured three-fourths of the cases. Those requiring subsequent abdominal section in many cases lost but one appendage instead of both. In this group of cases vaginal incision and drainage was a most conservative operation, both as to saving life, and in the conservation of the organs of generation. This was especially true when the abscess occurred in young women. Where the abscess was single, as in puerperal phlegmon, ovarian abscess, and intraperitoneal abscess without pyosalpinx (usually of puerperal origin), the simple incision resulted in a perfect cure.

The next class of cases in which the drainage

operation was of signal service was that in which suppuration occurred during an acute attack of peritonitis, and in which the peritonitis tended to become progressive. A radical operation under these conditions had a high mortality as contrasted with the injury by an encircling suture of chromicized catgut or silk, passed around the fragments in the coronal plane. This was done subcutaneously by means of a long needle, so as to draw the fragments of bone together by a purse-string ligature. He said that the method did not invade the knee joint or the prepatellar bursa and entailed little or no risk. It was preferable to Barker's method, in which the ligature was passed through the joint in the sagittal plane and might cause septic synovitis, if there was any fault in the aseptic technics.

The method described might not be new, but it was worthy of general adoption. It needed no special instruments, it might be performed by any physician who knew how to be aseptic in his work, it allowed the patient to go on crutches in a few days, and it gave perfect physiological use of the knee-joint after treatment was concluded.

Dr. Gordon, of Maine, thought that it was always advisable to operate and remove pus, and to make the incision at the point of indentation, where a soft spot would be found. Thousands of young women had been spared by this operative procedure. *Dr. W. H. Humiston*, of Cleveland, said that an early and trivial operation was the best course to pursue in these cases and agreed with the author. *Dr. Cushing*, of Boston, agreed with both *Dr. Gordon* and *Dr. Noble*, and said, further, that wherever he could find it possible to get at the pus from below, his results were unquestionably excellent and the method was simple and entailed but little, if any, risk.

Dr. Watkins, of Chicago, thought the difficulty encountered by surgeons was the determining of the class of cases that could be treated in this way. Patients having gonorrhœa, for instance, were extremely bad cases for this simple method of procedure, as well as cases of tuberculous abscess. The puerperal cases were the very best, as the exudation disappeared by absorption. The doctor differed slightly with the author's technics. *Dr. Watkins* packed with gauze and removed it gradually, so that it was all removed by the fifth or seventh day. This procedure did much to hasten convalescence.

Dr. Massey, of Philadelphia, said that these acute and semi-acute pelvic abscesses should be operated on as early as possible. *Dr. Ehrenfest*, of St. Louis, cautioned care and the ascertaining just where the pus was located. *Dr. J. H. Carstens*, of Detroit, did not use gloves in operating, except upon pus cases, and there simply to protect the next patient. *Dr. T. S. Cullen*, of Baltimore, opened in the vagina when there was bulging found there.

The Advantage of the Vaginal Route in Obese Patients.—*Dr. W. H. HUMISTON*, of Cleveland, was of the opinion that this method of operating was better in these cases as the dangers were decidedly less, and it was a great deal easier; the recoveries were also more prompt than by any other method. The operation by the vaginal route could be performed much more quickly than by the abdomen. The operation was applicable to cases of en-

larged retrodisplaced uteruses with diseased appendages, and in cases of small myomatous growths, metrorrhagia, etc. He reported a case.

Dr. C. O. Thienhaus, of Milwaukee, *Dr. J. Wesley Bovée*, of Washington, and *Dr. Gordon*, of Maine, all agreed with the author.

Adenomyomata of the Female Generative Organs.—*Dr. THOMAS S. CULLEN*, of Baltimore, after a brief survey of the literature, gave lantern projections of his cases. In an examination of over 700 cases of uterine myomata at the Johns Hopkins Hospital he found 19 cases of adenomyoma. Many of these were detected in the early stages and hence their very beginnings could be followed.

Dr. Cullen divides adenomyomata of the uterus into three main groups: (1) Those where the uterus preserves a relatively normal contour; (2) subperitoneal or intraligamentary adenomyomata; (3) submucous adenomyomata. In group 1 the uterus has a relatively normal contour but is somewhat enlarged. On section the anterior or posterior wall is found to have undergone a diffuse myomatous thickening. Sometimes both the anterior and posterior walls are affected, or the uterine cavity may be surrounded on all sides by a zone of myomatous tissue. On careful examination, small round, or irregular islands of homogeneous tissue are found scattered throughout the myomatous growth. With a loop these are seen to contain numerous small openings—cross sections of glands. The homogeneous areas resemble normal uterine mucosa. The glands are frequently cystic, varying from 1 to 10 millimetres or more in diameter, and are filled with dark blood. The mucosa lining the uterine cavity is usually smooth, somewhat thickened, and at one or more points can be seen extending for a considerable distance into the myomatous tissue. Histological examination shows that the thickened uterine wall is due to a diffuse and coarse myomatous transformation of the muscle and that the homogeneous islands of tissue scattered throughout this myomatous growth are islands of normal uterine mucosa. In many cases these can be traced directly to the uterine mucosa. It seems that the myomatous growth is the primary one and that the normal mucosa flows into the chinks between the coarse myomatous bundles. If the growth is very compact the down-growths of the mucosa are small, if loose, correspondingly large. The diffuse growth blends almost imperceptibly into the normal outer covering of uterine muscle and cannot be shelled out from it. The islands of glands are naturally most abundant near the mucosa, gradually diminish in number in the outlying portions, and *Cullen* has never found them in the normal muscle.

Group 2. Subperitoneal or intraligamentary adenomyomata. These vary from 1 centimetre, or less, in size to tumors filling the entire lower abdomen. If they attain any appreciable size they become cystic. This is readily accounted for by the glands being liberated from the surrounding and compressing influence of the uterine walls. When external to the uterus the fluid keeps accumulating and cyst-like cavities result. A cross

section through a large subperitoneal or intraligamentary cystic myoma reveals a framework of myomatous tissue containing large and small irregular cyst-like spaces. The large cysts are invariably near the surface. They have smooth inner linings and have little bays running off from them. Sometimes the inner lining resembles a definite mucosa. The cyst contents are invariably chocolate colored, due to old hæmorrhages. On histological examination the framework of the tumor is seen to present the ordinary picture of myoma. The cyst cavities are lined by cylindrical, and usually ciliated, epithelium, and frequently separating this from the myomatous tissue is a definite stroma identical with that normally lying between the uterine glands. Scattered throughout the solid portion of the tumor are islands of glands indistinguishable from normal uterine glands and surrounded by the usual stroma.

Group 3. Submucous adenomyomata. Examples of this group were also exhibited. They are usually very small and are expelled from time to time. On section the submucous myoma will be found to contain one or two irregular spaces lined by definite stroma and filled with characteristic chocolate-colored fluid. The histological picture is the same as that noted in the subperitoneal variety, an inner lining of cylindrical ciliated epithelium usually separated from the myomatous tissue by a definite stroma.

Origin of adenomyomata of the uterus. Formerly the majority of writers thought that they were due to remnants of the Wolffian duct, but now the consensus of opinion is that the greater number at least are derived either from the uterine mucosa or from a portion of Müller's duct. In over half of the author's cases the uterine mucosa could be seen extending by continuity into the adenomyoma, demonstrating beyond peradventure their origin from the mucosa. In the second place, in no other part of the body, either in the embryo or in the adult, do we find glands resembling uterine glands and surrounded by characteristic stroma, and furthermore, the Wolffian body contains no structures that can be mistaken for uterine glands. The uterine mucosa is, as Säger taught his students, a definite organ, and has a well defined function to fulfil. This function is seen in practically every case of adenomyoma. In group 1 the glands and small cyst-like spaces are more or less filled with blood. In group 2 the large subperitoneal or intraligamentary cysts are invariably filled with chocolate-colored fluid, the remnants of old hæmorrhages. The same condition is found in group 3.

Clinical history. Adenomyomata are usually detected during the child-bearing period and give rise to menstrual disturbance varying from a few months to ten years or more. The periods are usually more profuse and painful, but between periods there is, as a rule, little or no discharge. In 15 of Cullen's cases the patients were married, and of this number 9 had had children.

Vaginal examination. In group 1 the uterus may be normal in size but, as a rule, it is two or three times as large as normal. It is globular in

form and often slightly irregular in outline, due to small discrete myomata which are often present. The appendages show a peculiar tendency to become adherent and the uterus is often fixed by dense bands of inflammatory tissue. A sound introduced into the uterus will give no clue, and curettings will invariably yield nothing but normal mucosa. We thus see that while we have some clue from the slow increase in size of the organ and the profuse menstrual periods, yet no diagnosis can be made until the organ is removed. The subperitoneal and intraligamentary adenomyomata cannot possibly be distinguished from ordinary myomata, sarcomata, or obscure cysts until removal and the submucous variety offer no points of clinical variation from submucous myomata.

The *prognosis* in these cases is very favorable, provided the uterus is removed before pressure symptoms have developed.

A case of adeno-carcinoma developing in part from the glands of an adenomyoma was reported and an illustration of a squamous-cell carcinoma of the cervix associated with an early adenomyoma of the body given.

Adenomyomata of the uterine horn are divided into two groups: (a) those coming from the uterine portion of the horn; (b) those originating in the tubal portion of the horn, a classification first suggested by Meyer.

In conclusion, Cullen gave a brief review of cases of adenomyomata of the round ligament.

Fourth Day, Friday, June 13th.

Post Operative Intestinal Paresis.—Dr. F. H. WIGGIN, of New York, said that this condition was often caused by injury of the intestinal nerve supply during operations, or by fermentative or putrefactive changes of the bowel contents. It was a frequent and fatal complication of the early convalescent period. It was essentially important to recognize the condition early and to introduce promptly remedial agents. The writer found in strychnine, atropine, and physostigmine the best treatment, and had had with these drugs the lowest mortality following abdominal operations.

Conservative Operation upon the Ovaries.—By Dr. L. H. DUNNING, of Indianapolis. Read by title.

Critical Remarks on the Methods of Operation in Vogue for Cystocele with and without Prolapse of the Uterus.—D. C. O. THIENHAUS, of Milwaukee, said that of the manifold methods proposed for radical cure of cystocele with or without uterine prolapse, very few had fulfilled the promise of the originator to prohibit a recurrence. The most rational and best methods made use of the uterus as a supporting agent for the bladder, thereby blocking its further descent. The author demonstrated some cases before and after the operation had been performed.

Bimanual Methods of Examination.—By Dr. DAVID J. DOHERTY, of Chicago. Read by title.

Surgical Treatment of Internal Hæmorrhoids.—Dr. W. F. METCALF, of Detroit, mentioned the similarity of reflex phenomena of internal hæmor-

rhoids to those produced by pathological changes in the generative organs, and their effect upon nutrition. Necessary operations upon the rectum should be done by the gynecologist, and should, in the majority of cases, be done at the same time as the work upon the uterus and its annexa. Objections to prevailing methods of treatment were: disturbance of the heart's action and respiration; necessity for anodynes; ligature *en masse*, and resultant sloughs. A better method was to cut away vein extremities and redundant tissue without ligation; tying of arteries was not often required. Denuded surface should be left uncovered. He described the histological study of repair. When complicated with much redundant tissue and prolapse, the diseased membrane should be amputated.

Officers for the Ensuing Year.—President, Dr. A. Palmer Dudley, of New York; secretary and treasurer, Dr. H. L. Bonifield, of Cincinnati.

Book Notices.

BOOKS, ETC., RECEIVED.

Practical Dietetics. With Special Reference to Diet in Disease. By W. Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College in New York City, etc. Second Edition, Enlarged and thoroughly Revised. New York: D. Appleton & Company, 1902. Pp. xxiii-828. (Price, \$5.)

The Practitioner's Manual. A Condensed System of General Medical Diagnosis and Treatment. By Charles Warrenne Allen, M. D., Consulting Genito-urinary Surgeon to the City (Charity) Hospital, New York, etc. Second Edition, Revised and Enlarged. New York: William Wood & Company, 1902. Pp. iv-889. (Price, \$6.)

Nothnagel's Encyclopædia of Practical Medicine. Diphtheria. By William P. Northrup, M. D. Measles, Scarlatina, and German Measles. By Theodor von Jurgensen, M. D., Professor of Medicine at the University of Tübingen. Edited, with Additions, by Dr. William P. Northrup, M. D., Professor of Pædiatrics in the University and Bellevue Hospital Medical College, New York, etc. Authorized Translation from the German under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 5 to 672. (Price, \$5.)

Diseases of the Nose, Pharynx, and Ear. By Henry Gradle, M. D., Professor of Ophthalmology and Otolaryngology in the Northwestern University Medical School, Chicago. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 11 to 547. (Price, \$3.50.)

The Artificial Feeding of Infants, including a Critical Review of the Recent Literature of the Subject. By Charles F. Judson, M. D., Physician to the Medical Dispensary of the Children's Hospital, and J. Claxton Gittings, M. D., Assistant Physician to the Medical Dispensary of the Children's Hospital, Philadelphia. Philadelphia: J. B. Lippincott Company, 1902. Pp. 5 to 368. (Price, \$2.)

The Neuroses of the Genito-urinary System in the Male with Sterility and Impotence. By Dr. R. Uitzmann, Professor of Genito-urinary Diseases in the University of Vienna. Second Edition, Revised, with Notes and a Supplementary Article on Nervous Impotence. By the Translator, Gardner W. Allen, M. D., Surgeon in the Genito-urinary Department of the Boston Dispensary, etc. Philadelphia: F. A. Davis Company, 1902. Pp. 3 to 198. (Price, \$1.)

A Practical Treatise on Small-pox. Illustrated by Colored Photographs from Life. By George Henry Fox, A. M., M. D., Consulting Dermatologist to the Health Department of New York City. With the Collaboration of S. D. Hubbard, S. Pollitzer, M. D., and J. H. Huddleston,

M. D. Parts I and II. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. 31. (Price, \$3.)

Acute Dilatation of the Stomach. By H. Campbell Thomson, M. D., (Lond.) M. R. C. P., Assistant Physician to the Middlesex Hospital, etc. New York: William Wood & Company, 1902. Pp. 54. (Price, 75 cents.)

Dynamic Aspects of Nutrition and Heredity. By Frank Horridge. New York: William Wood & Company, 1902. Pp. xiv-175. (Price, \$1.50.)

A Manual of Surgical Treatment. By W. Watson Cheyne, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London, etc., and F. F. Burghard, M. D., and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London, etc. In Seven Volumes. Volume VI. The Treatment of the Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Oesophagus, Stomach, and Intestines. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. xix-479. (Price, \$5.)

Miscellany.

Venereal Prophylaxis that is Feasible.—Dr. LUDWIG WEISS, of New York, who was secretary to the Committee of Seven, appointed last year by the Medical Society of the County of New York for the study of venereal morbidity, in his paper read in the Section in Cutaneous Medicine and Surgery of the American Association, at Saratoga, presented the vast topic from different views. Prostitution being the main source for the spread of venereal diseases, measures against it should constitute the first steps of prophylaxis. As, however, regulation as practised in Europe, could not be considered here on account of constitutional and racial objections, a tacit toleration as long as public propriety was not insulted should be exercised as the lesser evil. On the other hand, social, economic, educative, and legislative measures should be instituted, forming a moral control of vice. Such were creation of better factory laws, living wages, division of sexes in workshops, working women's coercive accident and sick-benefit insurance societies, mutual loan associations, asylum for women out of work, education with tact and discretion in sexual matters, of the young of both sexes by teachers of the same sexes, broader instruction of medical students in venereology, and education of the public and of the patients. In the present moral evolution of the race, moral measures alone would be slow of producing quick and tangible results, therefore sanitary measures were of paramount value. The moralist anticipated the redemption of the race; the sanitarian dealt with things feasible. Therefore we must have more adequate hospital and dispensary facilities, to save the innocents. Not one in two thousand of those affected with venereal diseases could get hospital treatment. Individual prophylaxis by instillations *post coitum* of a twenty-per-cent. protargol-glycerin solution, as recommended by Neisser, Kopp, Nissl, and other continental authorities, was the most feasible means against the enormous spread of venereal diseases and should be recommended by physicians as yielding excellent results.

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